

## Supporting Information

### A comparative computational study of N-heterocyclic olefin and N-heterocyclic carbene mediated carboxylative cyclization of propargyl alcohols with CO<sub>2</sub>

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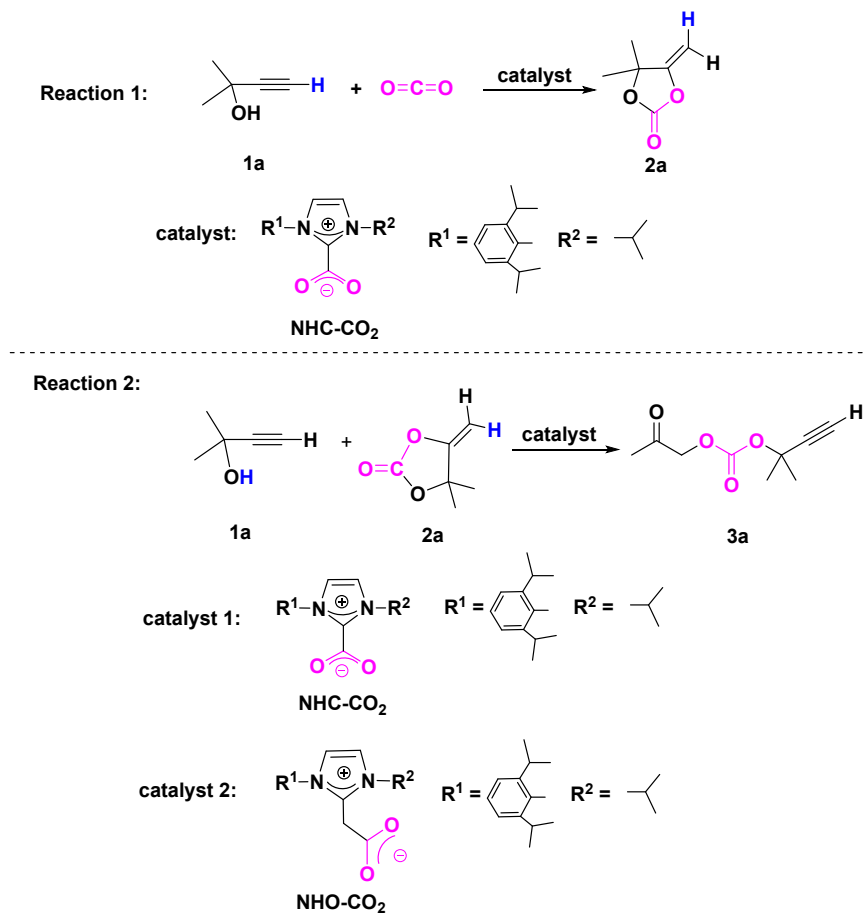
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## S1: Computational details



Scheme S1. Investigated reaction system

Optimization and frequency calculation in  $\text{CH}_2\text{Cl}_2$  solvent using SMD solvation model:  
M06-2X/6-31+G\*

Single-point energy calculation in  $\text{CH}_2\text{Cl}_2$  solvent: M06-2X/6-311++G\*\* using SMD solvation model

## S2: Supplementary calculations

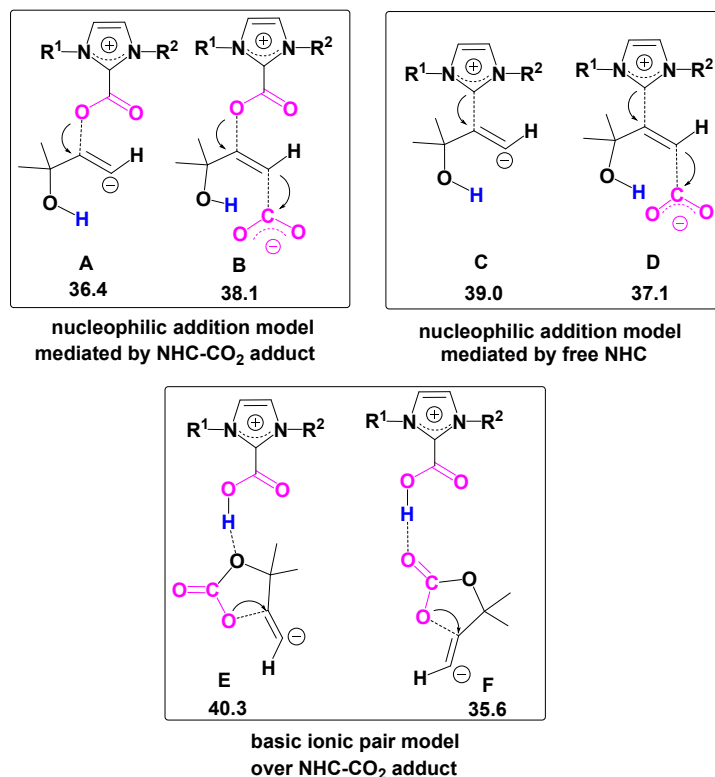


Fig. S1. Possible activation modes for the carboxylative cyclization of **1a** with CO<sub>2</sub> over the NHC-CO<sub>2</sub> adduct. The relative Gibbs free energies ( $\Delta G_{\text{sol},298\text{K}}$ , in kcal mol<sup>-1</sup>) of the TS models are labelled below.

From Fig. S1, it is clear that the relative free energies of the TSs for the nucleophilic addition model mediated by either the NHC-CO<sub>2</sub> adduct or free NHC and the basic ionic pair model over the NHC-CO<sub>2</sub> adduct are much higher than for the basic ionic pair mechanism mediated by the free NHC. These computed energy barriers are too high for the reaction to be occurred. Therefore, the nucleophilic addition mechanism and the basic ionic pair mechanism mediated by the NHC-CO<sub>2</sub> adduct can be safely ruled out for the NHC-CO<sub>2</sub>/**1a**/CO<sub>2</sub> reaction system.

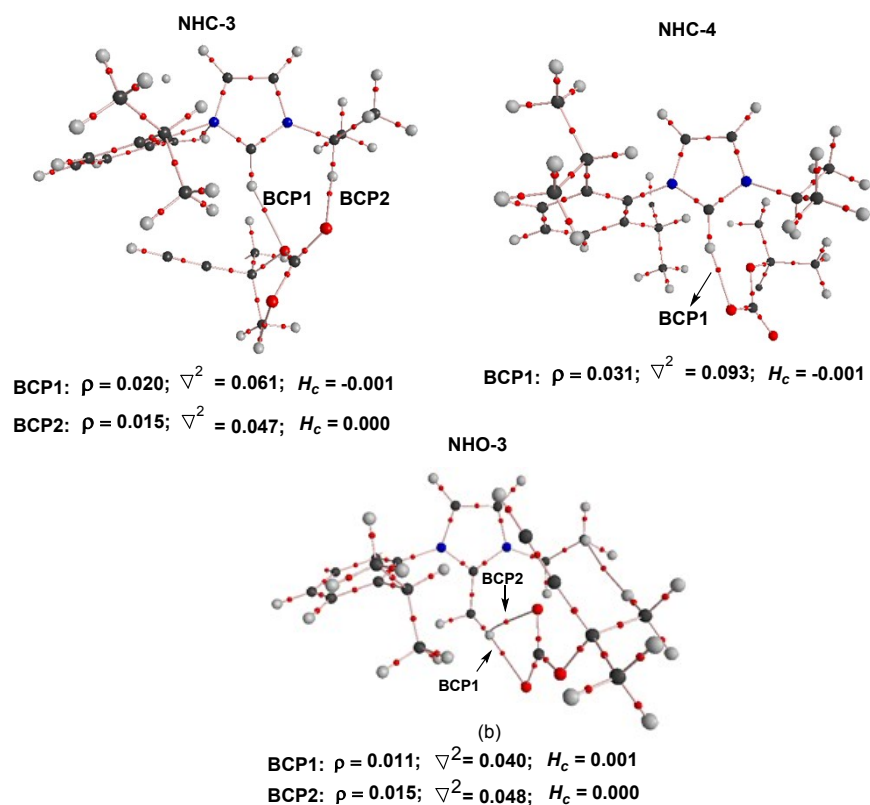


Fig. S2 AIM analysis of the key IMs involved in the NHC- and NHO-mediated basic ionic pair mechanism. The electron density ( $\rho$ ), Laplacian ( $\nabla^2$ ), and total electron density ( $H_c$ ) of the selected BCPs are given in a.u.

In AIM theory, the positive Laplacian value of the charge density ( $\nabla^2$ ) on (3, -1) bond critical point (BCP) reveals that hydrogen and hydrogen acceptor is interacted via H-bond, and the H-bond in ionic pair is termed as doubly ionic H-bond.<sup>[1]</sup> According to the suggested classification for doubly ionic H-bond,<sup>[1]</sup> the doubly ionic H-bonds at BCP1 in IM NHC-4 belong to the strong hydrogen bond ( $\rho > 0.02$  a.u. and  $H_c < 0$ ), while the two doubly ionic H-bonds at BCP1 and BCP2 in IM NHC-3 and NHO-3 are the medium strengthened H-bond ( $0.02 \text{ a.u.} < \rho < 0.05 \text{ a.u.}$ ,  $H_c \geq 0$ ).



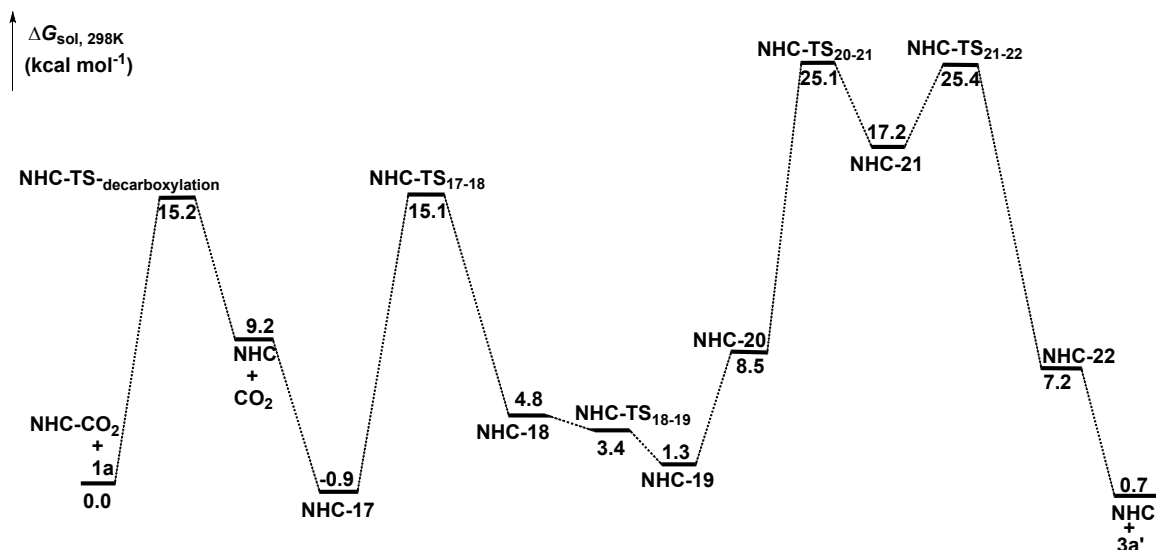


Fig. S5 Energy profile of the NHC-mediated nucleophilic acylation mechanism for the ring-opening transesterification of **2a** with **1a**.

In NHC-mediated nucleophilic acylation mechanism, the **2a**-NHC complex is initially formed via the nucleophilic addition of the carbene carbon atom of the NHC to the carbonyl carbon atom of the cyclic carbonate **2a**. Then, the enolate intermediate is generated by the C–O bond cleavage. Finally, the nucleophilic attack of the alcohol oxygen atom of **1a** to the carbonyl carbon atom of the enolate intermediate takes place, which is coupled with the proton transfer from the alcohol hydrogen atom of **1a** to the enolate oxygen atom, yielding the side-product **3a'**. However, the calculation shows that this process needs to overcome a high energy barrier of 25.1 kcal mol<sup>-1</sup> at NHC-TS<sub>20-21</sub> (see Fig.S5 in the Supporting Information), which is larger than the energy height of the highest stationary point (EHHSP) of 17.0 and 17.3 kcal mol<sup>-1</sup> at NHC-TS<sub>10-11</sub> and NHC-TS<sub>14-16</sub> in the basic ionic pair mechanism (see Fig.5 & 6 in the revised manuscript). In addition, we also considered the possibility that involves the nucleophilic attack of the alcohol oxygen atom of **1a** to the carbonyl carbon atom of the enolate intermediate and the proton transfer from the alcohol hydrogen atom of **1a** to the terminal carbon atom of the C=C bond. However, all attempts to locate the concerted transition state failed. Considering that the proton affinity of the carbon atom is inferior to the oxygen atom, it is reasonable to predict that this process will require the higher energy barrier (refer to the

energetic relationship between NHC-TS<sub>14-15</sub> and NHC-TS<sub>14-16</sub>). Thus, this mechanism could be excluded for the ring-opening side reaction.

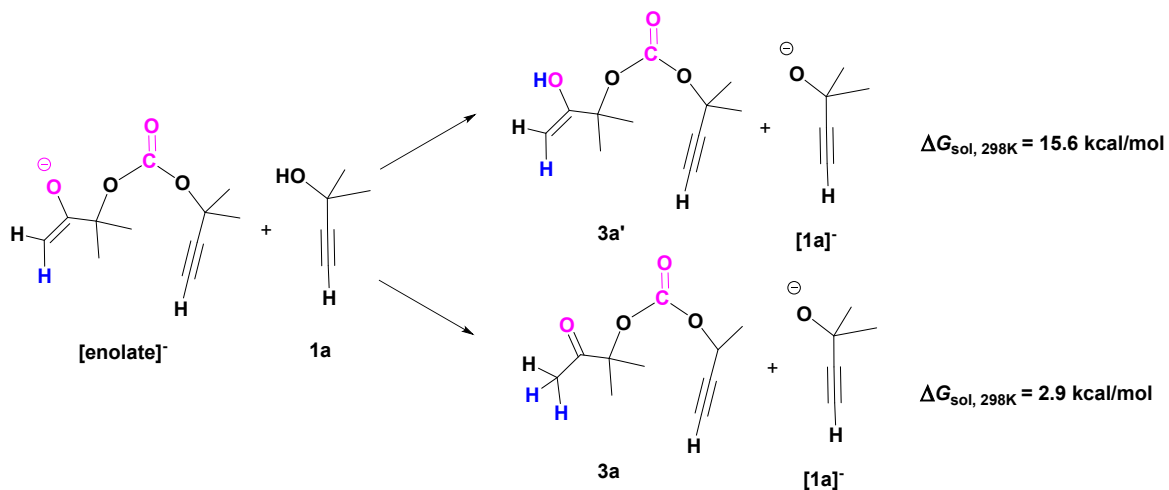


Fig. S6 Protonation of the enolate anion with **1a**.

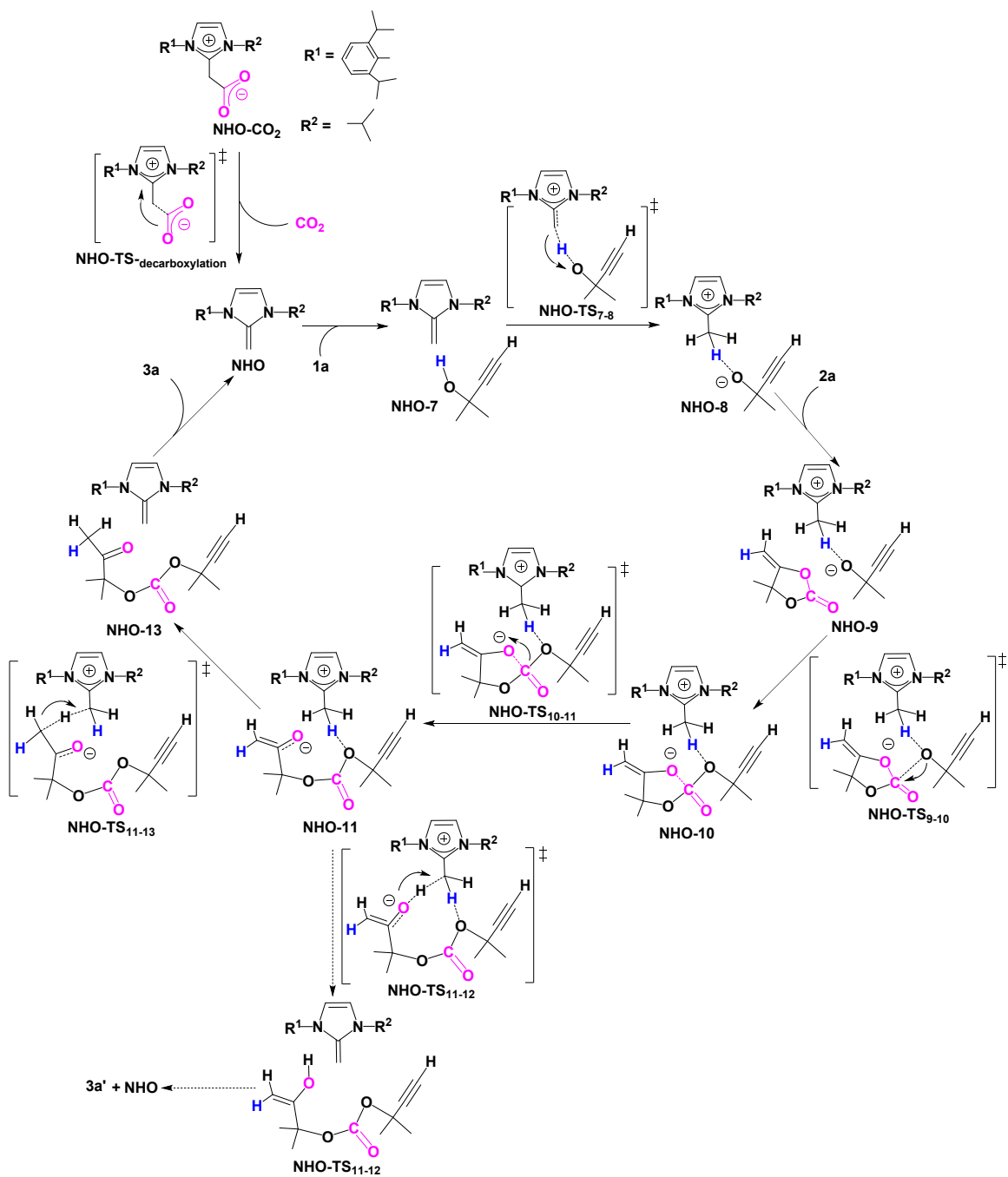


Fig. S7 The NHO-mediated basic ionic pair mechanism for the ring-opening transesterification of **2a** with **1a**.

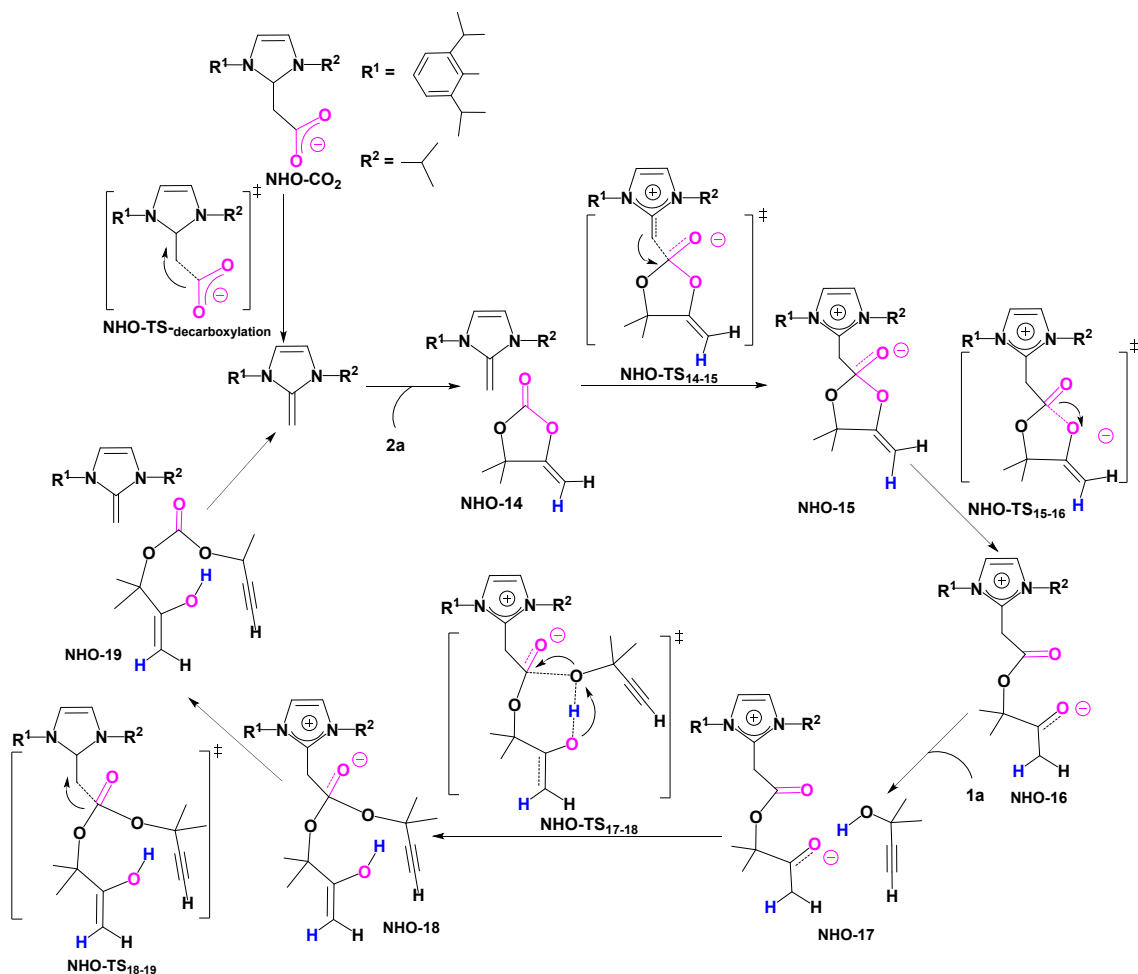


Fig. S8 The NHO-mediated nucleophilic acylation mechanism for the ring-opening transesterification of **2a** with **1a**.

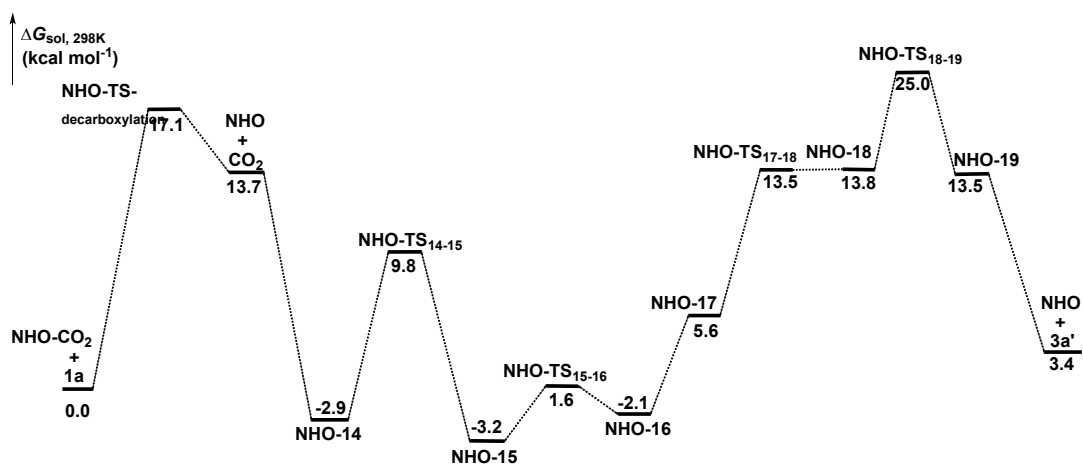


Fig. S9 Energy profile of the NHO-mediated nucleophilic acylation mechanism of the ring-opening transesterification of **2a** with **1a**.

### S3: Energies of the optimized species

**Table S1** Energy of species involved in the NHC-CO<sub>2</sub>/1a/CO<sub>2</sub> system

| Species                           | $H_c^a$<br>(hartree) | $G_c^b$<br>(hartree) | $E_{\text{sln}}^c$<br>(hartree) | $\Delta H_{\text{sol},298\text{K}}^d$<br>(kcal/mol) | $\Delta G_{\text{sol},298\text{K}}^e$<br>(kcal/mol) |
|-----------------------------------|----------------------|----------------------|---------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| CO <sub>2</sub>                   | 0.01421              | -0.00724             | -188.57422                      | -                                                   | -                                                   |
| 1a                                | 0.12602              | 0.08789              | -270.46847                      | -                                                   | -                                                   |
| 2a                                | 0.14535              | 0.10244              | -459.08770                      | -25.0                                               | -19.1                                               |
| NHC-CO <sub>2</sub>               | 0.44947              | 0.37167              | -999.53278                      | -                                                   | -                                                   |
| NHC-TS <sub>decarboxylation</sub> | 0.44629              | 0.36595              | -999.50285                      | 16.8                                                | 15.2                                                |
| NHC                               | 0.43081              | 0.35970              | -810.92888                      | 15.8                                                | 9.2                                                 |
| NHC-1                             | 0.57530              | 0.47500              | -1269.99510                     | 3.7                                                 | 9.1                                                 |
| NHC-TS <sub>1-2</sub>             | 0.57080              | 0.47316              | -1269.98381                     | 8.0                                                 | 15.0                                                |
| NHC-2                             | 0.57528              | 0.47792              | -1269.98498                     | 10.1                                                | 14.6                                                |
| NHC-TS <sub>2-3</sub>             | 0.57449              | 0.47921              | -1269.98447                     | 9.9                                                 | 18.4                                                |
| NHC-3                             | 0.57747              | 0.48202              | -1270.01351                     | -6.5                                                | 1.9                                                 |
| NHC-TS <sub>3-4</sub>             | 0.57649              | 0.48084              | -1270.00947                     | -4.5                                                | 3.7                                                 |
| NHC-4                             | 0.57759              | 0.48286              | -1270.01245                     | -5.7                                                | 3.1                                                 |
| NHC-TS <sub>4-5</sub>             | 0.57622              | 0.48285              | -1269.97626                     | 22.6                                                | 25.8                                                |
| NHC-5                             | 0.57853              | 0.48542              | -1269.98090                     | 14.7                                                | 24.5                                                |
| NHC-TS <sub>5-6</sub>             | 0.57596              | 0.48379              | -1269.97921                     | 14.1                                                | 24.6                                                |
| NHC-6                             | 0.57786              | 0.48342              | -1269.97991                     | 14.9                                                | 23.9                                                |
| NHC-TS <sub>6-7</sub>             | 0.57301              | 0.48071              | -1269.97545                     | 14.6                                                | 25.0                                                |
| NHC-7                             | 0.57798              | 0.48037              | -1270.02355                     | -12.4                                               | -5.4                                                |
| NHC-8                             | 0.72116              | 0.59750              | -1729.04843                     | 0.6                                                 | 22.2                                                |
| NHC-TS <sub>8-9</sub>             | 0.71773              | 0.59476              | -1729.04767                     | -1.1                                                | 21.0                                                |
| NHC-9                             | 0.72540              | 0.60411              | -1729.10049                     | -29.4                                               | -6.3                                                |
| NHC-TS <sub>3-5'</sub>            | 0.57656              | 0.48356              | -1269.97542                     | 16.9                                                | 26.8                                                |
| NHC-5'                            | 0.57587              | 0.48605              | -1269.97893                     | 14.2                                                | 26.1                                                |
| A                                 | 0.57460              | 0.48316              | -1269.95560                     | 28.1                                                | 36.4                                                |
| B                                 | 0.59251              | 0.49009              | -1458.53821                     | 25.1                                                | 38.1                                                |
| C                                 | 0.55743              | 0.47106              | -1081.36917                     | 33.9                                                | 39.0                                                |
| D                                 | 0.57408              | 0.47663              | -1269.95204                     | 30.0                                                | 37.1                                                |
| E                                 | 0.59386              | 0.49171              | -1458.53639                     | 27.1                                                | 40.2                                                |
| F                                 | 0.59248              | 0.49327              | -1458.54569                     | 20.4                                                | 35.4                                                |

- a*:  $H_c$  is the enthalpy correction calculated at the M06-2X(SMD, CH<sub>2</sub>Cl<sub>2</sub>)/6-31+G\* level;  
*b*:  $G_c$  is the Gibbs free energy correction calculated at the M06-2X(SMD, CH<sub>2</sub>Cl<sub>2</sub>)/6-31+G\* level;  
*c*:  $E_{\text{sln}}$  is the single point energy after PCM correction calculated at the M06-2X/(SMD, CH<sub>2</sub>Cl<sub>2</sub>)/6-311++G\*\* level  
*d*:  $\Delta H_{\text{sol}, 298\text{K}}$  is the relative enthalpy energy,  $\Delta H_{\text{sol}, 298\text{K}} = \Delta H_c + \Delta E_{\text{sln}}$   
*e*:  $\Delta G_{\text{sol}, 298\text{K}}$  is the relative Gibbs free energy,  $\Delta G_{\text{sol}, 298\text{K}} = \Delta G_c + \Delta E_{\text{sln}} + RT \ln(24.5) + (n - m) \times 2.6$ , n and m are components.

**Table S2** Energy of species involved in the uncatalyzed ring-opening transesterification of 2a with 1a

| Species                       | $H_c$<br>(hartree) | $G_c$<br>(hartree) | $E_{\text{sln}}$<br>(hartree) | $\Delta H_{\text{sol}, 298\text{K}}$<br>(kcal/mol) | $\Delta G_{\text{sol}, 298\text{K}}$<br>(kcal/mol) |
|-------------------------------|--------------------|--------------------|-------------------------------|----------------------------------------------------|----------------------------------------------------|
| CO <sub>2</sub>               | 0.01421            | -0.00724           | -188.57422                    | -                                                  | -                                                  |
| 1a                            | 0.12602            | 0.08789            | -270.46847                    | -                                                  | -                                                  |
| 2a                            | 0.14535            | 0.10244            | -459.08770                    | -25.0                                              | -19.1                                              |
| <i>b</i> -1                   | 0.27323            | 0.20886            | -729.56528                    | -29.6                                              | -17.7                                              |
| <i>b</i> -TS <sub>1-2</sub>   | 0.26849            | 0.20878            | -729.47954                    | 21.2                                               | 36.1                                               |
| <i>b</i> -2                   | 0.27398            | 0.21215            | -729.55804                    | -24.6                                              | -11.0                                              |
| <i>b</i> -TS <sub>2-3</sub>   | 0.26724            | 0.20521            | -729.46538                    | 29.3                                               | 42.7                                               |
| <i>b</i> -3                   | 0.27403            | 0.21192            | -729.57811                    | -37.1                                              | -23.8                                              |
| <i>b</i> -TS <sub>2-3</sub> ' | 0.39502            | 0.31723            | -999.98804                    | -3.6                                               | 22.0                                               |

**Table S3** Energy of species involved in the NHC-mediated ring-opening transesterification of 2a with 1a

| Species                 | $H_c$<br>(hartree) | $G_c$<br>(hartree) | $E_{\text{sln}}$<br>(hartree) | $\Delta H_{\text{sol},298\text{K}}$<br>(kcal/mol) | $\Delta G_{\text{sol},298\text{K}}$<br>(kcal/mol) |
|-------------------------|--------------------|--------------------|-------------------------------|---------------------------------------------------|---------------------------------------------------|
| NHC-10                  | 0.55783            | 0.47074            | -1081.41140                   | 7.6                                               | 12.3                                              |
| NHC-TS <sub>10-11</sub> | 0.55309            | 0.46348            | -1081.39666                   | 13.9                                              | 17.0                                              |
| NHC-11                  | 0.55808            | 0.46899            | -1081.39772                   | 16.4                                              | 16.6                                              |
| NHC-12                  | 0.70532            | 0.59327            | -1540.49113                   | -11.1                                             | 8.9                                               |
| NHC-TS <sub>12-13</sub> | 0.70403            | 0.59404            | -1540.48739                   | -9.5                                              | 11.8                                              |
| NHC-13                  | 0.70626            | 0.59571            | -1540.50232                   | -17.5                                             | 3.4                                               |
| NHC-TS <sub>13-14</sub> | 0.70518            | 0.59698            | -1540.50025                   | -16.9                                             | 5.5                                               |
| NHC-14                  | 0.70707            | 0.59637            | -1540.51075                   | -22.3                                             | -1.4                                              |
| NHC-TS <sub>14-15</sub> | 0.70169            | 0.59328            | -1540.50010                   | -19.0                                             | 3.3                                               |
| NHC-15                  | 0.70565            | 0.59173            | -1540.50255                   | -18.0                                             | 0.8                                               |
| NHC-TS <sub>14-16</sub> | 0.70101            | 0.59080            | -1540.47530                   | -3.8                                              | 17.3                                              |
| NHC-16                  | 0.70755            | 0.59283            | -1540.51565                   | -25.0                                             | -6.7                                              |
| NHC-17                  | 0.57841            | 0.48653            | -1270.02250                   | -11.5                                             | -0.9                                              |
| NHC-TS <sub>17-18</sub> | 0.57664            | 0.48778            | -1269.99819                   | 2.6                                               | 15.1                                              |
| NHC-18                  | 0.57852            | 0.48872            | -1270.01555                   | -7.1                                              | 4.8                                               |
| NHC-TS <sub>18-19</sub> | 0.57604            | 0.48805            | -1270.01712                   | -9.6                                              | 3.4                                               |
| NHC-19                  | 0.57893            | 0.48702            | -1270.01947                   | -9.3                                              | 1.3                                               |
| NHC-20                  | 0.70699            | 0.59885            | -1540.49738                   | -13.9                                             | 8.5                                               |
| NHC-TS <sub>20-21</sub> | 0.70319            | 0.60002            | -1540.47215                   | -0.5                                              | 25.1                                              |
| NHC-21                  | 0.70764            | 0.60303            | -1540.48777                   | -7.5                                              | 17.2                                              |
| NHC-TS <sub>21-22</sub> | 0.70560            | 0.60064            | -1540.47223                   | 1.0                                               | 25.4                                              |
| NHC-22                  | 0.70652            | 0.59385            | -1540.49444                   | -12.4                                             | 7.2                                               |

**Table S4** Energy of species involved in the NHO-mediated ring-opening transesterification of 2a with 1a

| Species                 | $H_c$<br>(hartree) | $G_c$<br>(hartree) | $E_{\text{sln}}$<br>(hartree) | $\Delta H_{\text{sol},298\text{K}}$<br>(kcal/mol) | $\Delta G_{\text{sol},298\text{K}}$<br>(kcal/mol) |
|-------------------------|--------------------|--------------------|-------------------------------|---------------------------------------------------|---------------------------------------------------|
| NHO-7                   | 0.58699            | 0.49430            | -1120.71624                   | 11.3                                              | 13.6                                              |
| NHO-TS <sub>7-8</sub>   | 0.58252            | 0.49328            | -1120.69785                   | 20.0                                              | 24.5                                              |
| NHO-8                   | 0.58814            | 0.49672            | -1120.70328                   | 20.1                                              | 23.2                                              |
| NHO-9                   | 0.73524            | 0.61972            | -1579.80617                   | -13.4                                             | 5.6                                               |
| NHO-TS <sub>9-10</sub>  | 0.73406            | 0.62009            | -1579.79147                   | -4.9                                              | 15.1                                              |
| NHO-10                  | 0.73613            | 0.62568            | -1579.81207                   | -16.5                                             | 5.6                                               |
| NHO-TS <sub>10-11</sub> | 0.73497            | 0.62394            | -1579.81065                   | -16.3                                             | 5.4                                               |
| NHO-11                  | 0.73590            | 0.62249            | -1579.81725                   | -19.9                                             | 0.4                                               |
| NHO-TS <sub>11-12</sub> | 0.73034            | 0.61971            | -1579.79668                   | -10.5                                             | 11.6                                              |
| NHO-12                  | 0.73484            | 0.62312            | -1579.80270                   | -11.4                                             | 9.9                                               |
| NHO-TS <sub>11-13</sub> | 0.73093            | 0.62061            | -1579.78826                   | -4.8                                              | 17.4                                              |
| NHO-13                  | 0.73526            | 0.61878            | -1579.81747                   | -20.4                                             | -2.1                                              |
| NHO-14                  | 0.60685            | 0.50975            | -1309.33224                   | -11.4                                             | -2.9                                              |
| NHO-TS <sub>14-15</sub> | 0.60544            | 0.51324            | -1309.31539                   | -1.7                                              | 9.8                                               |
| NHO-15                  | 0.60820            | 0.51656            | -1309.33948                   | -15.1                                             | -3.2                                              |
| NHO-TS <sub>15-16</sub> | 0.60751            | 0.51607            | -1309.33136                   | -10.4                                             | 1.6                                               |
| NHO-16                  | 0.60875            | 0.51488            | -1309.33612                   | -12.7                                             | -2.1                                              |
| NHO-17                  | 0.73673            | 0.62422            | -1579.82578                   | -24.7                                             | -3.9                                              |
| NHO-TS <sub>17-18</sub> | 0.73372            | 0.62469            | -1579.79849                   | -9.5                                              | 13.5                                              |
| NHO-18                  | 0.73760            | 0.62975            | -1579.80321                   | -10.0                                             | 13.8                                              |
| NHO-TS <sub>18-19</sub> | 0.73413            | 0.62509            | -1579.78064                   | 2.0                                               | 25.0                                              |
| NHO-19                  | 0.73612            | 0.62346            | -1579.79736                   | -7.3                                              | 13.5                                              |

#### S4: Cartesian coordinates of optimized species.

|                   |              |              |              |                       |              |              |              |
|-------------------|--------------|--------------|--------------|-----------------------|--------------|--------------|--------------|
| CO <sub>2</sub> : |              |              |              | 1                     | 1.587449000  | -2.024458000 | -1.238374000 |
| 6                 | 0.000000000  | 0.000721000  | 0.000000000  |                       |              |              |              |
| 8                 | 1.162399000  | 0.025664000  | 0.000000000  | NHC-CO <sub>2</sub> : |              |              |              |
| 8                 | -1.162399000 | -0.026205000 | 0.000000000  | 7                     | 2.306522000  | -0.351372000 | -0.441721000 |
| 1a:               |              |              |              | 6                     | 1.187358000  | -0.169046000 | 0.271040000  |
| 6                 | -1.165848000 | 0.019568000  | -0.027791000 | 7                     | 0.156110000  | -0.171898000 | -0.591783000 |
| 6                 | -2.373353000 | 0.022080000  | -0.077482000 | 6                     | 1.076290000  | 0.041851000  | 1.796312000  |
| 6                 | 0.316640000  | 0.003037000  | 0.031849000  | 6                     | -1.233967000 | 0.072941000  | -0.280860000 |
| 1                 | -3.444344000 | 0.027568000  | -0.118077000 | 6                     | -1.668455000 | 1.404285000  | -0.224088000 |
| 6                 | 0.853633000  | -1.183067000 | -0.771121000 | 6                     | 0.633859000  | -0.343741000 | -1.874315000 |
| 6                 | 0.876509000  | 1.322303000  | -0.491865000 | 1                     | -0.028799000 | -0.356251000 | -2.727102000 |
| 8                 | 0.741187000  | -0.087285000 | 1.392167000  | 6                     | -3.022912000 | 1.621592000  | 0.047834000  |
| 1                 | 0.438567000  | -0.937588000 | 1.755101000  | 1                     | -3.396340000 | 2.640311000  | 0.114373000  |
| 1                 | 0.474346000  | -2.127384000 | -0.365733000 | 6                     | -2.080864000 | -1.026388000 | -0.090357000 |
| 1                 | 1.946982000  | -1.185539000 | -0.715079000 | 6                     | 3.688215000  | -0.422028000 | 0.098152000  |
| 1                 | 0.550384000  | -1.111190000 | -1.820139000 | 1                     | 3.566235000  | -0.563639000 | 1.171653000  |
| 1                 | 0.580471000  | 1.477736000  | -1.533022000 | 6                     | -3.894655000 | 0.554013000  | 0.237861000  |
| 1                 | 0.509339000  | 2.157978000  | 0.110907000  | 1                     | -4.943884000 | 0.743807000  | 0.447313000  |
| 1                 | 1.969273000  | 1.293171000  | -0.432838000 | 8                     | 0.085424000  | -0.498248000 | 2.313801000  |
| 2a:               |              |              |              | 8                     | 1.994983000  | 0.725112000  | 2.285686000  |
| 8                 | -0.973941000 | 1.118299000  | 0.023656000  | 6                     | -1.587511000 | -2.461415000 | -0.134422000 |
| 6                 | -1.548341000 | -0.110236000 | -0.015820000 | 1                     | -0.505049000 | -2.451538000 | -0.299027000 |
| 8                 | -2.732637000 | -0.287622000 | -0.017644000 | 6                     | 4.391865000  | 0.902739000  | -0.162905000 |
| 6                 | 0.404046000  | 0.990203000  | 0.001624000  | 1                     | 3.843690000  | 1.726557000  | 0.302998000  |
| 6                 | 1.213829000  | 2.037066000  | -0.005581000 | 1                     | 4.480555000  | 1.092285000  | -1.238827000 |
| 6                 | 0.718814000  | -0.492854000 | -0.000739000 | 1                     | 5.399299000  | 0.868448000  | 0.263374000  |
| 1                 | 0.826074000  | 3.050116000  | 0.005518000  | 6                     | -0.729059000 | 2.584074000  | -0.411431000 |
| 6                 | 1.375172000  | -0.947639000 | 1.292729000  | 1                     | 0.244514000  | 2.208577000  | -0.745440000 |
| 6                 | 1.478664000  | -0.935708000 | -1.238706000 | 6                     | 1.984114000  | -0.463584000 | -1.778337000 |
| 8                 | -0.619736000 | -1.064665000 | -0.055243000 | 1                     | 2.733409000  | -0.621038000 | -2.539190000 |
| 1                 | 2.287570000  | 1.884228000  | -0.020581000 | 6                     | -3.427429000 | -0.755826000 | 0.165760000  |
| 1                 | 0.775132000  | -0.646751000 | 2.156750000  | 1                     | -4.116604000 | -1.582382000 | 0.320977000  |
| 1                 | 2.366231000  | -0.491882000 | 1.378104000  | 6                     | 4.419461000  | -1.613863000 | -0.504426000 |
| 1                 | 1.485547000  | -2.036232000 | 1.291745000  | 1                     | 3.855954000  | -2.540540000 | -0.357648000 |
| 1                 | 0.954249000  | -0.624227000 | -2.146560000 | 1                     | 5.388106000  | -1.718029000 | -0.006926000 |
| 1                 | 2.475158000  | -0.483881000 | -1.233790000 | 1                     | 4.606950000  | -1.477494000 | -1.574634000 |
|                   |              |              |              | 6                     | -2.233475000 | -3.229152000 | -1.294257000 |
|                   |              |              |              | 1                     | -2.036807000 | -2.745243000 | -2.257691000 |

|                         |              |              |              |      |              |              |              |
|-------------------------|--------------|--------------|--------------|------|--------------|--------------|--------------|
| 1                       | -3.320238000 | -3.293086000 | -1.163875000 | 6    | -0.871743000 | 2.537633000  | -0.590621000 |
| 1                       | -1.840081000 | -4.250941000 | -1.337671000 | 1    | 0.107110000  | 2.199302000  | -0.945602000 |
| 6                       | -1.844797000 | -3.169778000 | 1.200659000  | 6    | 1.988511000  | -0.410190000 | -1.901493000 |
| 1                       | -1.384341000 | -2.617368000 | 2.025327000  | 1    | 2.739652000  | -0.541413000 | -2.666727000 |
| 1                       | -1.421469000 | -4.180548000 | 1.175435000  | 6    | -3.331509000 | -0.928757000 | 0.238474000  |
| 1                       | -2.919105000 | -3.262609000 | 1.398221000  | 1    | -3.961669000 | -1.788883000 | 0.452653000  |
| 6                       | -0.517274000 | 3.313105000  | 0.921434000  | 6    | 4.379660000  | -1.606932000 | -0.425475000 |
| 1                       | -0.120084000 | 2.638115000  | 1.687348000  | 1    | 3.796397000  | -2.488202000 | -0.139818000 |
| 1                       | -1.463296000 | 3.726946000  | 1.290073000  | 1    | 5.352566000  | -1.659581000 | 0.073162000  |
| 1                       | 0.190812000  | 4.139593000  | 0.793482000  | 1    | 4.553905000  | -1.636995000 | -1.507102000 |
| 6                       | -1.240508000 | 3.548034000  | -1.487586000 | 6    | -2.140568000 | -3.361653000 | -1.247505000 |
| 1                       | -1.401606000 | 3.033275000  | -2.441295000 | 1    | -2.063397000 | -2.885058000 | -2.231359000 |
| 1                       | -0.509753000 | 4.347935000  | -1.650018000 | 1    | -3.204431000 | -3.483756000 | -1.012411000 |
| 1                       | -2.185275000 | 4.015953000  | -1.188998000 | 1    | -1.695503000 | -4.360645000 | -1.317253000 |
| NHC-TS-decarboxylation: |              |              |              | 6    | -1.503883000 | -3.231708000 | 1.192174000  |
| 7                       | 2.295574000  | -0.302126000 | -0.554738000 | 1    | -0.985456000 | -2.650614000 | 1.962172000  |
| 6                       | 1.190268000  | -0.147052000 | 0.214051000  | 1    | -1.040577000 | -4.223401000 | 1.137489000  |
| 7                       | 0.176895000  | -0.163332000 | -0.694850000 | 1    | -2.545263000 | -3.364470000 | 1.508875000  |
| 6                       | 0.997522000  | 0.364589000  | 2.537414000  | 6    | -0.647992000 | 3.351092000  | 0.689373000  |
| 6                       | -1.208996000 | 0.009438000  | -0.358407000 | 1    | -0.173209000 | 2.745205000  | 1.468596000  |
| 6                       | -1.726817000 | 1.313448000  | -0.307460000 | 1    | -1.599625000 | 3.725295000  | 1.085269000  |
| 6                       | 0.637382000  | -0.321632000 | -1.991800000 | 1    | -0.002556000 | 4.212893000  | 0.484156000  |
| 1                       | -0.029362000 | -0.352481000 | -2.841970000 | 6    | -1.484808000 | 3.416079000  | -1.686896000 |
| 6                       | -3.073343000 | 1.462490000  | 0.038543000  | 1    | -1.654153000 | 2.846892000  | -2.607772000 |
| 1                       | -3.502691000 | 2.459821000  | 0.100028000  | 1    | -0.812274000 | 4.249367000  | -1.919249000 |
| 6                       | -1.989167000 | -1.127303000 | -0.099828000 | 1    | -2.443525000 | 3.841096000  | -1.368151000 |
| 6                       | 3.665027000  | -0.324362000 | -0.015823000 | NHC: |              |              |              |
| 1                       | 3.534698000  | -0.307882000 | 1.068482000  | 7    | -2.464046000 | -0.000380000 | -0.045417000 |
| 6                       | -3.869186000 | 0.353125000  | 0.311433000  | 6    | -1.300470000 | -0.000028000 | -0.748025000 |
| 1                       | -4.913157000 | 0.488707000  | 0.581740000  | 7    | -0.362944000 | -0.000170000 | 0.246267000  |
| 8                       | -0.116177000 | 0.041824000  | 2.724658000  | 6    | 1.054443000  | 0.000070000  | 0.019529000  |
| 8                       | 2.081867000  | 0.777645000  | 2.735036000  | 6    | 1.723832000  | 1.231193000  | -0.076930000 |
| 6                       | -1.425130000 | -2.536267000 | -0.171534000 | 6    | -0.923469000 | -0.000581000 | 1.514318000  |
| 1                       | -0.368789000 | -2.470500000 | -0.450621000 | 1    | -0.323401000 | -0.000710000 | 2.413343000  |
| 6                       | 4.420240000  | 0.926364000  | -0.452282000 | 6    | 3.105777000  | 1.206118000  | -0.290877000 |
| 1                       | 3.885086000  | 1.830019000  | -0.142444000 | 1    | 3.649246000  | 2.144454000  | -0.373773000 |
| 1                       | 4.545472000  | 0.949416000  | -1.541121000 | 6    | 1.724261000  | -1.230834000 | -0.076899000 |
| 1                       | 5.415131000  | 0.937899000  | 0.004530000  | 6    | -3.793840000 | -0.000249000 | -0.671633000 |

|        |              |              |              |   |              |              |              |
|--------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1      | -3.593645000 | -0.000318000 | -1.746344000 | 7 | 0.801549000  | 1.047541000  | -0.762894000 |
| 6      | 3.792762000  | 0.000538000  | -0.398885000 | 6 | 1.773872000  | 0.001591000  | -0.617005000 |
| 1      | 4.866423000  | 0.000703000  | -0.567575000 | 6 | 1.616462000  | -1.177547000 | -1.362298000 |
| 6      | 1.003109000  | -2.562810000 | 0.043163000  | 6 | 0.976393000  | 2.147151000  | -1.587539000 |
| 1      | -0.056423000 | -2.364416000 | 0.231399000  | 1 | 1.868944000  | 2.290391000  | -2.179932000 |
| 6      | -4.556482000 | 1.266421000  | -0.296866000 | 6 | 2.579536000  | -2.179583000 | -1.199774000 |
| 1      | -3.981293000 | 2.159213000  | -0.562454000 | 1 | 2.482054000  | -3.110175000 | -1.754042000 |
| 1      | -4.768043000 | 1.294326000  | 0.778281000  | 6 | 2.845717000  | 0.201757000  | 0.267323000  |
| 1      | -5.511736000 | 1.296868000  | -0.830539000 | 6 | -2.281128000 | 2.688089000  | -0.111478000 |
| 6      | 1.002258000  | 2.562921000  | 0.043321000  | 1 | -2.735711000 | 1.813755000  | 0.364426000  |
| 1      | -0.057211000 | 2.364170000  | 0.231533000  | 6 | 3.657973000  | -2.004933000 | -0.336910000 |
| 6      | -2.266674000 | -0.000712000 | 1.326141000  | 1 | 4.397842000  | -2.793569000 | -0.226561000 |
| 1      | -3.079447000 | -0.000957000 | 2.038307000  | 6 | 2.992223000  | 1.465779000  | 1.097183000  |
| 6      | 3.106192000  | -1.205280000 | -0.290789000 | 1 | 2.170988000  | 2.142796000  | 0.842638000  |
| 1      | 3.650004000  | -2.143432000 | -0.373554000 | 6 | -3.138797000 | 3.121471000  | -1.294733000 |
| 6      | -4.556816000 | -1.266692000 | -0.296771000 | 1 | -3.188867000 | 2.335069000  | -2.053497000 |
| 1      | -3.981855000 | -2.159659000 | -0.562258000 | 1 | -2.746982000 | 4.033772000  | -1.758621000 |
| 1      | -5.512057000 | -1.296928000 | -0.830477000 | 1 | -4.154845000 | 3.334500000  | -0.947981000 |
| 1      | -4.768439000 | -1.294450000 | 0.778365000  | 6 | 0.440348000  | -1.395183000 | -2.299963000 |
| 6      | 1.542042000  | -3.379190000 | 1.223849000  | 1 | -0.128758000 | -0.461483000 | -2.359273000 |
| 1      | 1.467571000  | -2.819753000 | 2.163190000  | 6 | -0.147562000 | 2.896395000  | -1.456043000 |
| 1      | 2.593749000  | -3.648830000 | 1.071506000  | 1 | -0.425668000 | 3.833911000  | -1.915304000 |
| 1      | 0.970568000  | -4.308004000 | 1.332308000  | 6 | 3.788225000  | -0.824305000 | 0.389208000  |
| 6      | 1.103801000  | -3.364843000 | -1.259828000 | 1 | 4.628123000  | -0.700113000 | 1.069289000  |
| 1      | 0.695362000  | -2.802729000 | -2.106466000 | 6 | -2.112623000 | 3.801994000  | 0.916768000  |
| 1      | 0.544830000  | -4.303306000 | -1.170168000 | 1 | -1.517264000 | 3.458183000  | 1.768907000  |
| 1      | 2.146415000  | -3.615520000 | -1.488972000 | 1 | -3.091749000 | 4.125250000  | 1.284980000  |
| 6      | 1.102768000  | 3.365253000  | -1.259501000 | 1 | -1.612297000 | 4.668422000  | 0.468201000  |
| 1      | 0.694512000  | 2.803248000  | -2.106297000 | 6 | 4.307389000  | 2.189780000  | 0.787453000  |
| 1      | 2.145333000  | 3.616204000  | -1.488563000 | 1 | 4.388581000  | 2.432535000  | -0.278053000 |
| 1      | 0.543585000  | 4.303572000  | -1.169663000 | 1 | 5.173582000  | 1.576257000  | 1.061284000  |
| 6      | 1.540929000  | 3.379260000  | 1.224160000  | 1 | 4.365886000  | 3.124714000  | 1.356132000  |
| 1      | 1.466545000  | 2.819677000  | 2.163420000  | 6 | 2.881661000  | 1.147745000  | 2.593337000  |
| 1      | 0.969218000  | 4.307918000  | 1.332706000  | 1 | 1.929452000  | 0.656982000  | 2.822918000  |
| 1      | 2.592579000  | 3.649188000  | 1.071930000  | 1 | 2.944631000  | 2.070430000  | 3.181501000  |
| NHC-1: |              |              |              | 1 | 3.692988000  | 0.485007000  | 2.917785000  |
| 7      | -0.963052000 | 2.218124000  | -0.565642000 | 6 | -0.492660000 | -2.476204000 | -1.740209000 |
| 6      | -0.396021000 | 1.071281000  | -0.116090000 | 1 | -0.864101000 | -2.198857000 | -0.746517000 |
|        |              |              |              | 1 | 0.032666000  | -3.434972000 | -1.648481000 |
|        |              |              |              | 1 | -1.346192000 | -2.626936000 | -2.413401000 |

|                         |              |              |              |   |              |              |              |
|-------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6                       | 0.901737000  | -1.751244000 | -3.717492000 | 6 | -3.345458000 | 2.735872000  | -1.540734000 |
| 1                       | 1.582800000  | -0.992264000 | -4.118390000 | 1 | -3.299088000 | 1.927087000  | -2.275261000 |
| 1                       | 0.036765000  | -1.819416000 | -4.386838000 | 1 | -3.001476000 | 3.663580000  | -2.011938000 |
| 1                       | 1.417933000  | -2.718071000 | -3.742242000 | 1 | -4.389672000 | 2.877534000  | -1.245681000 |
| 1                       | -1.441452000 | -0.165466000 | 0.739155000  | 6 | 0.537659000  | -1.540814000 | -2.224979000 |
| 8                       | -2.124597000 | -0.825718000 | 1.081276000  | 1 | -0.054033000 | -0.635488000 | -2.401299000 |
| 6                       | -1.687380000 | -1.392191000 | 2.302720000  | 6 | -0.318146000 | 2.791895000  | -1.530120000 |
| 6                       | -2.611592000 | -2.572036000 | 2.600614000  | 1 | -0.637802000 | 3.714468000  | -1.991978000 |
| 1                       | -2.337905000 | -3.052491000 | 3.545111000  | 6 | 3.836097000  | -0.596894000 | 0.421500000  |
| 1                       | -2.555192000 | -3.309522000 | 1.794487000  | 1 | 4.664588000  | -0.382081000 | 1.092165000  |
| 1                       | -3.641819000 | -2.207107000 | 2.671997000  | 6 | -2.479252000 | 3.553099000  | 0.695109000  |
| 6                       | -3.434703000 | -1.315408000 | -1.077423000 | 1 | -1.885835000 | 3.284920000  | 1.574938000  |
| 8                       | -3.039401000 | -0.306413000 | -1.502617000 | 1 | -3.496729000 | 3.790418000  | 1.021326000  |
| 8                       | -3.873661000 | -2.330882000 | -0.717574000 | 1 | -2.046922000 | 4.452037000  | 0.240281000  |
| 6                       | -1.755833000 | -0.349353000 | 3.424682000  | 6 | 3.964226000  | 2.559860000  | 0.528680000  |
| 1                       | -1.436642000 | -0.775167000 | 4.381866000  | 1 | 3.830861000  | 2.782906000  | -0.535768000 |
| 1                       | -1.114278000 | 0.506561000  | 3.190733000  | 1 | 4.946280000  | 2.088673000  | 0.655028000  |
| 1                       | -2.789331000 | 0.001775000  | 3.516928000  | 1 | 3.970609000  | 3.507546000  | 1.078870000  |
| 6                       | -0.289577000 | -1.879052000 | 2.165814000  | 6 | 3.021504000  | 1.391080000  | 2.556500000  |
| 6                       | 0.850562000  | -2.262935000 | 2.044021000  | 1 | 2.244169000  | 0.718132000  | 2.935092000  |
| 1                       | 1.862268000  | -2.598615000 | 1.928873000  | 1 | 2.953687000  | 2.337677000  | 3.104167000  |
| NHC-TS <sub>1-2</sub> : |              |              |              | 1 | 3.998207000  | 0.946093000  | 2.779111000  |
| 7                       | -1.137512000 | 2.049926000  | -0.701508000 | 6 | -0.367172000 | -2.566669000 | -1.529619000 |
| 6                       | -0.502484000 | 0.954219000  | -0.257957000 | 1 | -0.748930000 | -2.175782000 | -0.578702000 |
| 7                       | 0.726565000  | 0.997721000  | -0.810262000 | 1 | 0.189360000  | -3.488255000 | -1.317610000 |
| 6                       | 1.767608000  | 0.024600000  | -0.610540000 | 1 | -1.214569000 | -2.826766000 | -2.176651000 |
| 6                       | 1.701734000  | -1.186698000 | -1.315420000 | 6 | 1.005397000  | -2.061527000 | -3.588248000 |
| 6                       | 0.862613000  | 2.123574000  | -1.603646000 | 1 | 1.685062000  | -1.354452000 | -4.076618000 |
| 1                       | 1.775893000  | 2.335858000  | -2.140117000 | 1 | 0.140631000  | -2.212830000 | -4.243721000 |
| 6                       | 2.741188000  | -2.101034000 | -1.116961000 | 1 | 1.521475000  | -3.023548000 | -3.495756000 |
| 1                       | 2.719153000  | -3.056403000 | -1.634933000 | 1 | -1.100617000 | 0.100199000  | 0.468618000  |
| 6                       | 2.811117000  | 0.342245000  | 0.272577000  | 8 | -1.989520000 | -0.689532000 | 1.100963000  |
| 6                       | -2.515506000 | 2.404990000  | -0.307279000 | 6 | -1.586678000 | -1.218435000 | 2.316763000  |
| 1                       | -2.901744000 | 1.500876000  | 0.172889000  | 6 | -2.469761000 | -2.420137000 | 2.691786000  |
| 6                       | 3.802950000  | -1.806781000 | -0.266131000 | 1 | -2.179003000 | -2.852574000 | 3.656496000  |
| 1                       | 4.604061000  | -2.528835000 | -0.132514000 | 1 | -2.399879000 | -3.192506000 | 1.919671000  |
| 6                       | 2.851555000  | 1.644765000  | 1.054688000  | 1 | -3.511551000 | -2.084617000 | 2.751490000  |
| 1                       | 1.895694000  | 2.161120000  | 0.917085000  | 6 | -3.296965000 | -1.473877000 | -0.875945000 |
|                         |              |              |              | 8 | -2.952595000 | -0.528869000 | -1.465826000 |
|                         |              |              |              | 8 | -3.721645000 | -2.449876000 | -0.404926000 |

|        |              |              |              |                         |              |              |              |
|--------|--------------|--------------|--------------|-------------------------|--------------|--------------|--------------|
| 6      | -1.663394000 | -0.157757000 | 3.432336000  | 6                       | 4.325835000  | 2.212835000  | 0.815476000  |
| 1      | -1.360022000 | -0.558060000 | 4.407205000  | 1                       | 4.421235000  | 2.425349000  | -0.255306000 |
| 1      | -1.017213000 | 0.693628000  | 3.189850000  | 1                       | 5.190174000  | 1.611249000  | 1.119354000  |
| 1      | -2.697410000 | 0.200074000  | 3.501009000  | 1                       | 4.371159000  | 3.163414000  | 1.358392000  |
| 6      | -0.169452000 | -1.698178000 | 2.236702000  | 6                       | 2.876928000  | 1.222227000  | 2.632812000  |
| 6      | 0.976833000  | -2.078704000 | 2.141329000  | 1                       | 1.921187000  | 0.739831000  | 2.865383000  |
| 1      | 1.992184000  | -2.410109000 | 2.051611000  | 1                       | 2.930361000  | 2.165620000  | 3.187799000  |
| NHC-2: |              |              |              | 1                       | 3.683924000  | 0.573288000  | 2.992858000  |
| 7      | -0.934057000 | 2.161996000  | -0.668828000 | 6                       | -0.459441000 | -2.472421000 | -1.567895000 |
| 6      | -0.360613000 | 1.025531000  | -0.273410000 | 1                       | -0.863144000 | -2.053071000 | -0.638149000 |
| 7      | 0.877369000  | 0.998285000  | -0.785457000 | 1                       | 0.022089000  | -3.428576000 | -1.327458000 |
| 6      | 1.846291000  | -0.046958000 | -0.569347000 | 1                       | -1.289312000 | -2.677203000 | -2.255833000 |
| 6      | 1.701514000  | -1.252149000 | -1.271904000 | 6                       | 1.023808000  | -2.061274000 | -3.571815000 |
| 6      | 1.090218000  | 2.144371000  | -1.529466000 | 1                       | 1.773285000  | -1.404645000 | -4.027235000 |
| 1      | 2.026865000  | 2.325308000  | -2.036005000 | 1                       | 0.175620000  | -2.140047000 | -4.260662000 |
| 6      | 2.656909000  | -2.245828000 | -1.035411000 | 1                       | 1.461217000  | -3.060516000 | -3.469816000 |
| 1      | 2.572158000  | -3.200426000 | -1.547954000 | 1                       | -0.901891000 | 0.253789000  | 0.331090000  |
| 6      | 2.888100000  | 0.198270000  | 0.338215000  | 8                       | -2.224708000 | -0.582400000 | 1.040722000  |
| 6      | -2.293231000 | 2.580501000  | -0.256715000 | 6                       | -1.944326000 | -1.313148000 | 2.168084000  |
| 1      | -2.735101000 | 1.672179000  | 0.164337000  | 6                       | -2.749387000 | -2.628447000 | 2.222868000  |
| 6      | 3.710893000  | -2.032759000 | -0.151775000 | 1                       | -2.535314000 | -3.204972000 | 3.131570000  |
| 1      | 4.445426000  | -2.816471000 | 0.012745000  | 1                       | -2.520551000 | -3.247930000 | 1.349772000  |
| 6      | 3.010376000  | 1.490806000  | 1.128842000  | 1                       | -3.817903000 | -2.385082000 | 2.198439000  |
| 1      | 2.190890000  | 2.157358000  | 0.843302000  | 6                       | -3.295697000 | -1.140036000 | -1.050080000 |
| 6      | -3.085176000 | 3.047330000  | -1.469816000 | 8                       | -2.826247000 | -0.199494000 | -1.559834000 |
| 1      | -3.080930000 | 2.290814000  | -2.259160000 | 8                       | -3.859731000 | -2.108298000 | -0.729370000 |
| 1      | -2.682787000 | 3.984367000  | -1.871646000 | 6                       | -2.234848000 | -0.497401000 | 3.446336000  |
| 1      | -4.121662000 | 3.229955000  | -1.170546000 | 1                       | -1.998411000 | -1.048179000 | 4.365388000  |
| 6      | 0.545536000  | -1.514520000 | -2.222318000 | 1                       | -1.652733000 | 0.431478000  | 3.432023000  |
| 1      | 0.029737000  | -0.567165000 | -2.415463000 | 1                       | -3.299774000 | -0.235922000 | 3.453162000  |
| 6      | -0.051152000 | 2.879710000  | -1.449671000 | 6                       | -0.484308000 | -1.684792000 | 2.195150000  |
| 1      | -0.304364000 | 3.837789000  | -1.878468000 | 6                       | 0.696686000  | -1.960316000 | 2.156805000  |
| 6      | 3.825449000  | -0.822093000 | 0.525385000  | 1                       | 1.740474000  | -2.202765000 | 2.117704000  |
| 1      | 4.646715000  | -0.670473000 | 1.221776000  | NHC-TS <sub>2-3</sub> : |              |              |              |
| 6      | -2.180001000 | 3.654831000  | 0.818536000  | 7                       | -0.924195000 | 2.170572000  | -0.682328000 |
| 1      | -1.624923000 | 3.282617000  | 1.685507000  | 6                       | -0.349505000 | 1.036632000  | -0.284200000 |
| 1      | -3.181025000 | 3.948281000  | 1.149285000  | 7                       | 0.896219000  | 1.016614000  | -0.776497000 |
| 1      | -1.672562000 | 4.544710000  | 0.428346000  | 6                       | 1.863617000  | -0.029697000 | -0.555379000 |

|   |              |              |              |        |              |              |              |
|---|--------------|--------------|--------------|--------|--------------|--------------|--------------|
| 6 | 1.733752000  | -1.225483000 | -1.276779000 | 1      | 0.261475000  | -2.066298000 | -4.306735000 |
| 6 | 1.112628000  | 2.165828000  | -1.514481000 | 1      | 1.553628000  | -2.980847000 | -3.519282000 |
| 1 | 2.055143000  | 2.352878000  | -2.007857000 | 1      | -0.888178000 | 0.260094000  | 0.302999000  |
| 6 | 2.685097000  | -2.221856000 | -1.035303000 | 8      | -2.269913000 | -0.600685000 | 0.980462000  |
| 1 | 2.612105000  | -3.168604000 | -1.564033000 | 6      | -1.996330000 | -1.332597000 | 2.113805000  |
| 6 | 2.887267000  | 0.203764000  | 0.376029000  | 6      | -2.803759000 | -2.644357000 | 2.185068000  |
| 6 | -2.291509000 | 2.581753000  | -0.288793000 | 1      | -2.589021000 | -3.200215000 | 3.106016000  |
| 1 | -2.731677000 | 1.673436000  | 0.133529000  | 1      | -2.573926000 | -3.282121000 | 1.326339000  |
| 6 | 3.718405000  | -2.022281000 | -0.124637000 | 1      | -3.872480000 | -2.403192000 | 2.155929000  |
| 1 | 4.448686000  | -2.808679000 | 0.045765000  | 6      | -3.228846000 | -1.159275000 | -0.957690000 |
| 6 | 2.992588000  | 1.483630000  | 1.189392000  | 8      | -2.813185000 | -0.219045000 | -1.523725000 |
| 1 | 2.232357000  | 2.188563000  | 0.839070000  | 8      | -3.789635000 | -2.151392000 | -0.690224000 |
| 6 | -3.072518000 | 3.029444000  | -1.515935000 | 6      | -2.285867000 | -0.499170000 | 3.379710000  |
| 1 | -3.059183000 | 2.259730000  | -2.292270000 | 1      | -2.048551000 | -1.038899000 | 4.304856000  |
| 1 | -2.667493000 | 3.960836000  | -1.928269000 | 1      | -1.702797000 | 0.428787000  | 3.353049000  |
| 1 | -4.112082000 | 3.214651000  | -1.229226000 | 1      | -3.350526000 | -0.237154000 | 3.384408000  |
| 6 | 0.595524000  | -1.478861000 | -2.250710000 | 6      | -0.537762000 | -1.702836000 | 2.142189000  |
| 1 | 0.068721000  | -0.534626000 | -2.428624000 | 6      | 0.644634000  | -1.971575000 | 2.108852000  |
| 6 | -0.033776000 | 2.894871000  | -1.448216000 | 1      | 1.690067000  | -2.207594000 | 2.072467000  |
| 1 | -0.286416000 | 3.852899000  | -1.877311000 |        |              |              |              |
| 6 | 3.817592000  | -0.821234000 | 0.571856000  | NHC-3: |              |              |              |
| 1 | 4.620846000  | -0.681029000 | 1.290948000  | 7      | 1.094084000  | 2.263823000  | -0.013138000 |
| 6 | -2.197654000 | 3.666187000  | 0.778021000  | 6      | 0.455073000  | 1.099334000  | 0.033323000  |
| 1 | -1.646063000 | 3.306677000  | 1.652613000  | 7      | -0.854578000 | 1.338368000  | 0.155240000  |
| 1 | -3.204430000 | 3.951954000  | 1.097708000  | 6      | -1.895605000 | 0.338514000  | 0.215747000  |
| 1 | -1.695892000 | 4.558083000  | 0.385171000  | 6      | -2.216664000 | -0.210510000 | 1.466292000  |
| 6 | 4.359148000  | 2.153878000  | 1.008695000  | 6      | -1.054598000 | 2.704255000  | 0.190569000  |
| 1 | 4.569726000  | 2.356261000  | -0.047309000 | 1      | -2.042619000 | 3.127208000  | 0.296030000  |
| 1 | 5.167320000  | 1.527058000  | 1.402009000  | 6      | -3.246926000 | -1.154552000 | 1.496663000  |
| 1 | 4.382776000  | 3.105417000  | 1.551253000  | 1      | -3.523254000 | -1.616891000 | 2.440061000  |
| 6 | 2.711901000  | 1.202595000  | 2.671215000  | 6      | -2.540479000 | -0.012575000 | -0.978394000 |
| 1 | 1.715717000  | 0.769303000  | 2.812259000  | 6      | 2.562226000  | 2.410134000  | -0.171165000 |
| 1 | 2.767612000  | 2.133258000  | 3.247059000  | 1      | 2.942394000  | 1.386878000  | -0.110693000 |
| 1 | 3.447827000  | 0.503028000  | 3.085385000  | 6      | -3.924661000 | -1.512852000 | 0.333573000  |
| 6 | -0.403392000 | -2.466275000 | -1.632157000 | 1      | -4.728211000 | -2.243048000 | 0.382014000  |
| 1 | -0.807835000 | -2.082129000 | -0.688213000 | 6      | -2.162140000 | 0.593113000  | -2.318817000 |
| 1 | 0.084561000  | -3.426781000 | -1.424621000 | 1      | -1.204308000 | 1.113690000  | -2.206550000 |

|   |              |              |              |                         |              |              |              |
|---|--------------|--------------|--------------|-------------------------|--------------|--------------|--------------|
| 1 | 2.752658000  | 4.249147000  | 0.976673000  | 1                       | 1.341479000  | -0.764986000 | -2.544395000 |
| 1 | 4.210052000  | 3.240933000  | 0.917409000  | 1                       | 2.967237000  | -1.401589000 | -2.887129000 |
| 6 | -1.440717000 | 0.143500000  | 2.722797000  | 6                       | 0.700702000  | -2.571054000 | -0.646093000 |
| 1 | -0.949425000 | 1.110021000  | 2.562571000  | 6                       | -0.443818000 | -2.782752000 | -0.317861000 |
| 6 | 0.172322000  | 3.284744000  | 0.085270000  | 1                       | -1.451265000 | -2.979500000 | -0.005955000 |
| 1 | 0.464441000  | 4.324160000  | 0.075906000  | NHC-TS <sub>3-4</sub> : |              |              |              |
| 6 | -3.574868000 | -0.949217000 | -0.889671000 | 7                       | 1.994490000  | 2.125402000  | 0.416024000  |
| 1 | -4.109404000 | -1.242078000 | -1.789280000 | 6                       | 1.181714000  | 1.103108000  | 0.163579000  |
| 6 | 2.861759000  | 3.032416000  | -1.528330000 | 7                       | 1.827534000  | -0.029218000 | 0.459389000  |
| 1 | 2.437137000  | 2.433072000  | -2.340223000 | 6                       | 1.300639000  | -1.365189000 | 0.313137000  |
| 1 | 3.945651000  | 3.083687000  | -1.668386000 | 6                       | 1.573354000  | -2.055754000 | -0.875441000 |
| 1 | 2.460887000  | 4.050376000  | -1.594738000 | 6                       | 3.093500000  | 0.283785000  | 0.913312000  |
| 6 | -3.208850000 | 1.626102000  | -2.755184000 | 1                       | 3.791618000  | -0.484749000 | 1.210903000  |
| 1 | -3.324216000 | 2.420540000  | -2.009510000 | 6                       | 1.070163000  | -3.356365000 | -0.982803000 |
| 1 | -4.186001000 | 1.148640000  | -2.895555000 | 1                       | 1.256629000  | -3.926248000 | -1.889685000 |
| 1 | -2.915102000 | 2.086676000  | -3.704999000 | 6                       | 0.559428000  | -1.904445000 | 1.375232000  |
| 6 | -1.978674000 | -0.481342000 | -3.396383000 | 6                       | 1.640012000  | 3.550433000  | 0.206338000  |
| 1 | -1.285745000 | -1.263743000 | -3.067436000 | 1                       | 0.606396000  | 3.522719000  | -0.149895000 |
| 1 | -1.577508000 | -0.027838000 | -4.309392000 | 6                       | 0.330945000  | -3.924707000 | 0.049572000  |
| 1 | -2.931462000 | -0.957242000 | -3.654304000 | 1                       | -0.055193000 | -4.935176000 | -0.055558000 |
| 6 | -0.350430000 | -0.909914000 | 2.962711000  | 6                       | 0.238329000  | -1.100904000 | 2.623534000  |
| 1 | 0.325378000  | -1.003677000 | 2.106578000  | 1                       | 0.922511000  | -0.246001000 | 2.669491000  |
| 1 | -0.803152000 | -1.893981000 | 3.137450000  | 6                       | 2.548311000  | 4.143664000  | -0.862172000 |
| 1 | 0.251741000  | -0.647220000 | 3.839842000  | 1                       | 2.473953000  | 3.579781000  | -1.797012000 |
| 6 | -2.336973000 | 0.285947000  | 3.955836000  | 1                       | 3.593142000  | 4.150332000  | -0.531970000 |
| 1 | -3.163307000 | 0.982686000  | 3.777173000  | 1                       | 2.246483000  | 5.177050000  | -1.056791000 |
| 1 | -1.745700000 | 0.665491000  | 4.795928000  | 6                       | 2.361005000  | -1.444551000 | -2.021747000 |
| 1 | -2.759834000 | -0.676524000 | 4.263739000  | 1                       | 2.674976000  | -0.435838000 | -1.733113000 |
| 1 | 0.930228000  | 0.126916000  | -0.035654000 | 6                       | 3.197151000  | 1.640611000  | 0.885865000  |
| 8 | 2.597893000  | -1.158957000 | -0.342409000 | 1                       | 4.014228000  | 2.292408000  | 1.156650000  |
| 6 | 2.067581000  | -2.238972000 | -1.117275000 | 6                       | 0.074970000  | -3.205183000 | 1.214356000  |
| 6 | 2.979097000  | -3.467802000 | -1.124161000 | 1                       | -0.516062000 | -3.659118000 | 2.005361000  |
| 1 | 2.608010000  | -4.195556000 | -1.853411000 | 6                       | 1.723287000  | 4.292156000  | 1.533626000  |
| 1 | 3.026822000  | -3.930071000 | -0.139134000 | 1                       | 1.076182000  | 3.829113000  | 2.284902000  |
| 1 | 3.984823000  | -3.154258000 | -1.425258000 | 1                       | 1.397231000  | 5.326037000  | 1.387079000  |
| 6 | 2.777557000  | -1.287418000 | 1.069931000  | 1                       | 2.751413000  | 4.310302000  | 1.912282000  |
| 8 | 3.082870000  | -0.193068000 | 1.578292000  | 6                       | 0.429289000  | -1.908050000 | 3.910579000  |
| 8 | 2.605296000  | -2.404987000 | 1.572201000  | 1                       | 1.436366000  | -2.334485000 | 3.973770000  |
| 6 | 1.964507000  | -1.665398000 | -2.535161000 |                         |              |              |              |
| 1 | 1.530256000  | -2.402260000 | -3.217181000 |                         |              |              |              |

|        |              |              |              |   |              |              |              |
|--------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1      | -0.294580000 | -2.726686000 | 3.986544000  | 1 | -2.328509000 | 1.026142000  | -2.438169000 |
| 1      | 0.279355000  | -1.256733000 | 4.778467000  | 6 | -4.226839000 | -1.492677000 | 0.650882000  |
| 6      | -1.193984000 | -0.557183000 | 2.529531000  | 1 | -5.238969000 | -1.352005000 | 1.021222000  |
| 1      | -1.340622000 | 0.045234000  | 1.625012000  | 6 | -1.605275000 | -1.891430000 | -0.295293000 |
| 1      | -1.423652000 | 0.066764000  | 3.401234000  | 6 | 1.237898000  | 2.938195000  | -0.070931000 |
| 1      | -1.913057000 | -1.385165000 | 2.500844000  | 1 | 1.871539000  | 2.259353000  | 0.507681000  |
| 6      | 1.480640000  | -1.317454000 | -3.270856000 | 6 | -3.707528000 | -2.779140000 | 0.537778000  |
| 1      | 0.574098000  | -0.739833000 | -3.061195000 | 1 | -4.316479000 | -3.635072000 | 0.815321000  |
| 1      | 1.176769000  | -2.304488000 | -3.638241000 | 6 | -0.205597000 | -2.137962000 | -0.832279000 |
| 1      | 2.032753000  | -0.813754000 | -4.071908000 | 1 | 0.289735000  | -1.174254000 | -0.985155000 |
| 6      | 3.627136000  | -2.254888000 | -2.323570000 | 6 | 0.664635000  | 4.020260000  | 0.836455000  |
| 1      | 4.274188000  | -2.331237000 | -1.442476000 | 1 | 0.135225000  | 3.578491000  | 1.686290000  |
| 1      | 4.197065000  | -1.772763000 | -3.125395000 | 1 | -0.027165000 | 4.662298000  | 0.279364000  |
| 1      | 3.378554000  | -3.270386000 | -2.652444000 | 1 | 1.479258000  | 4.640665000  | 1.222259000  |
| 1      | 0.170089000  | 1.209666000  | -0.222205000 | 6 | -4.051424000 | 1.019060000  | 0.448719000  |
| 8      | -2.946174000 | 1.410924000  | -0.194043000 | 1 | -3.266861000 | 1.755865000  | 0.247690000  |
| 6      | -3.974013000 | 0.417776000  | -0.239891000 | 6 | -0.609054000 | 2.247314000  | -1.716778000 |
| 6      | -5.042303000 | 0.730155000  | -1.292605000 | 1 | -0.412535000 | 3.037290000  | -2.424983000 |
| 1      | -5.891583000 | 0.050615000  | -1.166287000 | 6 | -2.409767000 | -2.973530000 | 0.075746000  |
| 1      | -4.644105000 | 0.630994000  | -2.301733000 | 1 | -2.013343000 | -3.982198000 | -0.007427000 |
| 1      | -5.392499000 | 1.757294000  | -1.140703000 | 6 | 2.026721000  | 3.515217000  | -1.236142000 |
| 6      | -2.104402000 | 1.604531000  | -1.305924000 | 1 | 2.345225000  | 2.737062000  | -1.936443000 |
| 8      | -1.204644000 | 2.443140000  | -1.066565000 | 1 | 2.918915000  | 4.009097000  | -0.840785000 |
| 8      | -2.329300000 | 0.953670000  | -2.335110000 | 1 | 1.446645000  | 4.267713000  | -1.781678000 |
| 6      | -4.602437000 | 0.459318000  | 1.156801000  | 6 | -0.272065000 | -2.851828000 | -2.188126000 |
| 1      | -5.383185000 | -0.301701000 | 1.246712000  | 1 | -0.863520000 | -2.279784000 | -2.912280000 |
| 1      | -3.844360000 | 0.284084000  | 1.925419000  | 1 | -0.725903000 | -3.844815000 | -2.086594000 |
| 1      | -5.047885000 | 1.446282000  | 1.318730000  | 1 | 0.736375000  | -2.983439000 | -2.596870000 |
| 6      | -3.388758000 | -0.927139000 | -0.457938000 | 6 | 0.649993000  | -2.929170000 | 0.161692000  |
| 6      | -2.947971000 | -2.046704000 | -0.576331000 | 1 | 0.736080000  | -2.405782000 | 1.119880000  |
| 1      | -2.546471000 | -3.031604000 | -0.706051000 | 1 | 1.660822000  | -3.059877000 | -0.239981000 |
| NHC-4: |              |              |              | 1 | 0.229104000  | -3.925399000 | 0.342371000  |
| 7      | 0.133412000  | 2.078958000  | -0.565030000 | 6 | -4.556834000 | 1.270198000  | 1.873992000  |
| 6      | -0.344244000 | 1.037026000  | 0.113942000  | 1 | -3.764013000 | 1.106238000  | 2.611568000  |
| 7      | -1.372041000 | 0.528089000  | -0.573514000 | 1 | -5.396908000 | 0.612489000  | 2.123362000  |
| 6      | -2.163915000 | -0.610167000 | -0.173462000 | 1 | -4.904591000 | 2.304746000  | 1.968578000  |
| 6      | -3.462248000 | -0.374632000 | 0.305310000  | 6 | -5.173688000 | 1.235933000  | -0.574159000 |
| 6      | -1.551961000 | 1.266253000  | -1.727309000 | 1 | -4.813961000 | 1.095000000  | -1.599455000 |
|        |              |              |              | 1 | -5.575838000 | 2.251430000  | -0.487813000 |
|        |              |              |              | 1 | -5.995152000 | 0.529949000  | -0.404258000 |

|                         |              |              |              |   |              |              |              |
|-------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1                       | 0.087963000  | 0.643864000  | 1.041142000  | 6 | -4.165204000 | 0.902790000  | 0.443706000  |
| 8                       | 2.395984000  | -0.175265000 | 0.484428000  | 1 | -3.406092000 | 1.672698000  | 0.270146000  |
| 6                       | 3.578442000  | -0.409236000 | -0.283567000 | 6 | -0.712629000 | 2.319009000  | -1.604142000 |
| 6                       | 4.575019000  | 0.744651000  | -0.145456000 | 1 | -0.513153000 | 3.134061000  | -2.283434000 |
| 1                       | 5.422692000  | 0.588485000  | -0.820472000 | 6 | -2.378033000 | -3.014925000 | -0.048782000 |
| 1                       | 4.941103000  | 0.821535000  | 0.879039000  | 1 | -1.942966000 | -4.006000000 | -0.147753000 |
| 1                       | 4.075851000  | 1.679188000  | -0.425624000 | 6 | 2.065150000  | 3.326951000  | -0.993159000 |
| 6                       | 2.463557000  | -0.106204000 | 1.897059000  | 1 | 2.418723000  | 2.397198000  | -1.447405000 |
| 8                       | 1.351744000  | 0.184525000  | 2.393456000  | 1 | 2.920820000  | 3.849245000  | -0.555456000 |
| 8                       | 3.551885000  | -0.325282000 | 2.440388000  | 1 | 1.642034000  | 3.968814000  | -1.773779000 |
| 6                       | 3.079181000  | -0.502619000 | -1.728957000 | 6 | -0.080888000 | -2.968832000 | -2.067899000 |
| 1                       | 3.921650000  | -0.625994000 | -2.416071000 | 1 | -0.700211000 | -2.587820000 | -2.887427000 |
| 1                       | 2.401080000  | -1.353057000 | -1.847253000 | 1 | -0.404232000 | -3.991105000 | -1.842006000 |
| 1                       | 2.542399000  | 0.417892000  | -1.985067000 | 1 | 0.956113000  | -3.021108000 | -2.417580000 |
| 6                       | 4.218707000  | -1.700415000 | 0.063960000  | 6 | 0.687404000  | -2.620484000 | 0.312022000  |
| 6                       | 4.754310000  | -2.770212000 | 0.235783000  | 1 | 0.634309000  | -1.980812000 | 1.200547000  |
| 1                       | 5.227451000  | -3.713572000 | 0.421096000  | 1 | 1.735896000  | -2.698668000 | 0.004059000  |
| NHC-TS <sub>4-5</sub> : |              |              |              | 1 | 0.346590000  | -3.621909000 | 0.601253000  |
| 7                       | -0.017807000 | 2.157414000  | -0.423204000 | 6 | -4.678862000 | 1.083197000  | 1.876837000  |
| 6                       | -0.479774000 | 1.081060000  | 0.207306000  | 1 | -3.879861000 | 0.926616000  | 2.609381000  |
| 7                       | -1.451761000 | 0.542449000  | -0.535812000 | 1 | -5.489918000 | 0.381434000  | 2.100453000  |
| 6                       | -2.212218000 | -0.637752000 | -0.202255000 | 1 | -5.070286000 | 2.097931000  | 2.007776000  |
| 6                       | -3.528314000 | -0.464266000 | 0.254224000  | 6 | -5.295531000 | 1.118314000  | -0.570327000 |
| 6                       | -1.610855000 | 1.299416000  | -1.679201000 | 1 | -4.935203000 | 1.018590000  | -1.600164000 |
| 1                       | -2.341806000 | 1.040966000  | -2.430882000 | 1 | -5.725765000 | 2.118897000  | -0.452124000 |
| 6                       | -4.259521000 | -1.620401000 | 0.540293000  | 1 | -6.096999000 | 0.385545000  | -0.420143000 |
| 1                       | -5.283812000 | -1.530228000 | 0.892673000  | 1 | -0.083904000 | 0.691265000  | 1.141243000  |
| 6                       | -1.606744000 | -1.892423000 | -0.367613000 | 8 | 2.554615000  | 0.209765000  | 0.321856000  |
| 6                       | 1.047095000  | 3.045654000  | 0.101875000  | 6 | 3.752067000  | -0.302246000 | -0.302675000 |
| 1                       | 1.514262000  | 2.467125000  | 0.903511000  | 6 | 4.830301000  | 0.777230000  | -0.217671000 |
| 6                       | -3.690994000 | -2.882375000 | 0.392148000  | 1 | 5.760481000  | 0.404112000  | -0.656874000 |
| 1                       | -4.273153000 | -3.768647000 | 0.628959000  | 1 | 5.022215000  | 1.042768000  | 0.827586000  |
| 6                       | -0.170343000 | -2.066656000 | -0.831671000 | 1 | 4.515359000  | 1.673888000  | -0.760924000 |
| 1                       | 0.236007000  | -1.086933000 | -1.110337000 | 6 | 2.483710000  | -0.152440000 | 1.638461000  |
| 6                       | 0.419054000  | 4.317057000  | 0.658456000  | 8 | 1.591993000  | 0.336646000  | 2.329666000  |
| 1                       | -0.295034000 | 4.090850000  | 1.455897000  | 8 | 3.383300000  | -0.993025000 | 1.988072000  |
| 1                       | -0.095839000 | 4.873787000  | -0.132625000 | 6 | 3.402249000  | -0.643764000 | -1.741879000 |
| 1                       | 1.205764000  | 4.956320000  | 1.070430000  | 1 | 4.287463000  | -1.024336000 | -2.258730000 |
|                         |              |              |              | 1 | 2.622562000  | -1.410803000 | -1.772968000 |
|                         |              |              |              | 1 | 3.046929000  | 0.252610000  | -2.262515000 |

|   |             |              |             |
|---|-------------|--------------|-------------|
| 6 | 4.158834000 | -1.518680000 | 0.484601000 |
| 6 | 4.811666000 | -2.605630000 | 0.372045000 |
| 1 | 4.994705000 | -3.321302000 | 1.167380000 |

NHC-5:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 7 | 0.052772000  | 2.196833000  | 0.373453000  |
| 6 | 0.535860000  | 1.133682000  | -0.262999000 |
| 7 | 1.454588000  | 0.556181000  | 0.516421000  |
| 6 | 2.198657000  | -0.638747000 | 0.197485000  |
| 6 | 3.520282000  | -0.491536000 | -0.250432000 |
| 6 | 1.560712000  | 1.275939000  | 1.688859000  |
| 1 | 2.244153000  | 0.981904000  | 2.471593000  |
| 6 | 4.233791000  | -1.663131000 | -0.517790000 |
| 1 | 5.261403000  | -1.594383000 | -0.865540000 |
| 6 | 1.569853000  | -1.880095000 | 0.373942000  |
| 6 | -0.981590000 | 3.108634000  | -0.171096000 |
| 1 | -1.398832000 | 2.570762000  | -1.027228000 |
| 6 | 3.645107000  | -2.913603000 | -0.350499000 |
| 1 | 4.215582000  | -3.812495000 | -0.567496000 |
| 6 | 0.129966000  | -2.024722000 | 0.838167000  |
| 1 | -0.297435000 | -1.026572000 | 0.991852000  |
| 6 | -0.327511000 | 4.407064000  | -0.625512000 |
| 1 | 0.432966000  | 4.223507000  | -1.390297000 |
| 1 | 0.139283000  | 4.921813000  | 0.221730000  |
| 1 | -1.091481000 | 5.066636000  | -1.047925000 |
| 6 | 4.178284000  | 0.863862000  | -0.448738000 |
| 1 | 3.431538000  | 1.645701000  | -0.274067000 |
| 6 | 0.682240000  | 2.311731000  | 1.595457000  |
| 1 | 0.456848000  | 3.110108000  | 2.286391000  |
| 6 | 2.327701000  | -3.019515000 | 0.084703000  |
| 1 | 1.878474000  | -4.002004000 | 0.203826000  |
| 6 | -2.065061000 | 3.331244000  | 0.874203000  |
| 1 | -2.433184000 | 2.377305000  | 1.260741000  |
| 1 | -2.899363000 | 3.866818000  | 0.412012000  |
| 1 | -1.693852000 | 3.937747000  | 1.707527000  |
| 6 | 0.054483000  | -2.770876000 | 2.175119000  |
| 1 | 0.620394000  | -2.249790000 | 2.955466000  |
| 1 | 0.455441000  | -3.786465000 | 2.081746000  |
| 1 | -0.987558000 | -2.853539000 | 2.503302000  |

|   |              |              |              |
|---|--------------|--------------|--------------|
| 6 | -0.711830000 | -2.731606000 | -0.231350000 |
| 1 | -0.617656000 | -2.239908000 | -1.206349000 |
| 1 | -1.770131000 | -2.737910000 | 0.054759000  |
| 1 | -0.395349000 | -3.774517000 | -0.351619000 |
| 6 | 4.687531000  | 1.028346000  | -1.885352000 |
| 1 | 3.882391000  | 0.882676000  | -2.613504000 |
| 1 | 5.484064000  | 0.309987000  | -2.108840000 |
| 1 | 5.097285000  | 2.034827000  | -2.023622000 |
| 6 | 5.316340000  | 1.067661000  | 0.558928000  |
| 1 | 4.958877000  | 0.980316000  | 1.590908000  |
| 1 | 5.760853000  | 2.060953000  | 0.432392000  |
| 1 | 6.106533000  | 0.322553000  | 0.410124000  |
| 1 | 0.193483000  | 0.771702000  | -1.226280000 |
| 8 | -2.563285000 | 0.274968000  | -0.322320000 |
| 6 | -3.784875000 | -0.264792000 | 0.279678000  |
| 6 | -4.859074000 | 0.813337000  | 0.192235000  |
| 1 | -5.801178000 | 0.404320000  | 0.569928000  |
| 1 | -5.009983000 | 1.122358000  | -0.848235000 |
| 1 | -4.588265000 | 1.689819000  | 0.790009000  |
| 6 | -2.406279000 | -0.232669000 | -1.553473000 |
| 8 | -1.539696000 | 0.151368000  | -2.314618000 |
| 8 | -3.287662000 | -1.175277000 | -1.818101000 |
| 6 | -3.469207000 | -0.643424000 | 1.712894000  |
| 1 | -4.357539000 | -1.088275000 | 2.170701000  |
| 1 | -2.658977000 | -1.377853000 | 1.748224000  |
| 1 | -3.180800000 | 0.243040000  | 2.289289000  |
| 6 | -4.107269000 | -1.448610000 | -0.617188000 |
| 6 | -4.919803000 | -2.475211000 | -0.462821000 |
| 1 | -4.914207000 | -3.118484000 | -1.356841000 |

NHC-TS<sub>5-6</sub>:

|   |             |              |              |
|---|-------------|--------------|--------------|
| 7 | 1.312057000 | 2.440020000  | 0.454957000  |
| 6 | 1.130464000 | 1.267855000  | -0.144562000 |
| 7 | 1.788460000 | 0.329651000  | 0.542933000  |
| 6 | 1.839825000 | -1.073180000 | 0.200703000  |
| 6 | 2.909485000 | -1.520212000 | -0.587015000 |
| 6 | 2.415011000 | 0.926166000  | 1.617725000  |
| 1 | 3.007667000 | 0.352906000  | 2.315066000  |
| 6 | 2.946249000 | -2.885017000 | -0.891910000 |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1 | 3.759792000  | -3.274925000 | -1.498361000 | 6 | -3.523413000 | 0.380444000  | -1.351540000 |
| 6 | 0.822810000  | -1.911376000 | 0.685858000  | 6 | -4.564277000 | 1.220776000  | -2.083898000 |
| 6 | 0.767891000  | 3.735288000  | -0.024361000 | 1 | -4.227055000 | 2.261051000  | -2.125891000 |
| 1 | -0.026128000 | 3.460208000  | -0.724296000 | 1 | -5.523932000 | 1.187872000  | -1.556142000 |
| 6 | 1.956843000  | -3.746537000 | -0.429476000 | 1 | -4.708911000 | 0.848642000  | -3.104272000 |
| 1 | 2.001264000  | -4.803211000 | -0.678758000 | 6 | -4.568225000 | -1.188618000 | -0.054746000 |
| 6 | -0.288111000 | -1.392225000 | 1.582221000  | 8 | -5.181044000 | -2.187050000 | 0.244854000  |
| 1 | -0.410141000 | -0.318013000 | 1.400256000  | 8 | -4.323439000 | -0.169977000 | 0.761519000  |
| 6 | 1.870100000  | 4.506464000  | -0.739900000 | 6 | -2.201204000 | 0.341432000  | -2.090207000 |
| 1 | 2.269838000  | 3.936768000  | -1.584333000 | 1 | -1.814076000 | 1.361037000  | -2.180436000 |
| 1 | 2.689249000  | 4.736723000  | -0.049583000 | 1 | -1.473814000 | -0.260282000 | -1.536021000 |
| 1 | 1.464853000  | 5.449416000  | -1.118719000 | 1 | -2.333312000 | -0.077541000 | -3.093419000 |
| 6 | 4.010850000  | -0.597309000 | -1.081058000 | 6 | -3.396501000 | 0.762801000  | 0.110874000  |
| 1 | 3.746199000  | 0.434340000  | -0.824645000 | 6 | -2.667533000 | 1.679037000  | 0.723496000  |
| 6 | 2.116478000  | 2.253325000  | 1.559810000  | 1 | -2.855802000 | 1.663241000  | 1.809991000  |
| 1 | 2.403892000  | 3.070050000  | 2.204530000  |   |              |              |              |
| 6 | 0.907796000  | -3.265197000 | 0.350277000  |   | NHC-6:       |              |              |
| 1 | 0.145461000  | -3.953527000 | 0.703024000  | 7 | 0.594635000  | 2.459886000  | 0.484202000  |
| 6 | 0.167151000  | 4.508001000  | 1.139842000  | 6 | 0.672634000  | 1.202558000  | 0.052859000  |
| 1 | -0.569969000 | 3.902540000  | 1.674364000  | 7 | 1.841278000  | 0.699136000  | 0.464189000  |
| 1 | -0.337167000 | 5.394999000  | 0.745844000  | 6 | 2.303362000  | -0.642744000 | 0.201750000  |
| 1 | 0.940859000  | 4.843524000  | 1.838786000  | 6 | 3.071727000  | -0.866622000 | -0.949835000 |
| 6 | 0.102057000  | -1.579583000 | 3.055478000  | 6 | 2.526114000  | 1.663226000  | 1.176928000  |
| 1 | 1.043643000  | -1.071408000 | 3.291595000  | 1 | 3.499418000  | 1.468071000  | 1.603137000  |
| 1 | 0.223011000  | -2.645134000 | 3.286024000  | 6 | 3.516915000  | -2.172585000 | -1.173414000 |
| 1 | -0.678390000 | -1.173559000 | 3.708535000  | 1 | 4.111201000  | -2.390208000 | -2.057349000 |
| 6 | -1.639519000 | -2.053671000 | 1.300163000  | 6 | 1.960775000  | -1.651278000 | 1.113449000  |
| 1 | -1.892470000 | -2.010957000 | 0.233926000  | 6 | -0.546236000 | 3.365002000  | 0.219459000  |
| 1 | -2.420721000 | -1.531180000 | 1.860635000  | 1 | -1.260067000 | 2.751021000  | -0.338867000 |
| 1 | -1.652372000 | -3.104213000 | 1.611506000  | 6 | 3.202272000  | -3.197983000 | -0.286315000 |
| 6 | 4.167975000  | -0.668984000 | -2.603831000 | 1 | 3.555642000  | -4.207211000 | -0.479486000 |
| 1 | 3.227541000  | -0.436602000 | -3.115240000 | 6 | 1.105197000  | -1.396574000 | 2.342499000  |
| 1 | 4.492327000  | -1.664813000 | -2.925547000 | 1 | 0.833427000  | -0.335553000 | 2.368906000  |
| 1 | 4.924557000  | 0.050638000  | -2.935272000 | 6 | -0.081683000 | 4.530739000  | -0.643937000 |
| 6 | 5.335983000  | -0.926423000 | -0.382347000 | 1 | 0.362424000  | 4.174620000  | -1.578255000 |
| 1 | 5.242841000  | -0.854869000 | 0.706930000  | 1 | 0.655047000  | 5.140662000  | -0.109075000 |
| 1 | 6.117946000  | -0.231148000 | -0.707131000 | 1 | -0.939335000 | 5.165051000  | -0.886482000 |
| 1 | 5.662353000  | -1.943613000 | -0.628580000 | 6 | 3.411536000  | 0.235000000  | -1.939481000 |
| 1 | 0.535547000  | 1.084933000  | -1.029736000 | 1 | 2.990233000  | 1.177483000  | -1.573666000 |
| 8 | -4.043932000 | -0.981862000 | -1.272554000 |   |              |              |              |

|   |              |              |              |                         |              |              |              |
|---|--------------|--------------|--------------|-------------------------|--------------|--------------|--------------|
| 6 | 1.739271000  | 2.773974000  | 1.188497000  | 1                       | -1.335909000 | -1.268946000 | -2.257254000 |
| 1 | 1.893262000  | 3.746631000  | 1.631556000  |                         |              |              |              |
| 6 | 2.431950000  | -2.939277000 | 0.843450000  | NHC-TS <sub>6-7</sub> : |              |              |              |
| 1 | 2.185523000  | -3.750583000 | 1.523726000  | 7                       | 0.547196000  | 2.495176000  | 0.453143000  |
| 6 | -1.161197000 | 3.814921000  | 1.537561000  | 6                       | 0.555560000  | 1.218337000  | 0.043535000  |
| 1 | -1.437004000 | 2.958426000  | 2.160087000  | 7                       | 1.728719000  | 0.707407000  | 0.461458000  |
| 1 | -2.062684000 | 4.400283000  | 1.332240000  | 6                       | 2.152748000  | -0.647043000 | 0.213689000  |
| 1 | -0.463849000 | 4.448099000  | 2.097517000  | 6                       | 2.898550000  | -0.908193000 | -0.945679000 |
| 6 | 1.875757000  | -1.711738000 | 3.629768000  | 6                       | 2.465246000  | 1.663517000  | 1.134998000  |
| 1 | 2.801329000  | -1.128786000 | 3.695253000  | 1                       | 3.441121000  | 1.449907000  | 1.546962000  |
| 1 | 2.138411000  | -2.774537000 | 3.681005000  | 6                       | 3.307300000  | -2.227527000 | -1.162073000 |
| 1 | 1.259372000  | -1.475600000 | 4.504181000  | 1                       | 3.883708000  | -2.469245000 | -2.051674000 |
| 6 | -0.194679000 | -2.206863000 | 2.269759000  | 6                       | 1.801744000  | -1.639198000 | 1.141138000  |
| 1 | -0.746162000 | -1.988647000 | 1.348162000  | 6                       | -0.553697000 | 3.442411000  | 0.192304000  |
| 1 | -0.836787000 | -1.966976000 | 3.124689000  | 1                       | -1.308242000 | 2.849639000  | -0.333325000 |
| 1 | 0.011399000  | -3.283151000 | 2.295270000  | 6                       | 2.980993000  | -3.234842000 | -0.258822000 |
| 6 | 2.785677000  | -0.053857000 | -3.309259000 | 1                       | 3.305896000  | -4.254983000 | -0.445110000 |
| 1 | 1.699709000  | -0.176578000 | -3.233987000 | 6                       | 0.986182000  | -1.343741000 | 2.388671000  |
| 1 | 3.201433000  | -0.969685000 | -3.745110000 | 1                       | 0.685392000  | -0.290653000 | 2.366779000  |
| 1 | 2.992255000  | 0.771957000  | -3.998923000 | 6                       | -0.066059000 | 4.567056000  | -0.712906000 |
| 6 | 4.928061000  | 0.423429000  | -2.060819000 | 1                       | 0.347234000  | 4.168162000  | -1.644393000 |
| 1 | 5.382508000  | 0.645588000  | -1.088714000 | 1                       | 0.704180000  | 5.163605000  | -0.211063000 |
| 1 | 5.149611000  | 1.253575000  | -2.740680000 | 1                       | -0.902807000 | 5.228075000  | -0.958371000 |
| 1 | 5.407984000  | -0.476398000 | -2.462293000 | 6                       | 3.257517000  | 0.173918000  | -1.950434000 |
| 1 | -0.102325000 | 0.665009000  | -0.528063000 | 1                       | 2.853615000  | 1.127733000  | -1.595051000 |
| 8 | -4.867140000 | -0.783522000 | 0.085347000  | 6                       | 1.715723000  | 2.797508000  | 1.128579000  |
| 6 | -3.740097000 | 0.108364000  | -0.154613000 | 1                       | 1.910213000  | 3.776680000  | 1.541219000  |
| 6 | -3.064194000 | 0.388379000  | 1.174865000  | 6                       | 2.235833000  | -2.942290000 | 0.880027000  |
| 1 | -2.150671000 | 0.964427000  | 0.993396000  | 1                       | 1.984111000  | -3.738464000 | 1.576333000  |
| 1 | -2.790453000 | -0.546807000 | 1.671707000  | 6                       | -1.125323000 | 3.956678000  | 1.507808000  |
| 1 | -3.722758000 | 0.967606000  | 1.831504000  | 1                       | -1.424647000 | 3.129922000  | 2.159679000  |
| 6 | -4.844030000 | -1.799860000 | -0.789250000 | 1                       | -2.004936000 | 4.575365000  | 1.304746000  |
| 8 | -5.720454000 | -2.627874000 | -0.871991000 | 1                       | -0.390894000 | 4.573291000  | 2.038071000  |
| 8 | -3.747814000 | -1.776529000 | -1.538384000 | 6                       | 1.823301000  | -1.565084000 | 3.654542000  |
| 6 | -4.294546000 | 1.376358000  | -0.792729000 | 1                       | 2.727040000  | -0.945319000 | 3.652122000  |
| 1 | -3.472981000 | 2.069474000  | -1.000792000 | 1                       | 2.132484000  | -2.613453000 | 3.741360000  |
| 1 | -4.796252000 | 1.143585000  | -1.738181000 | 1                       | 1.237391000  | -1.311447000 | 4.545037000  |
| 1 | -5.010163000 | 1.861943000  | -0.119956000 | 6                       | -0.291379000 | -2.190531000 | 2.424460000  |
| 6 | -2.869763000 | -0.689901000 | -1.114263000 | 1                       | -0.882345000 | -2.048991000 | 1.512727000  |
| 6 | -1.629977000 | -0.493267000 | -1.530883000 |                         |              |              |              |

|        |              |              |              |   |              |              |              |
|--------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1      | -0.906738000 | -1.907735000 | 3.285989000  | 6 | 2.539385000  | 3.418809000  | -0.094583000 |
| 1      | -0.057574000 | -3.257439000 | 2.517308000  | 1 | 1.466040000  | 3.608099000  | -0.183801000 |
| 6      | 2.626193000  | -0.117433000 | -3.316989000 | 6 | 0.090509000  | -3.763977000 | 0.130678000  |
| 1      | 1.537793000  | -0.214598000 | -3.240299000 | 1 | -0.447536000 | -4.708156000 | 0.150939000  |
| 1      | 3.021154000  | -1.047055000 | -3.742897000 | 6 | 1.284223000  | -1.138160000 | 2.627014000  |
| 1      | 2.850297000  | 0.695698000  | -4.016392000 | 1 | 1.860905000  | -0.233025000 | 2.412248000  |
| 6      | 4.777445000  | 0.331408000  | -2.075311000 | 6 | 3.253785000  | 3.949080000  | -1.332898000 |
| 1      | 5.236848000  | 0.558448000  | -1.106617000 | 1 | 2.865653000  | 3.474851000  | -2.240073000 |
| 1      | 5.015063000  | 1.147628000  | -2.766719000 | 1 | 4.332306000  | 3.761405000  | -1.275044000 |
| 1      | 5.239453000  | -0.583520000 | -2.463902000 | 1 | 3.102260000  | 5.030105000  | -1.413975000 |
| 1      | -0.324320000 | 0.495001000  | -0.533424000 | 6 | 1.655001000  | -1.457058000 | -2.473740000 |
| 8      | -4.730655000 | -0.730777000 | -0.066226000 | 1 | 2.187847000  | -0.518251000 | -2.292504000 |
| 6      | -3.569991000 | 0.132845000  | -0.240514000 | 6 | 3.859405000  | 1.284480000  | 0.094278000  |
| 6      | -3.091587000 | 0.581927000  | 1.127181000  | 1 | 4.812855000  | 1.791635000  | 0.131653000  |
| 1      | -2.141287000 | 1.113552000  | 1.013331000  | 6 | 0.345122000  | -3.083696000 | 1.318254000  |
| 1      | -2.925205000 | -0.281261000 | 1.778394000  | 1 | -0.000184000 | -3.501922000 | 2.261126000  |
| 1      | -3.819250000 | 1.253913000  | 1.594901000  | 6 | 3.062684000  | 4.052790000  | 1.190200000  |
| 6      | -4.586496000 | -1.845456000 | -0.795079000 | 1 | 2.548836000  | 3.640422000  | 2.064602000  |
| 8      | -5.443569000 | -2.685416000 | -0.916620000 | 1 | 2.895440000  | 5.134305000  | 1.166786000  |
| 8      | -3.379351000 | -1.906269000 | -1.360805000 | 1 | 4.138898000  | 3.879392000  | 1.304322000  |
| 6      | -4.000585000 | 1.300437000  | -1.119927000 | 6 | 2.106448000  | -1.998401000 | 3.593680000  |
| 1      | -3.144086000 | 1.957239000  | -1.301235000 | 1 | 3.051343000  | -2.317356000 | 3.139429000  |
| 1      | -4.366106000 | 0.939387000  | -2.087201000 | 1 | 1.553756000  | -2.895986000 | 3.894391000  |
| 1      | -4.795023000 | 1.874450000  | -0.630834000 | 1 | 2.339196000  | -1.429411000 | 4.500744000  |
| 6      | -2.580175000 | -0.782297000 | -0.939298000 | 6 | -0.038842000 | -0.710676000 | 3.272875000  |
| 6      | -1.283260000 | -0.635086000 | -1.152505000 | 1 | -0.624130000 | -0.073506000 | 2.600533000  |
| 1      | -0.837033000 | -1.475844000 | -1.703804000 | 1 | 0.152885000  | -0.151130000 | 4.195733000  |
|        |              |              |              | 1 | -0.650731000 | -1.584211000 | 3.527970000  |
|        |              |              |              | 6 | 0.445219000  | -1.143658000 | -3.362020000 |
| NHC-7: |              |              |              | 1 | -0.241423000 | -0.447051000 | -2.867625000 |
| 7      | 2.652199000  | 1.954660000  | -0.023575000 | 1 | -0.113409000 | -2.055663000 | -3.603601000 |
| 6      | 1.584076000  | 1.115204000  | -0.052048000 | 1 | 0.774389000  | -0.690650000 | -4.304174000 |
| 7      | 2.174516000  | -0.112234000 | 0.053499000  | 6 | 2.619895000  | -2.412526000 | -3.184915000 |
| 6      | 1.455544000  | -1.354828000 | 0.078869000  | 1 | 3.489594000  | -2.640469000 | -2.558229000 |
| 6      | 1.208897000  | -2.018211000 | -1.134359000 | 1 | 2.979557000  | -1.962532000 | -4.117171000 |
| 6      | 3.555886000  | -0.036245000 | 0.143908000  | 1 | 2.126481000  | -3.358134000 | -3.438745000 |
| 1      | 4.180929000  | -0.913943000 | 0.230006000  | 1 | -1.157134000 | -0.320005000 | -0.116744000 |
| 6      | 0.516174000  | -3.232453000 | -1.083428000 | 8 | -4.836467000 | 1.591978000  | -0.154173000 |
| 1      | 0.303959000  | -3.766376000 | -2.007143000 | 6 | -3.383964000 | 1.460906000  | -0.137796000 |
| 6      | 1.032111000  | -1.865162000 | 1.317119000  | 6 | -2.861216000 | 2.141358000  | 1.116313000  |

|        |              |              |              |   |              |              |              |
|--------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1      | -1.773354000 | 2.033258000  | 1.159730000  | 6 | -2.735906000 | -3.336977000 | 0.777646000  |
| 1      | -3.297658000 | 1.689692000  | 2.012585000  | 1 | -1.947983000 | -4.038237000 | 1.040460000  |
| 1      | -3.108643000 | 3.207186000  | 1.091020000  | 6 | -0.963013000 | 3.937123000  | -1.444201000 |
| 6      | -5.423224000 | 0.397780000  | -0.098923000 | 1 | -0.171034000 | 3.186246000  | -1.511437000 |
| 8      | -6.605222000 | 0.200393000  | -0.086863000 | 1 | -0.532329000 | 4.865970000  | -1.059453000 |
| 8      | -4.498853000 | -0.592275000 | -0.057372000 | 1 | -1.350871000 | 4.137745000  | -2.449099000 |
| 6      | -2.836563000 | 2.072729000  | -1.415792000 | 6 | -0.318534000 | -2.667471000 | -1.064724000 |
| 1      | -1.750452000 | 1.943601000  | -1.442047000 | 1 | -0.866693000 | -2.606588000 | -2.011612000 |
| 1      | -3.271257000 | 1.585768000  | -2.293846000 | 1 | -0.328723000 | -3.711317000 | -0.730185000 |
| 1      | -3.065366000 | 3.142529000  | -1.443836000 | 1 | 0.723979000  | -2.387036000 | -1.255280000 |
| 6      | -3.225659000 | -0.046404000 | -0.094139000 | 6 | -0.137696000 | -1.808089000 | 1.304890000  |
| 6      | -2.133357000 | -0.794175000 | -0.087647000 | 1 | -0.601657000 | -1.195411000 | 2.086415000  |
| 1      | -2.193753000 | -1.877260000 | -0.052860000 | 1 | 0.887102000  | -1.451161000 | 1.148311000  |
|        |              |              |              | 1 | -0.075723000 | -2.836173000 | 1.680190000  |
|        |              |              |              | 6 | -6.678473000 | -0.170788000 | 1.057795000  |
| NHC-8: |              |              |              | 1 | -5.999428000 | 0.271802000  | 1.794916000  |
| 7      | -2.501366000 | 2.109900000  | -0.874084000 | 1 | -7.165625000 | -1.036319000 | 1.521581000  |
| 6      | -2.731393000 | 1.132360000  | -0.002175000 | 1 | -7.454651000 | 0.564930000  | 0.819920000  |
| 7      | -3.125917000 | 0.048496000  | -0.676158000 | 6 | -6.891305000 | -1.177895000 | -1.248126000 |
| 6      | -3.448266000 | -1.231311000 | -0.092047000 | 1 | -6.368086000 | -1.461105000 | -2.167982000 |
| 6      | -4.800743000 | -1.542448000 | 0.111215000  | 1 | -7.667145000 | -0.448530000 | -1.505449000 |
| 6      | -3.147709000 | 0.345038000  | -2.023400000 | 1 | -7.388620000 | -2.070501000 | -0.852103000 |
| 1      | -3.436188000 | -0.391618000 | -2.758734000 | 1 | -2.569566000 | 1.195309000  | 1.068173000  |
| 6      | -5.087164000 | -2.795262000 | 0.660685000  | 8 | 0.294486000  | 1.702691000  | 0.726541000  |
| 1      | -6.122317000 | -3.074477000 | 0.840318000  | 6 | 1.730336000  | 1.587391000  | 0.455502000  |
| 6      | -2.393220000 | -2.097562000 | 0.229099000  | 6 | 2.295911000  | 2.998043000  | 0.340556000  |
| 6      | -2.069831000 | 3.479956000  | -0.505758000 | 1 | 3.382178000  | 2.934375000  | 0.219906000  |
| 1      | -1.675685000 | 3.378739000  | 0.509267000  | 1 | 2.079465000  | 3.574321000  | 1.247160000  |
| 6      | -4.066958000 | -3.683308000 | 0.989985000  | 1 | 1.874393000  | 3.520425000  | -0.524282000 |
| 1      | -4.310928000 | -4.651670000 | 1.418422000  | 6 | 0.062242000  | 1.465364000  | 2.023506000  |
| 6      | -0.933291000 | -1.746363000 | -0.004073000 | 8 | -1.024873000 | 1.617507000  | 2.540153000  |
| 1      | -0.871212000 | -0.718713000 | -0.381335000 | 8 | 1.148866000  | 1.046953000  | 2.653956000  |
| 6      | -3.274899000 | 4.411791000  | -0.516135000 | 6 | 1.911097000  | 0.789550000  | -0.818881000 |
| 1      | -4.048696000 | 4.064938000  | 0.175209000  | 1 | 2.979651000  | 0.693576000  | -1.032863000 |
| 1      | -3.702708000 | 4.479687000  | -1.522366000 | 1 | 1.486494000  | -0.213742000 | -0.710020000 |
| 1      | -2.959363000 | 5.413433000  | -0.208833000 | 1 | 1.423204000  | 1.297675000  | -1.658981000 |
| 6      | -5.928248000 | -0.578170000 | -0.216839000 | 6 | 2.236797000  | 0.881693000  | 1.700058000  |
| 1      | -5.499132000 | 0.329729000  | -0.654010000 | 6 | 3.378156000  | 0.260165000  | 1.931772000  |
| 6      | -2.761023000 | 1.644448000  | -2.146299000 | 1 | 3.449785000  | -0.136244000 | 2.954556000  |
| 1      | -2.652188000 | 2.266476000  | -3.021726000 | 1 | 4.425701000  | 0.026847000  | 0.675571000  |

|                         |              |              |              |   |              |              |              |
|-------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8                       | 4.997819000  | -0.136163000 | -0.214863000 | 1 | -5.498033000 | 0.340039000  | -0.640204000 |
| 6                       | 3.792864000  | -2.115969000 | -1.428674000 | 6 | -2.753086000 | 1.654592000  | -2.134143000 |
| 8                       | 3.828270000  | -2.788917000 | -0.479381000 | 1 | -2.640389000 | 2.278707000  | -3.007589000 |
| 8                       | 3.704112000  | -1.530525000 | -2.431116000 | 6 | -2.736616000 | -3.337602000 | 0.766578000  |
| 6                       | 6.362862000  | -0.273607000 | 0.102232000  | 1 | -1.949166000 | -4.041943000 | 1.022456000  |
| 6                       | 6.580486000  | -1.330250000 | 1.198367000  | 6 | -0.954886000 | 3.943083000  | -1.425313000 |
| 6                       | 6.945206000  | 1.076323000  | 0.547691000  | 1 | -0.165075000 | 3.190444000  | -1.497581000 |
| 1                       | 8.015420000  | 1.001031000  | 0.770096000  | 1 | -0.521150000 | 4.868739000  | -1.036316000 |
| 1                       | 6.796962000  | 1.826242000  | -0.235710000 | 1 | -1.343585000 | 4.150124000  | -2.428583000 |
| 1                       | 6.418866000  | 1.405442000  | 1.450716000  | 6 | -0.327629000 | -2.663017000 | -1.086293000 |
| 1                       | 6.099983000  | -0.996857000 | 2.124092000  | 1 | -0.880397000 | -2.594875000 | -2.029997000 |
| 1                       | 6.135447000  | -2.283044000 | 0.896761000  | 1 | -0.339269000 | -3.708859000 | -0.758098000 |
| 1                       | 7.647963000  | -1.481667000 | 1.391660000  | 1 | 0.714800000  | -2.384619000 | -1.280435000 |
| 6                       | 7.054608000  | -0.722855000 | -1.132433000 | 6 | -0.131126000 | -1.818077000 | 1.286965000  |
| 6                       | 7.620868000  | -1.100218000 | -2.132401000 | 1 | -0.587715000 | -1.207045000 | 2.074129000  |
| 1                       | 8.118944000  | -1.429892000 | -3.021877000 | 1 | 0.894253000  | -1.465084000 | 1.125204000  |
| NHC-TS <sub>8,9</sub> : |              |              |              | 1 | -0.071031000 | -2.848045000 | 1.657299000  |
| 7                       | -2.495480000 | 2.115923000  | -0.860078000 | 6 | -6.677094000 | -0.166845000 | 1.069986000  |
| 6                       | -2.729927000 | 1.136368000  | 0.008461000  | 1 | -5.997562000 | 0.272681000  | 1.808499000  |
| 7                       | -3.125074000 | 0.055252000  | -0.669568000 | 1 | -7.164341000 | -1.033993000 | 1.530621000  |
| 6                       | -3.448396000 | -1.226485000 | -0.090181000 | 1 | -7.453130000 | 0.570069000  | 0.835408000  |
| 6                       | -4.800667000 | -1.536008000 | 0.116184000  | 6 | -6.891182000 | -1.164594000 | -1.240009000 |
| 6                       | -3.142883000 | 0.355670000  | -2.015926000 | 1 | -6.368154000 | -1.444472000 | -2.160995000 |
| 1                       | -3.430773000 | -0.378285000 | -2.754192000 | 1 | -7.666829000 | -0.433989000 | -1.494345000 |
| 6                       | -5.087343000 | -2.790689000 | 0.661319000  | 1 | -7.388572000 | -2.058598000 | -0.847242000 |
| 1                       | -6.122374000 | -3.068929000 | 0.843130000  | 1 | -2.573626000 | 1.196193000  | 1.079535000  |
| 6                       | -2.393762000 | -2.096350000 | 0.222424000  | 8 | 0.309377000  | 1.704211000  | 0.715925000  |
| 6                       | -2.061712000 | 3.484269000  | -0.487600000 | 6 | 1.743075000  | 1.579197000  | 0.434645000  |
| 1                       | -1.666999000 | 3.379357000  | 0.526803000  | 6 | 2.320248000  | 2.985348000  | 0.325917000  |
| 6                       | -4.067583000 | -3.682106000 | 0.982761000  | 1 | 3.404849000  | 2.912850000  | 0.196002000  |
| 1                       | -4.311834000 | -4.651975000 | 1.407614000  | 1 | 2.115778000  | 3.557325000  | 1.237949000  |
| 6                       | -0.934385000 | -1.746882000 | -0.016769000 | 1 | 1.896266000  | 3.516590000  | -0.532155000 |
| 1                       | -0.872495000 | -0.717019000 | -0.388131000 | 6 | 0.083587000  | 1.459772000  | 2.011700000  |
| 6                       | -3.265465000 | 4.417826000  | -0.494272000 | 8 | -0.995756000 | 1.614963000  | 2.540484000  |
| 1                       | -4.038957000 | 4.070618000  | 0.197221000  | 8 | 1.174556000  | 1.027482000  | 2.632049000  |
| 1                       | -3.694376000 | 4.488572000  | -1.499825000 | 6 | 1.915070000  | 0.783737000  | -0.841703000 |
| 1                       | -2.948107000 | 5.418327000  | -0.185135000 | 1 | 2.983855000  | 0.664171000  | -1.044206000 |
| 6                       | -5.927596000 | -0.569353000 | -0.206541000 | 1 | 1.467093000  | -0.210116000 | -0.739788000 |
|                         |              |              |              | 1 | 1.445651000  | 1.305665000  | -1.683686000 |
|                         |              |              |              | 6 | 2.244927000  | 0.863071000  | 1.673909000  |

|   |             |              |              |   |              |              |              |
|---|-------------|--------------|--------------|---|--------------|--------------|--------------|
| 6 | 3.380904000 | 0.226802000  | 1.892599000  | 1 | -2.908435000 | 4.836533000  | -0.600436000 |
| 1 | 3.475805000 | -0.186860000 | 2.904545000  | 1 | -1.897083000 | 5.337521000  | 0.769951000  |
| 1 | 4.338422000 | 0.022246000  | 0.758263000  | 6 | -6.297133000 | 0.529882000  | -0.009653000 |
| 8 | 4.964173000 | -0.149132000 | -0.192353000 | 1 | -5.600955000 | 1.350301000  | -0.214048000 |
| 6 | 3.792604000 | -2.116269000 | -1.426610000 | 6 | -2.634157000 | 2.011875000  | -1.781707000 |
| 8 | 3.816628000 | -2.801402000 | -0.485278000 | 1 | -2.336481000 | 2.704450000  | -2.554165000 |
| 8 | 3.708003000 | -1.529169000 | -2.428789000 | 6 | -4.088083000 | -3.192376000 | 0.240867000  |
| 6 | 6.324631000 | -0.271842000 | 0.113542000  | 1 | -3.551764000 | -4.135772000 | 0.304453000  |
| 6 | 6.565286000 | -1.327962000 | 1.208648000  | 6 | -0.369813000 | 3.683549000  | -0.826980000 |
| 6 | 6.899864000 | 1.082624000  | 0.561872000  | 1 | 0.194532000  | 2.791986000  | -1.111613000 |
| 1 | 7.971218000 | 1.019285000  | 0.784392000  | 1 | 0.304668000  | 4.371796000  | -0.309452000 |
| 1 | 6.743509000 | 1.832840000  | -0.219978000 | 1 | -0.728951000 | 4.182567000  | -1.733550000 |
| 1 | 6.369970000 | 1.406122000  | 1.465169000  | 6 | -1.647966000 | -2.984928000 | -1.651668000 |
| 1 | 6.086824000 | -1.002083000 | 2.138367000  | 1 | -2.186351000 | -2.620866000 | -2.533804000 |
| 1 | 6.128026000 | -2.285067000 | 0.908463000  | 1 | -1.964976000 | -4.016348000 | -1.459265000 |
| 1 | 7.635249000 | -1.469779000 | 1.397294000  | 1 | -0.577578000 | -3.002990000 | -1.884782000 |
| 6 | 7.031491000 | -0.711792000 | -1.119639000 | 6 | -1.107867000 | -2.585910000 | 0.780112000  |
| 6 | 7.603719000 | -1.080112000 | -2.120521000 | 1 | -1.294868000 | -1.967568000 | 1.665403000  |
| 1 | 8.106002000 | -1.401436000 | -3.010589000 | 1 | -0.034334000 | -2.565766000 | 0.556517000  |

NHC-9:

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 7 | -2.286741000 | 2.190135000  | -0.459445000 | 1 | -6.305929000 | 0.885036000  | 2.146309000  |
| 6 | -2.789757000 | 1.188091000  | 0.256344000  | 1 | -7.772218000 | 0.091316000  | 1.539594000  |
| 7 | -3.449288000 | 0.368221000  | -0.567188000 | 1 | -7.515016000 | 1.816015000  | 1.239235000  |
| 6 | -4.134261000 | -0.842718000 | -0.180107000 | 6 | -7.297826000 | 0.467894000  | -1.170262000 |
| 6 | -5.509540000 | -0.765972000 | 0.084262000  | 1 | -6.794500000 | 0.271544000  | -2.123350000 |
| 6 | -3.362622000 | 0.863680000  | -1.851492000 | 1 | -7.836187000 | 1.418151000  | -1.257203000 |
| 1 | -3.822319000 | 0.354093000  | -2.685450000 | 1 | -8.036189000 | -0.325770000 | -1.006896000 |
| 6 | -6.155679000 | -1.956354000 | 0.429426000  | 1 | -2.655696000 | 1.045851000  | 1.321093000  |
| 1 | -7.222824000 | -1.942901000 | 0.636475000  | 8 | 0.415092000  | 0.815549000  | 0.564774000  |
| 6 | -3.394356000 | -2.032340000 | -0.117055000 | 6 | 1.679648000  | 0.299507000  | 0.026335000  |
| 6 | -1.520673000 | 3.329759000  | 0.102919000  | 6 | 2.683935000  | 1.438494000  | -0.047396000 |
| 1 | -1.129217000 | 2.956833000  | 1.053259000  | 1 | 3.649476000  | 1.024548000  | -0.359005000 |
| 6 | -5.453342000 | -3.155613000 | 0.509360000  | 1 | 2.798787000  | 1.917103000  | 0.931622000  |
| 1 | -5.975389000 | -4.069092000 | 0.780645000  | 1 | 2.360191000  | 2.185788000  | -0.778245000 |
| 6 | -1.909474000 | -2.095604000 | -0.430560000 | 6 | 0.215264000  | 0.362684000  | 1.799526000  |
| 1 | -1.560861000 | -1.084807000 | -0.673816000 | 8 | -0.697867000 | 0.684344000  | 2.514631000  |
| 6 | -2.462192000 | 4.503425000  | 0.343117000  | 8 | 1.172213000  | -0.516291000 | 2.159695000  |
| 1 | -3.262934000 | 4.235015000  | 1.038727000  | 6 | 1.409774000  | -0.330404000 | -1.324184000 |
|   |              |              |              | 1 | 2.355541000  | -0.717335000 | -1.719325000 |

|                                      |              |              |              |   |              |              |              |
|--------------------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1                                    | 0.688192000  | -1.147765000 | -1.236931000 | 1 | 0.914106000  | -0.586333000 | 2.352256000  |
| 1                                    | 1.017483000  | 0.425912000  | -2.013288000 | 6 | -2.333441000 | 3.752695000  | 0.147418000  |
| 6                                    | 2.055112000  | -0.700057000 | 1.100091000  | 1 | -1.941779000 | 3.601353000  | -0.863184000 |
| 6                                    | 3.026660000  | -1.597425000 | 1.123731000  | 1 | -1.823690000 | 4.608733000  | 0.603897000  |
| 1                                    | 3.181950000  | -2.239561000 | 1.984965000  | 1 | -3.399884000 | 3.984825000  | 0.072934000  |
| 1                                    | 3.681637000  | -1.672973000 | 0.259107000  | 6 | 2.118420000  | 1.483656000  | -2.082454000 |
| 8                                    | 5.669993000  | -0.089488000 | -0.342299000 | 1 | 1.714651000  | 2.259477000  | -1.421421000 |
| 6                                    | 5.668410000  | -1.060669000 | -1.370699000 | 6 | 0.287272000  | 2.809823000  | 1.659617000  |
| 8                                    | 6.731645000  | -1.650475000 | -1.613322000 | 1 | 0.091958000  | 3.698713000  | 2.240554000  |
| 8                                    | 4.539956000  | -1.169132000 | -1.891775000 | 6 | 3.282706000  | -1.927286000 | 0.328585000  |
| 6                                    | 6.810597000  | 0.083558000  | 0.495936000  | 1 | 3.571955000  | -2.796452000 | 0.911920000  |
| 6                                    | 7.138472000  | -1.191842000 | 1.278328000  | 6 | -2.664899000 | 2.660172000  | 2.417438000  |
| 6                                    | 6.393255000  | 1.194127000  | 1.466174000  | 1 | -2.480533000 | 1.756096000  | 3.005887000  |
| 1                                    | 7.207924000  | 1.424892000  | 2.158968000  | 1 | -3.742804000 | 2.842839000  | 2.389157000  |
| 1                                    | 6.125940000  | 2.101508000  | 0.916264000  | 1 | -2.189439000 | 3.512801000  | 2.914528000  |
| 1                                    | 5.522159000  | 0.857135000  | 2.038830000  | 6 | 2.831483000  | -0.629387000 | 3.312407000  |
| 1                                    | 6.237614000  | -1.511702000 | 1.815008000  | 1 | 3.064623000  | 0.426263000  | 3.136905000  |
| 1                                    | 7.462897000  | -1.989183000 | 0.608934000  | 1 | 3.770282000  | -1.195055000 | 3.273073000  |
| 1                                    | 7.926797000  | -0.989066000 | 2.010682000  | 1 | 2.417401000  | -0.725621000 | 4.322418000  |
| 6                                    | 7.987477000  | 0.551772000  | -0.275388000 | 6 | 1.483334000  | -2.629372000 | 2.589117000  |
| 6                                    | 8.962217000  | 0.997721000  | -0.834005000 | 1 | 0.854101000  | -3.064032000 | 1.805375000  |
| 1                                    | 9.823122000  | 1.371571000  | -1.350558000 | 1 | 0.939513000  | -2.680865000 | 3.538716000  |
| NHC-TS <sub>3-5</sub> <sup>2</sup> : |              |              |              | 1 | 2.382090000  | -3.247791000 | 2.691262000  |
| 7                                    | -0.720549000 | 2.122095000  | 1.015686000  | 6 | 1.003633000  | 1.054933000  | -3.046738000 |
| 6                                    | -0.191706000 | 1.080222000  | 0.380720000  | 1 | 0.132702000  | 0.653376000  | -2.516742000 |
| 7                                    | 1.126546000  | 1.073671000  | 0.599771000  | 1 | 1.367851000  | 0.277565000  | -3.729682000 |
| 6                                    | 2.051317000  | 0.099163000  | 0.067666000  | 1 | 0.674172000  | 1.909802000  | -3.648577000 |
| 6                                    | 2.548105000  | 0.303568000  | -1.227314000 | 6 | 3.286783000  | 2.105924000  | -2.853163000 |
| 6                                    | 1.449844000  | 2.150783000  | 1.398732000  | 1 | 4.119233000  | 2.360645000  | -2.188270000 |
| 1                                    | 2.469412000  | 2.348128000  | 1.694909000  | 1 | 2.952689000  | 3.022841000  | -3.350219000 |
| 6                                    | 3.424239000  | -0.664045000 | -1.728232000 | 1 | 3.664236000  | 1.432058000  | -3.629882000 |
| 1                                    | 3.823950000  | -0.557893000 | -2.732730000 | 1 | -0.722333000 | 0.354050000  | -0.227093000 |
| 6                                    | 2.390837000  | -0.998846000 | 0.871593000  | 8 | -3.502881000 | -1.124254000 | -0.210337000 |
| 6                                    | -2.154920000 | 2.499078000  | 0.992706000  | 6 | -2.700608000 | -2.322681000 | -0.260632000 |
| 1                                    | -2.662890000 | 1.661364000  | 0.508757000  | 6 | -3.473685000 | -3.371466000 | -1.057918000 |
| 6                                    | 3.789356000  | -1.764553000 | -0.957611000 | 1 | -2.896003000 | -4.299318000 | -1.109586000 |
| 1                                    | 4.472260000  | -2.504860000 | -1.365236000 | 1 | -3.657186000 | -3.017186000 | -2.077818000 |
| 6                                    | 1.837341000  | -1.172620000 | 2.275940000  | 1 | -4.435399000 | -3.574500000 | -0.574806000 |
|                                      |              |              |              | 6 | -3.171618000 | -0.246482000 | -1.200411000 |
|                                      |              |              |              | 8 | -3.866006000 | 0.745109000  | -1.375212000 |

|         |              |              |              |    |              |              |              |
|---------|--------------|--------------|--------------|----|--------------|--------------|--------------|
| 8       | -2.095512000 | -0.577532000 | -1.831223000 | 1  | 2.249758000  | -1.775788000 | 3.885222000  |
| 6       | -2.459971000 | -2.766253000 | 1.173820000  | 6  | -2.976211000 | 1.732716000  | 2.850990000  |
| 1       | -1.862792000 | -3.682100000 | 1.185388000  | 1  | -3.202391000 | 0.673543000  | 3.016462000  |
| 1       | -1.922970000 | -1.989981000 | 1.729122000  | 1  | -3.916441000 | 2.246753000  | 2.617072000  |
| 1       | -3.418025000 | -2.961753000 | 1.667338000  | 1  | -2.582863000 | 2.149131000  | 3.785062000  |
| 6       | -1.417580000 | -1.953150000 | -0.956343000 | 6  | -1.628142000 | 3.407753000  | 1.536428000  |
| 6       | -0.203862000 | -2.328377000 | -1.058364000 | 1  | -0.943972000 | 3.560652000  | 0.695735000  |
| 1       | 0.557458000  | -1.897144000 | -1.702629000 | 1  | -1.146577000 | 3.782848000  | 2.446370000  |
| NHC-5': |              |              |              | 1  | -2.527368000 | 4.010824000  | 1.368403000  |
| 7       | 0.710120000  | -1.468938000 | 1.600651000  | 6  | -1.379594000 | -2.051060000 | -2.725026000 |
| 6       | 0.131776000  | -0.724262000 | 0.663207000  | 1  | -0.468167000 | -1.464425000 | -2.566863000 |
| 7       | -1.187308000 | -0.727657000 | 0.871279000  | 1  | -1.921657000 | -1.612361000 | -3.570977000 |
| 6       | -2.148373000 | -0.017812000 | 0.057724000  | 1  | -1.085842000 | -3.070154000 | -3.000859000 |
| 6       | -2.664479000 | -0.666476000 | -1.071939000 | 6  | -3.481679000 | -2.976737000 | -1.678031000 |
| 6       | -1.460714000 | -1.504131000 | 1.978493000  | 1  | -4.126826000 | -2.988789000 | -0.792606000 |
| 1       | -2.471323000 | -1.654573000 | 2.327883000  | 1  | -3.157161000 | -4.003786000 | -1.878155000 |
| 6       | -3.572660000 | 0.053504000  | -1.855044000 | 1  | -4.082421000 | -2.646755000 | -2.532897000 |
| 1       | -3.988340000 | -0.405049000 | -2.748536000 | 1  | 0.629788000  | -0.171686000 | -0.125940000 |
| 6       | -2.501486000 | 1.285329000  | 0.441782000  | 8  | 3.752988000  | 0.458509000  | -0.734183000 |
| 6       | 2.166842000  | -1.714007000 | 1.717046000  | 6  | 3.043477000  | 1.734536000  | -0.695491000 |
| 1       | 2.614240000  | -1.133866000 | 0.905140000  | 6  | 3.918246000  | 2.767937000  | -1.392593000 |
| 6       | -3.944025000 | 1.348722000  | -1.509209000 | 1  | 3.397884000  | 3.730482000  | -1.403412000 |
| 1       | -4.648107000 | 1.893350000  | -2.132503000 | 1  | 4.114001000  | 2.468416000  | -2.428024000 |
| 6       | -1.965115000 | 1.925198000  | 1.711376000  | 1  | 4.873061000  | 2.882408000  | -0.867780000 |
| 1       | -1.037946000 | 1.410973000  | 1.989966000  | 6  | 3.185788000  | -0.361017000 | -1.631439000 |
| 6       | 2.454658000  | -3.194570000 | 1.510674000  | 8  | 3.634725000  | -1.447992000 | -1.914307000 |
| 1       | 2.075180000  | -3.539189000 | 0.544096000  | 8  | 2.076010000  | 0.160643000  | -2.138157000 |
| 1       | 2.000505000  | -3.794334000 | 2.307226000  | 6  | 2.797871000  | 2.077456000  | 0.762290000  |
| 1       | 3.536399000  | -3.355263000 | 1.535031000  | 1  | 2.220769000  | 3.004565000  | 0.824885000  |
| 6       | -2.259226000 | -2.076086000 | -1.468764000 | 1  | 2.228092000  | 1.281033000  | 1.254182000  |
| 1       | -1.669693000 | -2.512466000 | -0.655170000 | 1  | 3.748762000  | 2.212521000  | 1.289551000  |
| 6       | -0.266151000 | -1.970789000 | 2.436451000  | 6  | 1.769012000  | 1.439935000  | -1.472400000 |
| 1       | -0.027974000 | -2.607871000 | 3.275080000  | 6  | 0.631081000  | 2.102769000  | -1.569606000 |
| 6       | -3.418262000 | 1.955385000  | -0.370928000 | 1  | -0.076154000 | 1.591130000  | -2.243572000 |
| 1       | -3.720188000 | 2.967071000  | -0.116476000 | A: |              |              |              |
| 6       | 2.665803000  | -1.191419000 | 3.056963000  | 7  | -1.891462000 | 1.948944000  | 0.494095000  |
| 1       | 2.397318000  | -0.139960000 | 3.197067000  | 6  | -1.009986000 | 1.001907000  | 0.166894000  |
| 1       | 3.755572000  | -1.279746000 | 3.091275000  | 7  | -1.481518000 | -0.177260000 | 0.598655000  |

|   |              |              |              |    |              |              |              |
|---|--------------|--------------|--------------|----|--------------|--------------|--------------|
| 6 | 0.290930000  | 1.179882000  | -0.591706000 | 1  | 2.147670000  | -2.344278000 | 3.196193000  |
| 6 | -0.886650000 | -1.470008000 | 0.335460000  | 1  | 2.151508000  | -0.633944000 | 3.641411000  |
| 6 | 0.017518000  | -1.986577000 | 1.274061000  | 6  | -0.458718000 | -1.704250000 | 3.719749000  |
| 6 | -2.697938000 | 0.026943000  | 1.213579000  | 1  | -1.529895000 | -1.571836000 | 3.529937000  |
| 1 | -3.269663000 | -0.795525000 | 1.617947000  | 1  | -0.200205000 | -1.140959000 | 4.623571000  |
| 6 | 0.555246000  | -3.246745000 | 1.006785000  | 1  | -0.277381000 | -2.767578000 | 3.917363000  |
| 1 | 1.262872000  | -3.685387000 | 1.704317000  | 6  | 4.096431000  | 1.032171000  | 0.825953000  |
| 6 | -1.247882000 | -2.130740000 | -0.845369000 | 6  | 3.696477000  | 1.057484000  | -0.651139000 |
| 6 | -1.756524000 | 3.401862000  | 0.217435000  | 6  | 2.603945000  | 0.055473000  | -0.935360000 |
| 1 | -0.759447000 | 3.518506000  | -0.211104000 | 6  | 2.497568000  | -1.044138000 | -1.581255000 |
| 6 | 0.209618000  | -3.943326000 | -0.149603000 | 6  | 3.325793000  | 2.475229000  | -1.080493000 |
| 1 | 0.647140000  | -4.919285000 | -0.341379000 | 1  | 4.205187000  | 3.117999000  | -0.960672000 |
| 8 | 0.264208000  | 1.778987000  | -1.656665000 | 1  | 3.015199000  | 2.489766000  | -2.128953000 |
| 8 | 1.271286000  | 0.635387000  | 0.028480000  | 1  | 2.513690000  | 2.877432000  | -0.467929000 |
| 6 | -2.172744000 | -1.520339000 | -1.885230000 | 1  | 1.602518000  | -1.658949000 | -1.639205000 |
| 1 | -2.591139000 | -0.590241000 | -1.484687000 | 8  | 4.829550000  | 0.658555000  | -1.429691000 |
| 6 | -1.853137000 | 4.179825000  | 1.523098000  | 1  | 4.600437000  | -0.208584000 | -1.814772000 |
| 1 | -1.119900000 | 3.819713000  | 2.251046000  | 1  | 4.439533000  | 0.030583000  | 1.104964000  |
| 1 | -2.854407000 | 4.102895000  | 1.960119000  | 1  | 4.916733000  | 1.740176000  | 0.990433000  |
| 1 | -1.652430000 | 5.235972000  | 1.322266000  | 1  | 3.256220000  | 1.312107000  | 1.468651000  |
| 6 | 0.389043000  | -1.226446000 | 2.533471000  |    |              |              |              |
| 1 | 0.172817000  | -0.166824000 | 2.362672000  | B: |              |              |              |
| 6 | -2.950851000 | 1.362777000  | 1.155169000  | 7  | 3.126250000  | -1.024569000 | -0.145129000 |
| 1 | -3.784474000 | 1.940645000  | 1.525348000  | 6  | 1.874262000  | -0.565220000 | -0.086449000 |
| 6 | -0.676583000 | -3.389358000 | -1.066790000 | 7  | 1.921691000  | 0.708765000  | 0.331410000  |
| 1 | -0.921916000 | -3.933515000 | -1.975220000 | 6  | 0.593358000  | -1.330262000 | -0.433315000 |
| 6 | -2.805088000 | 3.815870000  | -0.805867000 | 6  | 0.799417000  | 1.614051000  | 0.432597000  |
| 1 | -2.711138000 | 3.227461000  | -1.723504000 | 6  | 0.125497000  | 1.709237000  | 1.657821000  |
| 1 | -2.664854000 | 4.872105000  | -1.053880000 | 6  | 3.239716000  | 1.067721000  | 0.535973000  |
| 1 | -3.816077000 | 3.690051000  | -0.403081000 | 1  | 3.509898000  | 2.064294000  | 0.852991000  |
| 6 | -3.348957000 | -2.445793000 | -2.213645000 | 6  | -0.917704000 | 2.635532000  | 1.740135000  |
| 1 | -4.029825000 | -1.949897000 | -2.914129000 | 1  | -1.462770000 | 2.743279000  | 2.674155000  |
| 1 | -3.915374000 | -2.707697000 | -1.312946000 | 6  | 0.465522000  | 2.373089000  | -0.698538000 |
| 1 | -3.006621000 | -3.374464000 | -2.683765000 | 6  | 3.528506000  | -2.397367000 | -0.536972000 |
| 6 | -1.379329000 | -1.168405000 | -3.150660000 | 1  | 2.590209000  | -2.934456000 | -0.687556000 |
| 1 | -0.558666000 | -0.477302000 | -2.927643000 | 6  | -1.270122000 | 3.417609000  | 0.642636000  |
| 1 | -2.035595000 | -0.694585000 | -3.889530000 | 1  | -2.086586000 | 4.129808000  | 0.725799000  |
| 1 | -0.951819000 | -2.070378000 | -3.604328000 | 8  | 0.558438000  | -1.844657000 | -1.555990000 |
| 6 | 1.882554000  | -1.339607000 | 2.847416000  | 8  | -0.252178000 | -1.320110000 | 0.496508000  |
| 1 | 2.485394000  | -1.111542000 | 1.962534000  |    |              |              |              |

|   |              |              |              |    |              |              |              |
|---|--------------|--------------|--------------|----|--------------|--------------|--------------|
| 6 | 1.158635000  | 2.203772000  | -2.039625000 | 1  | -1.931069000 | 1.044789000  | -0.599136000 |
| 1 | 2.044768000  | 1.573619000  | -1.901867000 | 8  | -4.203326000 | -2.469267000 | -0.283008000 |
| 6 | 4.319793000  | -3.039137000 | 0.594734000  | 1  | -4.694053000 | -1.772020000 | 0.190283000  |
| 1 | 3.748342000  | -3.033558000 | 1.528015000  | 1  | -3.298779000 | -1.960828000 | 2.200260000  |
| 1 | 5.271437000  | -2.521937000 | 0.758115000  | 1  | -3.160176000 | -3.701884000 | 1.845726000  |
| 1 | 4.540840000  | -4.077333000 | 0.330371000  | 1  | -1.692244000 | -2.690710000 | 1.960542000  |
| 6 | 0.500805000  | 0.864257000  | 2.860788000  | 6  | -4.226509000 | 0.439501000  | -1.090001000 |
| 1 | 1.177646000  | 0.072751000  | 2.523811000  | 8  | -4.133776000 | 0.744322000  | -2.249002000 |
| 6 | 3.994719000  | -0.024001000 | 0.243996000  | 8  | -5.001980000 | 0.318406000  | -0.170803000 |
| 1 | 5.062945000  | -0.176208000 | 0.281180000  |    |              |              |              |
| 6 | -0.591640000 | 3.280922000  | -0.565041000 | C: |              |              |              |
| 1 | -0.890380000 | 3.880891000  | -1.420552000 | 6  | -1.725123000 | -2.446788000 | 0.141118000  |
| 6 | 4.300437000  | -2.341149000 | -1.848029000 | 6  | -1.468075000 | -1.463918000 | 0.872624000  |
| 1 | 3.703865000  | -1.868944000 | -2.634209000 | 6  | -1.321817000 | -1.096064000 | 2.327623000  |
| 1 | 4.547263000  | -3.359503000 | -2.162487000 | 6  | -2.198628000 | 0.080023000  | 2.739737000  |
| 1 | 5.236557000  | -1.784220000 | -1.729150000 | 1  | -2.091147000 | 0.243317000  | 3.817636000  |
| 6 | 1.633124000  | 3.543782000  | -2.611257000 | 1  | -1.902786000 | 0.991390000  | 2.213765000  |
| 1 | 2.198662000  | 3.374305000  | -3.533951000 | 1  | -3.250360000 | -0.136097000 | 2.525496000  |
| 1 | 2.281320000  | 4.073499000  | -1.904250000 | 1  | -1.811055000 | -2.778786000 | -0.879550000 |
| 1 | 0.788147000  | 4.197130000  | -2.855611000 | 6  | 0.143590000  | -0.834769000 | 2.673909000  |
| 6 | 0.220459000  | 1.487813000  | -3.020577000 | 1  | 0.530620000  | 0.027933000  | 2.125723000  |
| 1 | -0.081408000 | 0.505462000  | -2.639944000 | 1  | 0.228693000  | -0.637932000 | 3.748389000  |
| 1 | 0.719523000  | 1.341375000  | -3.985196000 | 1  | 0.756696000  | -1.709113000 | 2.427209000  |
| 1 | -0.685730000 | 2.081116000  | -3.193392000 | 8  | -1.783500000 | -2.217492000 | 3.093635000  |
| 6 | -0.729818000 | 0.185638000  | 3.469090000  | 1  | -1.678222000 | -3.006405000 | 2.533605000  |
| 1 | -1.284919000 | -0.359991000 | 2.700022000  | 6  | -1.022009000 | 0.268892000  | -0.229351000 |
| 1 | -1.402069000 | 0.915367000  | 3.934653000  | 7  | 0.122878000  | 0.403261000  | -0.958013000 |
| 1 | -0.420152000 | -0.524158000 | 4.244729000  | 7  | -1.995569000 | 0.619272000  | -1.107049000 |
| 6 | 1.234764000  | 1.714482000  | 3.905350000  | 6  | -0.134686000 | 0.823791000  | -2.254426000 |
| 1 | 2.143589000  | 2.165771000  | 3.491133000  | 6  | -1.481553000 | 0.956742000  | -2.347329000 |
| 1 | 1.520668000  | 1.099062000  | 4.765758000  | 6  | -3.427643000 | 0.640150000  | -0.775460000 |
| 1 | 0.589502000  | 2.523959000  | 4.267490000  | 1  | 0.654064000  | 0.995311000  | -2.972812000 |
| 6 | -2.735746000 | -2.714189000 | 1.638072000  | 1  | -2.103416000 | 1.268078000  | -3.174037000 |
| 6 | -2.838793000 | -2.451922000 | 0.137411000  | 6  | -3.942402000 | 2.075892000  | -0.760584000 |
| 6 | -2.350141000 | -1.077580000 | -0.188853000 | 1  | -4.989502000 | 2.092714000  | -0.441813000 |
| 6 | -2.484413000 | 0.122575000  | -0.501103000 | 1  | -3.357813000 | 2.691393000  | -0.068610000 |
| 6 | -2.134515000 | -3.528296000 | -0.675396000 | 1  | -3.883063000 | 2.523969000  | -1.759307000 |
| 1 | -2.622403000 | -4.485358000 | -0.464160000 | 6  | -4.209890000 | -0.249720000 | -1.734502000 |
| 1 | -2.213605000 | -3.314621000 | -1.744885000 | 1  | -5.261194000 | -0.280427000 | -1.431884000 |
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|    |              |              |              |   |              |              |              |
|----|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1  | -4.164445000 | 0.134898000  | -2.759825000 | 1 | 2.796576000  | 0.967197000  | -1.997343000 |
| 1  | -3.817183000 | -1.271524000 | -1.725642000 | 1 | 1.836179000  | -1.637773000 | 1.732853000  |
| 1  | -3.485519000 | 0.220931000  | 0.232072000  | 6 | 0.150266000  | -1.245376000 | -2.359935000 |
| 6  | 1.446357000  | 0.240522000  | -0.425165000 | 1 | -0.682701000 | -0.618480000 | -2.027801000 |
| 6  | 2.038285000  | 1.332572000  | 0.231785000  | 1 | 0.190848000  | -1.229192000 | -3.454703000 |
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| 6  | 3.377886000  | -1.124464000 | -0.036194000 | 1 | 2.470705000  | -2.425100000 | -1.735352000 |
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| 1  | 3.804317000  | 1.975155000  | 1.282363000  | 8 | 4.630542000  | -0.020586000 | -0.504180000 |
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| 6  | 1.346092000  | 2.680082000  | 0.362406000  | 7 | -0.976472000 | 0.621670000  | 0.902074000  |
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| 6  | 1.161801000  | 3.081147000  | 1.830594000  | 6 | -1.114826000 | 1.313509000  | 2.096537000  |
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| 6  | 1.532535000  | -3.460814000 | -0.579878000 | 6 | -2.038227000 | -0.101752000 | 0.261736000  |
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| 6  | 1.451415000  | -0.809510000 | -0.286907000 | 1 | -3.513595000 | -3.151609000 | 0.238432000  |
| 6  | 1.478681000  | -0.739125000 | -1.795178000 | 1 | -4.834132000 | -2.049884000 | -1.534551000 |
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| 1  | 1.062074000  | 1.369080000  | -2.067703000 | 6 | -2.227379000 | 2.157006000  | -2.597218000 |

|    |              |              |              |   |              |              |              |
|----|--------------|--------------|--------------|---|--------------|--------------|--------------|
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| 1  | -3.573958000 | 3.919122000  | -0.962855000 | 6 | 2.590861000  | 2.810290000  | 0.020555000  |
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| 6  | 1.002159000  | 1.284485000  | 0.028847000  | 1 | 1.401732000  | -0.793946000 | 4.418213000  |
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| 6  | 2.674844000  | -2.780960000 | -1.233440000 | 1 | 4.268831000  | -0.587313000 | -3.117191000 |
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| F: |              |              |              | 6    | 0.196058000  | -3.331005000 | 1.635558000  |
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| 6  | -0.188520000 | 0.537286000  | -0.768486000 | 6    | 3.109891000  | 0.969732000  | -2.891297000 |
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| 6  | 3.957474000  | -1.639399000 | -1.406387000 | 1    | 5.523421000  | 1.124638000  | -0.376942000 |
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| 6  | 2.112517000  | -1.961799000 | 0.697985000  | 1    | 5.716547000  | 0.496301000  | -2.024630000 |
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| 6  | 3.676705000  | -2.903619000 | -0.900774000 | 6    | -3.950759000 | -0.628547000 | 0.293519000  |
| 1  | 4.165879000  | -3.775704000 | -1.325938000 | 6    | -5.014540000 | -1.257577000 | -0.569481000 |
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| 8  | -0.726110000 | 1.496584000  | -1.475865000 | 6    | -2.956027000 | -1.666173000 | 0.807400000  |
| 6  | 1.115340000  | -2.122851000 | 1.831587000  | 6    | -4.538347000 | 0.207520000  | 1.416852000  |
| 1  | 0.477119000  | -1.231941000 | 1.849474000  | 1    | -3.467833000 | -2.365553000 | 1.475780000  |
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| 1  | 2.550981000  | -4.059922000 | 0.516929000  | b-1: |              |              |              |
| 6  | -1.141415000 | 3.484287000  | 2.398105000  | 6    | -3.294935000 | -1.004508000 | 0.073891000  |
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|                               |              |              |              |              |              |              |              |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 6                             | -2.331644000 | 0.114894000  | -0.069161000 | 1            | 2.433493000  | -1.934886000 | -1.105639000 |
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| 6                             | -2.055138000 | 0.380528000  | -1.546316000 | 1            | 3.750800000  | -0.731224000 | 1.430595000  |
| 6                             | -2.872891000 | 1.364115000  | 0.626680000  | 1            | 2.264982000  | -0.105467000 | 2.170865000  |
| 8                             | -1.076597000 | -0.261849000 | 0.504165000  | 1            | 2.271412000  | -1.722272000 | 1.411200000  |
| 1                             | -1.623294000 | -0.506209000 | -2.019980000 | 8            | -0.815243000 | -0.184524000 | 1.416635000  |
| 1                             | -1.350408000 | 1.212896000  | -1.634120000 | 6            | -0.139240000 | -1.137189000 | -0.143015000 |
| 1                             | -2.982808000 | 0.641935000  | -2.063339000 | 8            | 0.322723000  | -2.218104000 | 0.058505000  |
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| 1                             | -3.046662000 | 1.168070000  | 1.690760000  | 6            | -2.955736000 | 0.776467000  | 1.782319000  |
| 1                             | -2.138111000 | 2.169031000  | 0.525609000  | 6            | -2.094727000 | 0.217950000  | -0.536110000 |
| 8                             | 1.388023000  | 0.918719000  | 1.193257000  | 1            | -3.895981000 | 1.129710000  | 1.373516000  |
| 6                             | 0.986238000  | 1.432941000  | 0.003567000  | 6            | -1.667577000 | 1.527412000  | -1.194979000 |
| 8                             | 0.435162000  | 2.492020000  | -0.107219000 | 6            | -3.451670000 | -0.234977000 | -1.045395000 |
| 6                             | 1.903104000  | -0.347156000 | 0.991804000  | 8            | -1.170616000 | -0.850083000 | -0.921182000 |
| 6                             | 2.204187000  | -1.158573000 | 1.994514000  | 1            | -2.800695000 | 0.841786000  | 2.854725000  |
| 6                             | 2.051624000  | -0.532754000 | -0.504336000 | 1            | -1.576475000 | 1.384716000  | -2.276960000 |
| 1                             | 2.613311000  | -2.141789000 | 1.788392000  | 1            | -0.715332000 | 1.898455000  | -0.807696000 |
| 6                             | 1.385481000  | -1.788570000 | -1.034103000 | 1            | -2.434792000 | 2.283538000  | -1.003582000 |
| 6                             | 3.503135000  | -0.401547000 | -0.947539000 | 1            | -3.742367000 | -1.182739000 | -0.584422000 |
| 8                             | 1.330413000  | 0.629795000  | -1.000650000 | 1            | -4.206916000 | 0.519999000  | -0.811412000 |
| 1                             | 2.055007000  | -0.856609000 | 3.025941000  | 1            | -3.417624000 | -0.358029000 | -2.132403000 |
| 1                             | 1.442122000  | -1.804049000 | -2.127173000 | 1            | 0.305161000  | 0.400412000  | 0.792455000  |
| 1                             | 0.340811000  | -1.826641000 | -0.717656000 |              |              |              |              |
| 1                             | 1.911595000  | -2.667395000 | -0.647942000 | <i>b</i> -2: |              |              |              |
| 1                             | 3.940818000  | 0.527639000  | -0.568994000 | 6            | 2.327024000  | 1.347707000  | -0.347986000 |
| 1                             | 4.081924000  | -1.245922000 | -0.561336000 | 6            | 2.555207000  | 2.503807000  | -0.608023000 |
| 1                             | 3.558679000  | -0.403779000 | -2.040587000 | 6            | 2.092350000  | -0.072050000 | -0.016012000 |
| 1                             | -1.185747000 | -0.344883000 | 1.467866000  | 1            | 2.755241000  | 3.531235000  | -0.839950000 |
|                               |              |              |              | 6            | 2.917859000  | -0.964004000 | -0.942419000 |
|                               |              |              |              | 6            | 2.395569000  | -0.308875000 | 1.463041000  |
| <i>b</i> -TS <sub>1,2</sub> : |              |              |              | 8            | 0.666983000  | -0.233974000 | -0.280693000 |
| 6                             | 2.793454000  | 1.300248000  | -0.084107000 | 1            | -1.116738000 | 0.902174000  | 2.532272000  |
| 6                             | 3.227065000  | 2.424280000  | -0.144030000 | 1            | 2.634963000  | -0.791508000 | -1.985068000 |
| 6                             | 2.294780000  | -0.082715000 | 0.002087000  | 1            | 2.766403000  | -2.014829000 | -0.690282000 |
| 1                             | 3.609655000  | 3.424395000  | -0.200451000 | 1            | 3.976590000  | -0.716708000 | -0.821946000 |
| 6                             | 2.765767000  | -0.899234000 | -1.194806000 | 1            | 3.440306000  | -0.048625000 | 1.656129000  |
| 6                             | 2.660583000  | -0.705092000 | 1.345303000  | 1            | 1.756508000  | 0.323757000  | 2.085995000  |
| 8                             | 0.823162000  | 0.085450000  | -0.108126000 | 1            | 2.238587000  | -1.357371000 | 1.722378000  |
| 1                             | 2.387010000  | -0.467049000 | -2.125196000 |              |              |              |              |

|                               |              |              |              |              |              |              |              |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 8                             | -1.350832000 | 0.256739000  | 1.842581000  | 6            | 1.726170000  | 0.168495000  | 1.851087000  |
| 6                             | 0.059999000  | -1.396253000 | -0.039696000 | 6            | 3.407161000  | -0.618710000 | 0.157901000  |
| 8                             | 0.592241000  | -2.430270000 | 0.288540000  | 8            | 1.207287000  | -1.438401000 | 0.065421000  |
| 6                             | -1.590072000 | 0.907618000  | 0.669081000  | 1            | 0.980227000  | 2.835222000  | -0.534094000 |
| 6                             | -1.555460000 | 2.233527000  | 0.523617000  | 1            | 1.927359000  | -0.694932000 | 2.492831000  |
| 6                             | -1.984528000 | -0.081295000 | -0.415970000 | 1            | 0.712234000  | 0.528244000  | 2.032453000  |
| 1                             | -1.732942000 | 2.697180000  | -0.438965000 | 1            | 2.430883000  | 0.963405000  | 2.110417000  |
| 6                             | -1.777364000 | 0.438731000  | -1.831729000 | 1            | 3.553538000  | -0.959898000 | -0.870543000 |
| 6                             | -3.438461000 | -0.500939000 | -0.202582000 | 1            | 4.054017000  | 0.242343000  | 0.347840000  |
| 8                             | -1.256901000 | -1.333202000 | -0.233872000 | 1            | 3.679460000  | -1.423507000 | 0.847402000  |
| 1                             | -1.336287000 | 2.882079000  | 1.368490000  | 1            | 2.666987000  | 2.635884000  | 0.132358000  |
| 1                             | -1.985636000 | -0.373086000 | -2.535453000 |              |              |              |              |
| 1                             | -0.759118000 | 0.800489000  | -1.989741000 | <i>b</i> -3: |              |              |              |
| 1                             | -2.479535000 | 1.251343000  | -2.038257000 | 6            | 2.247211000  | 1.425383000  | -0.358628000 |
| 1                             | -3.581334000 | -0.895274000 | 0.807350000  | 6            | 2.398445000  | 2.591844000  | -0.627957000 |
| 1                             | -4.093746000 | 0.362688000  | -0.345999000 | 6            | 2.098294000  | -0.002338000 | -0.012598000 |
| 1                             | -3.707931000 | -1.275728000 | -0.927311000 | 1            | 2.535114000  | 3.627960000  | -0.866965000 |
|                               |              |              |              | 6            | 2.984791000  | -0.854092000 | -0.919598000 |
| <i>b</i> -TS <sub>2-3</sub> : |              |              |              | 6            | 2.397450000  | -0.205255000 | 1.472262000  |
| 6                             | -2.230003000 | 1.398694000  | 0.426962000  | 8            | 0.686237000  | -0.252571000 | -0.293895000 |
| 6                             | -2.370230000 | 2.554722000  | 0.742646000  | 1            | 2.687701000  | -0.730002000 | -1.965157000 |
| 6                             | -2.089376000 | -0.015041000 | 0.026615000  | 1            | 2.912397000  | -1.906523000 | -0.639959000 |
| 1                             | -2.494839000 | 3.581634000  | 1.024289000  | 1            | 4.022840000  | -0.526841000 | -0.809975000 |
| 6                             | -2.942232000 | -0.904584000 | 0.928967000  | 1            | 3.410476000  | 0.152316000  | 1.678351000  |
| 6                             | -2.429386000 | -0.170390000 | -1.454677000 | 1            | 1.691361000  | 0.365426000  | 2.082113000  |
| 8                             | -0.667313000 | -0.270408000 | 0.258480000  | 1            | 2.336513000  | -1.263179000 | 1.733637000  |
| 1                             | 1.525071000  | 1.760576000  | -1.905385000 | 8            | -1.144267000 | 0.342900000  | 1.806219000  |
| 1                             | -2.611952000 | -0.818392000 | 1.968322000  | 6            | 0.139426000  | -1.436603000 | -0.011588000 |
| 1                             | -2.874461000 | -1.945318000 | 0.607086000  | 8            | 0.725171000  | -2.434882000 | 0.330502000  |
| 1                             | -3.984659000 | -0.579616000 | 0.864606000  | 6            | -1.604180000 | 0.757423000  | 0.762027000  |
| 1                             | -3.452911000 | 0.179485000  | -1.617612000 | 6            | -1.920779000 | 2.209231000  | 0.534605000  |
| 1                             | -1.749927000 | 0.430939000  | -2.064941000 | 6            | -1.938371000 | -0.222544000 | -0.377812000 |
| 1                             | -2.362216000 | -1.218030000 | -1.753705000 | 1            | -2.913215000 | 2.335860000  | 0.090326000  |
| 8                             | 1.114240000  | 0.571114000  | -1.739581000 | 6            | -1.735497000 | 0.345815000  | -1.779270000 |
| 6                             | -0.124698000 | -1.438878000 | -0.078189000 | 6            | -3.391863000 | -0.655826000 | -0.179156000 |
| 8                             | -0.706054000 | -2.427148000 | -0.451691000 | 8            | -1.184021000 | -1.441888000 | -0.194591000 |
| 6                             | 1.611303000  | 0.855979000  | -0.589164000 | 1            | -1.857078000 | 2.751475000  | 1.479517000  |
| 6                             | 1.901247000  | 2.242775000  | -0.533723000 | 1            | -1.898515000 | -0.455353000 | -2.507117000 |
| 6                             | 1.942695000  | -0.239611000 | 0.397849000  | 1            | -0.735062000 | 0.758106000  | -1.922579000 |

|                                |              |              |              |         |              |              |              |
|--------------------------------|--------------|--------------|--------------|---------|--------------|--------------|--------------|
| 1                              | -2.471898000 | 1.131454000  | -1.971320000 | 1       | -0.695071000 | 1.345087000  | 2.405180000  |
| 1                              | -3.518086000 | -1.132055000 | 0.797335000  | 6       | -3.681690000 | -0.305602000 | -0.285551000 |
| 1                              | -4.058341000 | 0.209381000  | -0.243001000 | 6       | -4.379653000 | -0.399205000 | -1.637618000 |
| 1                              | -3.667802000 | -1.368368000 | -0.962718000 | 1       | -3.650716000 | -0.561841000 | -2.436842000 |
| 1                              | -1.190932000 | 2.623643000  | -0.172086000 | 1       | -5.088618000 | -1.232049000 | -1.632145000 |
| <i>b</i> -TS <sub>2-3</sub> ': |              |              |              | 1       | -4.921911000 | 0.531793000  | -1.827822000 |
| 6                              | 1.694804000  | -2.152895000 | 1.183050000  | 6       | -4.658157000 | -0.009521000 | 0.846795000  |
| 6                              | 1.185735000  | -2.605592000 | 2.179170000  | 1       | -5.391039000 | -0.817247000 | 0.924384000  |
| 6                              | 2.299109000  | -1.623791000 | -0.056399000 | 1       | -4.131915000 | 0.078662000  | 1.802301000  |
| 1                              | 0.739260000  | -3.005307000 | 3.068030000  | 1       | -5.182014000 | 0.927859000  | 0.635598000  |
| 6                              | 3.781148000  | -1.984781000 | -0.124035000 | 6       | -2.911981000 | -1.538732000 | -0.012180000 |
| 6                              | 1.505918000  | -2.135543000 | -1.259147000 | 6       | -2.280043000 | -2.543393000 | 0.210078000  |
| 8                              | 2.138537000  | -0.181971000 | 0.101312000  | 1       | -1.716513000 | -3.434275000 | 0.407650000  |
| 1                              | -1.810029000 | 0.577724000  | -0.811721000 | NHC-10: |              |              |              |
| 1                              | 4.314893000  | -1.559208000 | 0.730794000  | 7       | -2.059035000 | -1.548285000 | 0.019682000  |
| 1                              | 4.215187000  | -1.606307000 | -1.051800000 | 6       | -1.097597000 | -0.594961000 | 0.102936000  |
| 1                              | 3.887344000  | -3.073285000 | -0.098167000 | 7       | 0.054886000  | -1.318930000 | 0.028063000  |
| 1                              | 1.507286000  | -3.229411000 | -1.240402000 | 6       | 1.375973000  | -0.755950000 | 0.069598000  |
| 1                              | 0.474236000  | -1.776227000 | -1.204523000 | 6       | 1.945425000  | -0.459268000 | 1.319029000  |
| 1                              | 1.961505000  | -1.796978000 | -2.191457000 | 6       | -0.183818000 | -2.678203000 | -0.095346000 |
| 8                              | -0.406565000 | 0.613406000  | -0.808781000 | 1       | 0.616465000  | -3.401270000 | -0.166026000 |
| 6                              | 2.384628000  | 0.645761000  | -0.917022000 | 6       | 3.237848000  | 0.073958000  | 1.332067000  |
| 8                              | 2.993872000  | 0.378315000  | -1.925198000 | 1       | 3.704419000  | 0.326388000  | 2.281061000  |
| 6                              | -0.141005000 | 1.100837000  | 0.343211000  | 6       | 2.055016000  | -0.543853000 | -1.140869000 |
| 6                              | -0.936031000 | 0.846010000  | 1.472443000  | 6       | -3.498688000 | -1.248029000 | 0.050814000  |
| 6                              | 0.978962000  | 2.156840000  | 0.376552000  | 1       | -3.551450000 | -0.165328000 | 0.198153000  |
| 6                              | 1.717702000  | 2.259110000  | 1.704745000  | 6       | 3.938528000  | 0.285745000  | 0.147249000  |
| 6                              | 0.372526000  | 3.501881000  | -0.017407000 | 1       | 4.944921000  | 0.695310000  | 0.179058000  |
| 8                              | 1.923294000  | 1.876782000  | -0.691664000 | 6       | 1.423706000  | -0.827851000 | -2.493920000 |
| 1                              | -1.291211000 | -0.180752000 | 1.582838000  | 1       | 0.431477000  | -1.259688000 | -2.329407000 |
| 1                              | 2.588273000  | 2.909849000  | 1.573536000  | 6       | -4.162660000 | -1.954194000 | 1.227736000  |
| 1                              | 2.049569000  | 1.282582000  | 2.064095000  | 1       | -3.665374000 | -1.695157000 | 2.167915000  |
| 1                              | 1.070411000  | 2.710236000  | 2.461628000  | 1       | -4.131731000 | -3.042787000 | 1.102740000  |
| 1                              | -0.114988000 | 3.428055000  | -0.993985000 | 1       | -5.212528000 | -1.652334000 | 1.294950000  |
| 1                              | -0.366053000 | 3.809236000  | 0.728851000  | 6       | 1.185934000  | -0.659421000 | 2.619305000  |
| 1                              | 1.159875000  | 4.261009000  | -0.067233000 | 1       | 0.313390000  | -1.287790000 | 2.411047000  |
| 8                              | -2.770663000 | 0.826906000  | -0.363790000 | 6       | -1.532786000 | -2.823436000 | -0.101436000 |
| 1                              | -2.227387000 | 1.034981000  | 0.636067000  | 1       | -2.147784000 | -3.708695000 | -0.175982000 |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6                         | 3.350815000  | -0.021012000 | -1.076186000 | 6 | 1.123233000  | -0.569933000 | -0.067328000 |
| 1                         | 3.901096000  | 0.157561000  | -1.997301000 | 7 | 0.013094000  | -1.247732000 | 0.281191000  |
| 6                         | -4.142997000 | -1.609519000 | -1.282727000 | 6 | -1.337741000 | -0.766493000 | 0.140985000  |
| 1                         | -3.643637000 | -1.091346000 | -2.107879000 | 6 | -1.962187000 | -0.887490000 | -1.110358000 |
| 1                         | -5.197950000 | -1.317675000 | -1.276198000 | 6 | 0.351113000  | -2.483409000 | 0.805153000  |
| 1                         | -4.090524000 | -2.689313000 | -1.464907000 | 1 | -0.398575000 | -3.185024000 | 1.140411000  |
| 6                         | 2.247342000  | -1.840131000 | -3.297586000 | 6 | -3.283335000 | -0.442829000 | -1.210801000 |
| 1                         | 2.366439000  | -2.782654000 | -2.751412000 | 1 | -3.800914000 | -0.510758000 | -2.163667000 |
| 1                         | 3.246791000  | -1.449689000 | -3.521868000 | 6 | -1.967860000 | -0.216500000 | 1.266306000  |
| 1                         | 1.752155000  | -2.058268000 | -4.250491000 | 6 | 3.564941000  | -0.978455000 | 0.032421000  |
| 6                         | 1.240330000  | 0.475785000  | -3.280143000 | 1 | 3.506359000  | -0.017367000 | -0.487525000 |
| 1                         | 0.640206000  | 1.194908000  | -2.712087000 | 6 | -3.945981000 | 0.088081000  | -0.106655000 |
| 1                         | 0.735615000  | 0.279379000  | -4.233114000 | 1 | -4.975615000 | 0.422576000  | -0.203972000 |
| 1                         | 2.208763000  | 0.941666000  | -3.499301000 | 6 | -1.265528000 | -0.081341000 | 2.605985000  |
| 6                         | 0.678052000  | 0.691367000  | 3.140772000  | 1 | -0.191508000 | -0.230333000 | 2.447528000  |
| 1                         | 0.029727000  | 1.182282000  | 2.406955000  | 6 | 4.271046000  | -2.004308000 | -0.843566000 |
| 1                         | 1.519736000  | 1.362432000  | 3.354162000  | 1 | 3.741856000  | -2.140717000 | -1.791807000 |
| 1                         | 0.109397000  | 0.551744000  | 4.067869000  | 1 | 4.345746000  | -2.972618000 | -0.336404000 |
| 6                         | 2.026279000  | -1.373012000 | 3.683019000  | 1 | 5.285962000  | -1.657633000 | -1.060265000 |
| 1                         | 2.422595000  | -2.323904000 | 3.309687000  | 6 | -1.219803000 | -1.410647000 | -2.327637000 |
| 1                         | 1.409281000  | -1.583912000 | 4.563544000  | 1 | -0.380136000 | -2.023261000 | -1.978972000 |
| 1                         | 2.870972000  | -0.757860000 | 4.013173000  | 6 | 1.708029000  | -2.558757000 | 0.776629000  |
| 1                         | -1.574994000 | 1.196763000  | 0.487010000  | 1 | 2.378827000  | -3.347125000 | 1.084881000  |
| 8                         | -1.916639000 | 2.101344000  | 0.750908000  | 6 | -3.294072000 | 0.202419000  | 1.117352000  |
| 6                         | -1.370358000 | 3.072143000  | -0.123277000 | 1 | -3.818833000 | 0.630444000  | 1.967602000  |
| 6                         | -1.781869000 | 4.440035000  | 0.418921000  | 6 | 4.242734000  | -0.789711000 | 1.383799000  |
| 1                         | -1.399430000 | 5.243265000  | -0.218343000 | 1 | 3.705302000  | -0.051122000 | 1.987597000  |
| 1                         | -1.396729000 | 4.577556000  | 1.433684000  | 1 | 5.266755000  | -0.434297000 | 1.233385000  |
| 1                         | -2.875166000 | 4.497138000  | 0.444763000  | 1 | 4.286511000  | -1.734464000 | 1.937745000  |
| 6                         | -1.903047000 | 2.873170000  | -1.547781000 | 6 | -1.755687000 | -1.164152000 | 3.576579000  |
| 1                         | -1.487907000 | 3.618242000  | -2.234863000 | 1 | -1.583205000 | -2.169379000 | 3.176261000  |
| 1                         | -1.645750000 | 1.875305000  | -1.917015000 | 1 | -2.831115000 | -1.054516000 | 3.762245000  |
| 1                         | -2.994129000 | 2.970469000  | -1.533516000 | 1 | -1.234418000 | -1.082813000 | 4.537046000  |
| 6                         | 0.112771000  | 2.967352000  | -0.130632000 | 6 | -1.455665000 | 1.313720000  | 3.211483000  |
| 6                         | 1.317341000  | 2.859152000  | -0.130860000 | 1 | -1.200434000 | 2.100290000  | 2.492901000  |
| 1                         | 2.384551000  | 2.757813000  | -0.131647000 | 1 | -0.812583000 | 1.428601000  | 4.091178000  |
| NHC-TS <sub>10-11</sub> : |              |              |              | 1 | -2.490457000 | 1.472055000  | 3.535805000  |
| 7                         | 2.155053000  | -1.369332000 | 0.234675000  | 6 | -0.647697000 | -0.228259000 | -3.124040000 |
|                           |              |              |              | 1 | 0.017755000  | 0.392417000  | -2.512940000 |
|                           |              |              |              | 1 | -1.462816000 | 0.411081000  | -3.486244000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | -0.086138000 | -0.590599000 | -3.993277000 | 1 | -3.763609000 | -2.779917000 | 1.919401000  |
| 6       | -2.092862000 | -2.292424000 | -3.224786000 | 1 | -4.974422000 | -1.611686000 | 1.356538000  |
| 1       | -2.565569000 | -3.103574000 | -2.660118000 | 6 | 0.901269000  | 0.401131000  | 2.653342000  |
| 1       | -1.476544000 | -2.739251000 | -4.012340000 | 1 | 0.295262000  | -0.512334000 | 2.682134000  |
| 1       | -2.882148000 | -1.713656000 | -3.717090000 | 6 | -1.067533000 | -2.949074000 | 0.700075000  |
| 1       | 1.294650000  | 0.564185000  | -0.536106000 | 1 | -1.561827000 | -3.885288000 | 0.912606000  |
| 8       | 1.767938000  | 1.755118000  | -1.089483000 | 6 | 3.519014000  | 0.193778000  | -0.797519000 |
| 6       | 1.183080000  | 2.892985000  | -0.571409000 | 1 | 4.174971000  | 0.162959000  | -1.664093000 |
| 6       | 1.667770000  | 4.140122000  | -1.331430000 | 6 | -3.721005000 | -2.739137000 | -0.868851000 |
| 1       | 1.222337000  | 5.063200000  | -0.941217000 | 1 | -3.191449000 | -2.664598000 | -1.823610000 |
| 1       | 1.419973000  | 4.049680000  | -2.394322000 | 1 | -4.787796000 | -2.580082000 | -1.051538000 |
| 1       | 2.757634000  | 4.204469000  | -1.233974000 | 1 | -3.593489000 | -3.751823000 | -0.469400000 |
| 6       | 1.507989000  | 3.060347000  | 0.928647000  | 6 | 3.096360000  | -2.432024000 | -2.322603000 |
| 1       | 1.039166000  | 3.951932000  | 1.363048000  | 1 | 3.318889000  | -3.068325000 | -1.458743000 |
| 1       | 1.169452000  | 2.182072000  | 1.490746000  | 1 | 4.022149000  | -1.925637000 | -2.618772000 |
| 1       | 2.595959000  | 3.141517000  | 1.040604000  | 1 | 2.789024000  | -3.077253000 | -3.152972000 |
| 6       | -0.310402000 | 2.829292000  | -0.709324000 | 6 | 1.693166000  | -0.530491000 | -3.215900000 |
| 6       | -1.512687000 | 2.742455000  | -0.838031000 | 1 | 0.876867000  | 0.169296000  | -3.005597000 |
| 1       | -2.574344000 | 2.654211000  | -0.953778000 | 1 | 1.405903000  | -1.146005000 | -4.075752000 |
| NHC-11: |              |              |              | 1 | 2.577413000  | 0.053517000  | -3.497472000 |
| 7       | -1.756553000 | -1.826078000 | 0.288526000  | 6 | -0.052422000 | 1.594096000  | 2.491015000  |
| 6       | -0.903631000 | -0.819691000 | 0.098682000  | 1 | -0.659963000 | 1.514394000  | 1.582685000  |
| 7       | 0.324486000  | -1.273952000 | 0.381554000  | 1 | 0.514889000  | 2.531708000  | 2.433487000  |
| 6       | 1.533837000  | -0.489948000 | 0.342048000  | 1 | -0.728613000 | 1.654357000  | 3.352089000  |
| 6       | 1.834989000  | 0.309500000  | 1.457100000  | 6 | 1.651323000  | 0.493513000  | 3.985156000  |
| 6       | 0.246536000  | -2.602015000 | 0.759764000  | 1 | 2.392255000  | -0.306593000 | 4.090100000  |
| 1       | 1.127560000  | -3.165703000 | 1.030035000  | 1 | 0.938781000  | 0.409351000  | 4.812590000  |
| 6       | 3.011897000  | 1.059749000  | 1.401016000  | 1 | 2.165709000  | 1.454561000  | 4.094767000  |
| 1       | 3.281501000  | 1.699103000  | 2.236594000  | 1 | -1.250164000 | 0.202824000  | -0.212791000 |
| 6       | 2.347940000  | -0.572457000 | -0.794923000 | 8 | -2.385025000 | 1.405428000  | -0.566301000 |
| 6       | -3.220882000 | -1.691948000 | 0.116333000  | 6 | -1.942445000 | 2.622966000  | -1.009351000 |
| 1       | -3.349130000 | -0.685566000 | -0.296174000 | 6 | -2.428775000 | 2.914875000  | -2.445884000 |
| 6       | 3.847226000  | 1.001029000  | 0.286952000  | 6 | -2.409848000 | 3.768932000  | -0.085313000 |
| 1       | 4.758618000  | 1.592379000  | 0.265258000  | 6 | -0.435749000 | 2.657804000  | -1.034736000 |
| 6       | 1.989744000  | -1.421186000 | -2.003240000 | 6 | 0.776754000  | 2.615131000  | -1.027515000 |
| 1       | 1.079262000  | -1.985154000 | -1.775367000 | 1 | 1.847812000  | 2.568326000  | -1.015456000 |
| 6       | -3.900925000 | -1.786743000 | 1.476109000  | 1 | -3.506346000 | 3.773060000  | -0.069884000 |
| 1       | -3.502837000 | -1.034218000 | 2.164271000  | 1 | -2.056416000 | 4.753297000  | -0.417639000 |
|         |              |              |              | 1 | -2.051248000 | 3.591768000  | 0.935217000  |
|         |              |              |              | 1 | -2.076965000 | 3.882278000  | -2.826194000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | -3.525480000 | 2.912902000  | -2.445379000 | 6 | -1.418801000 | 3.003257000  | 1.210336000  |
| 1       | -2.083485000 | 2.124148000  | -3.121619000 | 1 | -1.243126000 | 4.008284000  | 1.564024000  |
| NHC-12: |              |              |              | 6 | -4.916846000 | -1.007681000 | -0.859040000 |
| 8       | 1.182795000  | -0.516374000 | -0.733590000 | 1 | -5.612400000 | -0.971551000 | -1.694025000 |
| 6       | 1.015201000  | -1.652724000 | -1.477803000 | 6 | 0.982437000  | 3.646386000  | -0.802117000 |
| 6       | 1.646902000  | -2.886797000 | -0.792594000 | 1 | 0.526689000  | 3.214299000  | -1.698785000 |
| 1       | 1.509004000  | -3.809446000 | -1.371530000 | 1 | 2.018319000  | 3.912069000  | -1.035267000 |
| 1       | 1.204251000  | -3.025163000 | 0.200158000  | 1 | 0.444686000  | 4.564684000  | -0.538023000 |
| 1       | 2.717484000  | -2.705660000 | -0.657178000 | 6 | -5.368946000 | 1.891667000  | -1.730535000 |
| 6       | 1.618368000  | -1.494442000 | -2.891577000 | 1 | -5.706225000 | 2.232278000  | -0.745177000 |
| 1       | 1.526612000  | -2.402017000 | -3.502322000 | 1 | -6.128395000 | 1.211999000  | -2.133272000 |
| 1       | 1.122786000  | -0.667429000 | -3.412923000 | 1 | -5.316134000 | 2.762648000  | -2.392891000 |
| 1       | 2.679754000  | -1.239285000 | -2.786378000 | 6 | -3.539673000 | 0.736517000  | -3.034564000 |
| 6       | -0.448281000 | -1.975053000 | -1.661041000 | 1 | -2.534959000 | 0.302530000  | -2.992690000 |
| 6       | -1.634560000 | -2.205741000 | -1.771044000 | 1 | -3.521312000 | 1.580061000  | -3.734050000 |
| 1       | -2.684931000 | -2.401851000 | -1.858912000 | 1 | -4.222852000 | -0.021425000 | -3.436292000 |
| 7       | -0.429160000 | 2.241669000  | 0.624934000  | 6 | -0.882353000 | -2.007130000 | 2.018846000  |
| 6       | -0.918749000 | 1.050907000  | 0.281559000  | 1 | -0.376531000 | -1.541994000 | 1.165606000  |
| 7       | -2.211639000 | 1.030712000  | 0.638199000  | 1 | -1.162974000 | -3.028331000 | 1.730327000  |
| 6       | -3.135672000 | -0.053029000 | 0.415816000  | 1 | -0.164917000 | -2.069039000 | 2.845627000  |
| 6       | -3.119148000 | -1.138832000 | 1.305222000  | 6 | -2.732925000 | -1.831230000 | 3.720531000  |
| 6       | -2.543443000 | 2.239075000  | 1.223018000  | 1 | -3.664650000 | -1.331728000 | 4.008034000  |
| 1       | -3.541720000 | 2.434540000  | 1.586420000  | 1 | -2.022890000 | -1.731577000 | 4.548458000  |
| 6       | -4.029436000 | -2.171362000 | 1.063100000  | 1 | -2.939503000 | -2.899775000 | 3.595495000  |
| 1       | -4.044414000 | -3.038465000 | 1.716976000  | 1 | -0.281035000 | 0.257422000  | -0.185607000 |
| 6       | -4.015492000 | 0.045146000  | -0.671011000 | 6 | 4.845770000  | 1.267050000  | -1.704689000 |
| 6       | 0.965583000  | 2.650744000  | 0.351062000  | 6 | 4.558033000  | 0.588157000  | -0.604523000 |
| 1       | 1.461682000  | 1.722709000  | 0.052380000  | 6 | 5.144050000  | -0.689150000 | -0.049137000 |
| 6       | -4.921879000 | -2.105516000 | -0.004691000 | 6 | 5.358334000  | -1.784252000 | -1.072519000 |
| 1       | -5.625306000 | -2.916945000 | -0.171221000 | 8 | 4.094516000  | -1.076727000 | 0.883018000  |
| 6       | -3.998985000 | 1.208811000  | -1.649277000 | 1 | 4.333273000  | 2.192378000  | -1.945706000 |
| 1       | -3.278587000 | 1.954736000  | -1.299047000 | 1 | 6.190155000  | -1.505399000 | -1.726819000 |
| 6       | 1.601333000  | 3.206507000  | 1.616501000  | 1 | 5.619379000  | -2.718350000 | -0.565242000 |
| 1       | 1.535007000  | 2.485165000  | 2.435195000  | 1 | 4.468893000  | -1.940960000 | -1.685237000 |
| 1       | 1.125306000  | 4.146031000  | 1.920713000  | 6 | 6.405160000  | -0.410811000 | 0.764346000  |
| 1       | 2.658760000  | 3.409222000  | 1.422683000  | 1 | 6.724511000  | -1.324746000 | 1.275020000  |
| 6       | -2.127264000 | -1.219019000 | 2.454005000  | 1 | 7.205475000  | -0.076122000 | 0.097622000  |
| 1       | -1.811907000 | -0.198576000 | 2.702761000  | 1 | 6.224089000  | 0.368426000  | 1.512241000  |
|         |              |              |              | 6 | 3.311143000  | -0.024385000 | 1.144628000  |
|         |              |              |              | 8 | 2.518409000  | 0.054044000  | 2.037361000  |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8                         | 3.613134000  | 1.007031000  | 0.310000000  | 6 | 2.452077000  | 2.328312000  | -1.826286000 |
| 1                         | 5.604246000  | 0.893475000  | -2.384270000 | 1 | 2.820249000  | 3.214245000  | -2.321964000 |
| NHC-TS <sub>12-13</sub> : |              |              |              | 6 | 3.447001000  | -2.355668000 | 1.187159000  |
| 8                         | -1.410533000 | -0.217847000 | 0.796702000  | 1 | 4.075696000  | -2.473805000 | 2.065947000  |
| 6                         | -1.043300000 | -0.099507000 | 2.121358000  | 6 | 1.113252000  | 4.630922000  | -0.403974000 |
| 6                         | -0.087903000 | -1.258924000 | 2.475834000  | 1 | 1.617142000  | 4.327419000  | 0.519239000  |
| 1                         | 0.293636000  | -1.195849000 | 3.502892000  | 1 | 0.415638000  | 5.440016000  | -0.167586000 |
| 1                         | 0.757658000  | -1.268255000 | 1.780668000  | 1 | 1.861265000  | 5.024729000  | -1.100921000 |
| 1                         | -0.634815000 | -2.202467000 | 2.358894000  | 6 | 5.274448000  | 0.261974000  | 1.064775000  |
| 6                         | -2.229906000 | -0.144012000 | 3.107669000  | 1 | 5.458098000  | 0.304406000  | -0.014496000 |
| 1                         | -1.879397000 | -0.123698000 | 4.146992000  | 1 | 5.817342000  | -0.602079000 | 1.466493000  |
| 1                         | -2.907270000 | 0.698789000  | 2.949189000  | 1 | 5.692120000  | 1.167314000  | 1.519391000  |
| 1                         | -2.785653000 | -1.074406000 | 2.943149000  | 6 | 3.552576000  | 0.126049000  | 2.897858000  |
| 6                         | -0.307726000 | 1.189007000  | 2.377533000  | 1 | 2.491392000  | 0.018852000  | 3.144236000  |
| 6                         | 0.292059000  | 2.226689000  | 2.563407000  | 1 | 3.909825000  | 1.064989000  | 3.335553000  |
| 1                         | 0.813460000  | 3.145767000  | 2.740678000  | 1 | 4.102220000  | -0.693027000 | 3.375253000  |
| 7                         | 1.235414000  | 2.305443000  | -1.174514000 | 6 | -0.526696000 | -2.187540000 | -1.941872000 |
| 6                         | 1.029634000  | 1.089872000  | -0.665771000 | 1 | -0.851530000 | -1.502646000 | -1.149146000 |
| 7                         | 2.102088000  | 0.339075000  | -0.960540000 | 1 | -0.665347000 | -3.215508000 | -1.581483000 |
| 6                         | 2.370841000  | -0.980832000 | -0.443783000 | 1 | -1.174961000 | -2.042994000 | -2.814748000 |
| 6                         | 1.820874000  | -2.090626000 | -1.097277000 | 6 | 1.374701000  | -2.903303000 | -3.449726000 |
| 6                         | 2.999490000  | 1.092157000  | -1.690160000 | 1 | 2.432267000  | -2.769559000 | -3.703193000 |
| 1                         | 3.935874000  | 0.679330000  | -2.034401000 | 1 | 0.781117000  | -2.706904000 | -4.349400000 |
| 6                         | 2.090818000  | -3.348729000 | -0.548655000 | 1 | 1.219025000  | -3.952517000 | -3.175210000 |
| 1                         | 1.666223000  | -4.235388000 | -1.012003000 | 1 | 0.138092000  | 0.738053000  | -0.124097000 |
| 6                         | 3.185053000  | -1.073959000 | 0.697127000  | 6 | -5.447103000 | -0.379759000 | 1.603376000  |
| 6                         | 0.334944000  | 3.472014000  | -1.013673000 | 6 | -4.508168000 | -0.133002000 | 0.695442000  |
| 1                         | -0.438251000 | 3.130364000  | -0.325258000 | 6 | -4.107274000 | -0.955867000 | -0.516155000 |
| 6                         | 2.897564000  | -3.480853000 | 0.577316000  | 6 | -3.550347000 | -2.322776000 | -0.144600000 |
| 1                         | 3.099151000  | -4.468075000 | 0.984428000  | 8 | -3.075044000 | -0.134637000 | -1.094277000 |
| 6                         | 3.777529000  | 0.147346000  | 1.382352000  | 1 | -5.631725000 | 0.308173000  | 2.422106000  |
| 1                         | 3.278617000  | 1.042911000  | 0.994073000  | 1 | -4.316087000 | -2.897034000 | 0.387950000  |
| 6                         | -0.294044000 | 3.821342000  | -2.354739000 | 1 | -3.275085000 | -2.869755000 | -1.052836000 |
| 1                         | -0.827856000 | 2.961032000  | -2.766874000 | 1 | -2.668290000 | -2.193979000 | 0.487465000  |
| 1                         | 0.466762000  | 4.152461000  | -3.071397000 | 6 | -5.240561000 | -1.058603000 | -1.529715000 |
| 1                         | -1.011190000 | 4.636209000  | -2.215460000 | 1 | -4.877322000 | -1.542971000 | -2.442332000 |
| 6                         | 0.940169000  | -1.956719000 | -2.326052000 | 1 | -6.056892000 | -1.659272000 | -1.116142000 |
| 1                         | 1.033923000  | -0.932856000 | -2.704845000 | 1 | -5.626606000 | -0.066125000 | -1.782029000 |
|                           |              |              |              | 6 | -2.767602000 | 0.897890000  | -0.273183000 |
|                           |              |              |              | 8 | -2.134192000 | 1.864745000  | -0.636399000 |

|   |              |              |             |
|---|--------------|--------------|-------------|
| 8 | -3.745574000 | 0.998888000  | 0.703625000 |
| 1 | -6.042683000 | -1.284075000 | 1.535881000 |

NHC-13:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 8 | 1.237450000  | -1.322342000 | 0.477808000  |
| 6 | 1.262046000  | -2.501726000 | -0.340330000 |
| 6 | 1.931645000  | -3.667700000 | 0.399002000  |
| 1 | 1.769252000  | -4.600740000 | -0.150679000 |
| 1 | 1.499607000  | -3.770218000 | 1.399371000  |
| 1 | 3.003448000  | -3.483458000 | 0.489850000  |
| 6 | 1.876937000  | -2.308567000 | -1.731316000 |
| 1 | 1.728725000  | -3.227430000 | -2.308119000 |
| 1 | 1.403174000  | -1.476643000 | -2.257949000 |
| 1 | 2.948809000  | -2.115109000 | -1.656349000 |
| 6 | -0.175973000 | -2.818221000 | -0.508518000 |
| 6 | -1.344746000 | -3.088425000 | -0.652799000 |
| 1 | -2.380192000 | -3.331643000 | -0.782751000 |
| 7 | -0.260900000 | 2.577424000  | 0.183335000  |
| 6 | -0.667904000 | 1.309034000  | 0.208928000  |
| 7 | -2.004903000 | 1.299372000  | 0.125999000  |
| 6 | -2.868543000 | 0.142226000  | 0.124489000  |
| 6 | -3.121636000 | -0.505550000 | 1.343965000  |
| 6 | -2.459036000 | 2.600959000  | 0.049105000  |
| 1 | -3.513321000 | 2.825558000  | -0.018893000 |
| 6 | -4.016141000 | -1.579531000 | 1.317353000  |
| 1 | -4.231738000 | -2.117311000 | 2.236434000  |
| 6 | -3.457059000 | -0.236126000 | -1.090989000 |
| 6 | 1.150816000  | 3.033017000  | 0.242486000  |
| 1 | 1.720775000  | 2.127417000  | 0.459865000  |
| 6 | -4.641912000 | -1.964193000 | 0.134563000  |
| 1 | -5.344075000 | -2.793827000 | 0.140509000  |
| 6 | -3.140764000 | 0.445373000  | -2.411813000 |
| 1 | -2.383618000 | 1.216930000  | -2.238424000 |
| 6 | 1.314808000  | 4.016827000  | 1.392131000  |
| 1 | 0.983455000  | 3.570505000  | 2.335076000  |
| 1 | 0.754678000  | 4.943018000  | 1.220506000  |
| 1 | 2.373978000  | 4.274499000  | 1.487595000  |
| 6 | -2.441307000 | -0.100911000 | 2.640398000  |
| 1 | -2.027087000 | 0.906120000  | 2.515658000  |

|   |              |              |              |
|---|--------------|--------------|--------------|
| 6 | -1.361236000 | 3.402366000  | 0.080747000  |
| 1 | -1.269152000 | 4.477324000  | 0.040160000  |
| 6 | -4.362975000 | -1.300745000 | -1.056308000 |
| 1 | -4.845599000 | -1.619401000 | -1.977138000 |
| 6 | 1.550488000  | 3.610140000  | -1.107770000 |
| 1 | 1.403053000  | 2.874599000  | -1.904685000 |
| 1 | 2.610750000  | 3.880632000  | -1.082080000 |
| 1 | 0.972371000  | 4.511040000  | -1.345892000 |
| 6 | -4.384853000 | 1.128662000  | -2.991764000 |
| 1 | -4.805820000 | 1.857635000  | -2.290457000 |
| 1 | -5.164026000 | 0.393098000  | -3.222888000 |
| 1 | -4.131273000 | 1.654020000  | -3.919101000 |
| 6 | -2.551757000 | -0.558364000 | -3.410828000 |
| 1 | -1.652913000 | -1.037576000 | -3.007732000 |
| 1 | -2.280822000 | -0.047231000 | -4.341299000 |
| 1 | -3.275471000 | -1.344387000 | -3.655912000 |
| 6 | -1.279530000 | -1.058422000 | 2.940941000  |
| 1 | -0.535028000 | -1.065824000 | 2.137302000  |
| 1 | -1.654999000 | -2.081958000 | 3.066401000  |
| 1 | -0.776402000 | -0.761764000 | 3.868565000  |
| 6 | -3.419792000 | -0.046072000 | 3.818136000  |
| 1 | -4.279576000 | 0.596670000  | 3.598774000  |
| 1 | -2.910128000 | 0.354263000  | 4.701136000  |
| 1 | -3.794748000 | -1.041806000 | 4.079194000  |
| 1 | -0.029468000 | 0.433428000  | 0.309206000  |
| 6 | 4.329388000  | 0.912437000  | -2.064021000 |
| 6 | 3.817429000  | 0.292891000  | -0.990968000 |
| 6 | 4.586152000  | -0.474418000 | 0.082141000  |
| 6 | 5.586755000  | -1.475117000 | -0.477362000 |
| 8 | 3.543902000  | -1.200502000 | 0.727988000  |
| 1 | 3.694311000  | 1.453578000  | -2.758711000 |
| 1 | 6.396092000  | -0.956146000 | -1.000596000 |
| 1 | 6.025241000  | -2.052489000 | 0.343958000  |
| 1 | 5.107468000  | -2.166844000 | -1.176328000 |
| 6 | 5.268543000  | 0.490103000  | 1.056922000  |
| 1 | 5.702293000  | -0.076255000 | 1.888882000  |
| 1 | 6.069544000  | 1.037382000  | 0.548193000  |
| 1 | 4.544626000  | 1.203656000  | 1.459055000  |
| 6 | 2.334404000  | -0.436732000 | 0.666269000  |
| 8 | 2.098223000  | 0.385602000  | 1.591852000  |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8                         | 2.514388000  | 0.259234000  | -0.687387000 | 6 | 1.072256000  | 3.525861000  | -0.151693000 |
| 1                         | 5.397239000  | 0.883887000  | -2.253888000 | 1 | 0.916034000  | 4.592903000  | -0.205768000 |
| NHC-TS <sub>13-14</sub> : |              |              |              | 6 | 4.018793000  | -1.103402000 | 1.531409000  |
| 8                         | -0.986410000 | -1.532905000 | -0.806366000 | 1 | 4.305175000  | -1.474572000 | 2.511013000  |
| 6                         | -1.017011000 | -2.800557000 | -0.111021000 | 6 | -1.818694000 | 3.807490000  | 0.903926000  |
| 6                         | -1.735218000 | -3.853226000 | -0.961667000 | 1 | -1.586022000 | 3.269865000  | 1.828626000  |
| 1                         | -1.591271000 | -4.843841000 | -0.519424000 | 1 | -2.897996000 | 3.985359000  | 0.872022000  |
| 1                         | -1.327566000 | -3.858895000 | -1.977066000 | 1 | -1.310821000 | 4.779170000  | 0.921166000  |
| 1                         | -2.804090000 | -3.632304000 | -1.001927000 | 6 | 3.290239000  | 0.542509000  | 3.889277000  |
| 6                         | -1.594079000 | -2.737923000 | 1.305130000  | 1 | 4.242590000  | 1.042996000  | 3.682500000  |
| 1                         | -1.445290000 | -3.715218000 | 1.776524000  | 1 | 3.504821000  | -0.462362000 | 4.269155000  |
| 1                         | -1.093835000 | -1.971332000 | 1.898900000  | 1 | 2.784069000  | 1.090956000  | 4.690576000  |
| 1                         | -2.662059000 | -2.519962000 | 1.275140000  | 6 | 1.117462000  | -0.310826000 | 2.944883000  |
| 6                         | 0.418869000  | -3.149685000 | -0.020536000 | 1 | 0.424292000  | -0.299625000 | 2.096548000  |
| 6                         | 1.583041000  | -3.460909000 | 0.060685000  | 1 | 0.594040000  | 0.100288000  | 3.815924000  |
| 1                         | 2.612891000  | -3.747744000 | 0.129581000  | 1 | 1.374154000  | -1.356161000 | 3.157051000  |
| 7                         | 0.023388000  | 2.630448000  | -0.202963000 | 6 | 1.768121000  | -0.676098000 | -2.933866000 |
| 6                         | 0.505832000  | 1.393510000  | -0.112526000 | 1 | 0.907146000  | -0.712107000 | -2.256632000 |
| 7                         | 1.837426000  | 1.468660000  | -0.000996000 | 1 | 2.160015000  | -1.695937000 | -3.036402000 |
| 6                         | 2.753441000  | 0.359560000  | 0.131821000  | 1 | 1.416896000  | -0.343792000 | -3.917761000 |
| 6                         | 3.305565000  | -0.185349000 | -1.035803000 | 6 | 4.023822000  | 0.350868000  | -3.414290000 |
| 6                         | 2.213703000  | 2.798263000  | -0.025063000 | 1 | 4.842629000  | 0.969895000  | -3.031197000 |
| 1                         | 3.250203000  | 3.092417000  | 0.049434000  | 1 | 3.669813000  | 0.794616000  | -4.350932000 |
| 6                         | 4.240275000  | -1.213030000 | -0.874577000 | 1 | 4.426605000  | -0.639386000 | -3.653779000 |
| 1                         | 4.692353000  | -1.669830000 | -1.750435000 | 1 | -0.078644000 | 0.481906000  | -0.127887000 |
| 6                         | 3.079311000  | -0.074104000 | 1.426453000  | 6 | -3.983685000 | 0.763027000  | 2.116944000  |
| 6                         | -1.412321000 | 2.989589000  | -0.314553000 | 6 | -3.395342000 | 0.167367000  | 1.048011000  |
| 1                         | -1.930281000 | 2.029897000  | -0.313661000 | 6 | -4.226772000 | -0.508771000 | -0.066543000 |
| 6                         | 4.598578000  | -1.659535000 | 0.393666000  | 6 | -5.282556000 | -1.476990000 | 0.447373000  |
| 1                         | 5.332301000  | -2.454647000 | 0.497991000  | 8 | -3.266936000 | -1.316693000 | -0.773615000 |
| 6                         | 2.389834000  | 0.499348000  | 2.652527000  | 1 | -3.383101000 | 1.265200000  | 2.870322000  |
| 1                         | 2.089978000  | 1.529875000  | 2.427369000  | 1 | -6.056718000 | -0.935310000 | 0.998330000  |
| 6                         | -1.652448000 | 3.711365000  | -1.632105000 | 1 | -5.759355000 | -1.990139000 | -0.395401000 |
| 1                         | -1.344834000 | 3.088303000  | -2.477105000 | 1 | -4.844589000 | -2.225679000 | 1.114021000  |
| 1                         | -1.109327000 | 4.662824000  | -1.672390000 | 6 | -4.859497000 | 0.530092000  | -0.994076000 |
| 1                         | -2.720726000 | 3.926536000  | -1.732929000 | 1 | -5.315222000 | 0.030877000  | -1.857205000 |
| 6                         | 2.865380000  | 0.265998000  | -2.417029000 | 1 | -5.640150000 | 1.074507000  | -0.452801000 |
| 1                         | 2.432731000  | 1.269041000  | -2.329743000 | 1 | -4.113643000 | 1.242027000  | -1.354651000 |
|                           |              |              |              | 6 | -2.059342000 | -0.696845000 | -0.965797000 |
|                           |              |              |              | 8 | -1.897516000 | 0.242111000  | -1.740178000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8       | -2.120722000 | 0.106858000  | 0.794194000  | 6 | 0.883668000  | 3.596308000  | -0.973057000 |
| 1       | -5.061563000 | 0.755088000  | 2.242577000  | 1 | 0.774304000  | 4.587156000  | -1.387996000 |
| NHC-14: |              |              |              | 6 | 3.362657000  | -0.704778000 | 2.046180000  |
| 8       | -0.799849000 | -2.138941000 | -1.082603000 | 1 | 3.522428000  | -0.903629000 | 3.102343000  |
| 6       | -0.403905000 | -3.100436000 | -0.056029000 | 6 | -2.005595000 | 4.295642000  | 0.001234000  |
| 6       | -1.438746000 | -4.207864000 | 0.175656000  | 1 | -1.807966000 | 4.051581000  | 1.049951000  |
| 1       | -0.945578000 | -5.041249000 | 0.684254000  | 1 | -3.073093000 | 4.507769000  | -0.110693000 |
| 1       | -1.826488000 | -4.567938000 | -0.782428000 | 1 | -1.447631000 | 5.201030000  | -0.264677000 |
| 1       | -2.264561000 | -3.858027000 | 0.793604000  | 6 | 2.898224000  | 1.655384000  | 3.831005000  |
| 6       | -0.040563000 | -2.344799000 | 1.221854000  | 1 | 3.832617000  | 2.077864000  | 3.445547000  |
| 1       | 0.287498000  | -3.054049000 | 1.988700000  | 1 | 3.145191000  | 0.784856000  | 4.448715000  |
| 1       | 0.778675000  | -1.645619000 | 1.019897000  | 1 | 2.430996000  | 2.399174000  | 4.485262000  |
| 1       | -0.909155000 | -1.784387000 | 1.582818000  | 6 | 0.665858000  | 0.630893000  | 3.258937000  |
| 6       | 0.805372000  | -3.724296000 | -0.632861000 | 1 | -0.090590000 | 0.458685000  | 2.484815000  |
| 6       | 1.791923000  | -4.270888000 | -1.062176000 | 1 | 0.218042000  | 1.274132000  | 4.025747000  |
| 1       | 2.670537000  | -4.744998000 | -1.452283000 | 1 | 0.911149000  | -0.332410000 | 3.724576000  |
| 7       | -0.203174000 | 2.791476000  | -0.700557000 | 6 | 2.280306000  | -1.199484000 | -2.941827000 |
| 6       | 0.222432000  | 1.634261000  | -0.203543000 | 1 | 1.330166000  | -1.549022000 | -2.526862000 |
| 7       | 1.558177000  | 1.671788000  | -0.148025000 | 1 | 2.998774000  | -2.026246000 | -2.896872000 |
| 6       | 2.393152000  | 0.579096000  | 0.283609000  | 1 | 2.124643000  | -0.948419000 | -3.997178000 |
| 6       | 2.965392000  | -0.237023000 | -0.703352000 | 6 | 4.114404000  | 0.525496000  | -2.794086000 |
| 6       | 1.995035000  | 2.892374000  | -0.624304000 | 1 | 4.480677000  | 1.424587000  | -2.286144000 |
| 1       | 3.045870000  | 3.137455000  | -0.669902000 | 1 | 3.978549000  | 0.762254000  | -3.855177000 |
| 6       | 3.747411000  | -1.308722000 | -0.262713000 | 1 | 4.889043000  | -0.246778000 | -2.715363000 |
| 1       | 4.207315000  | -1.968523000 | -0.994284000 | 1 | -0.439960000 | 0.837877000  | 0.141843000  |
| 6       | 2.581049000  | 0.388372000  | 1.660459000  | 6 | -4.184701000 | 1.500348000  | 0.884185000  |
| 6       | -1.629111000 | 3.132625000  | -0.906093000 | 6 | -3.308400000 | 0.448169000  | 0.814272000  |
| 1       | -2.175183000 | 2.235157000  | -0.601008000 | 6 | -3.861395000 | -0.919520000 | 0.328627000  |
| 6       | 3.935504000  | -1.546254000 | 1.095858000  | 6 | -4.435596000 | -1.681956000 | 1.520272000  |
| 1       | 4.536190000  | -2.393114000 | 1.416652000  | 8 | -2.743569000 | -1.765228000 | -0.072892000 |
| 6       | 1.933988000  | 1.289753000  | 2.698291000  | 1 | -3.858108000 | 2.442963000  | 1.317168000  |
| 1       | 1.639043000  | 2.223721000  | 2.205534000  | 1 | -5.319653000 | -1.162529000 | 1.899783000  |
| 6       | -1.877972000 | 3.423700000  | -2.379196000 | 1 | -4.724011000 | -2.697481000 | 1.224394000  |
| 1       | -1.574228000 | 2.578487000  | -3.004042000 | 1 | -3.693822000 | -1.744132000 | 2.323689000  |
| 1       | -1.336443000 | 4.319751000  | -2.703911000 | 6 | -4.871953000 | -0.858272000 | -0.811168000 |
| 1       | -2.947427000 | 3.598411000  | -2.530945000 | 1 | -5.087466000 | -1.873857000 | -1.163214000 |
| 6       | 2.793862000  | 0.031251000  | -2.189772000 | 1 | -5.809797000 | -0.422372000 | -0.456074000 |
| 1       | 2.047658000  | 0.822149000  | -2.318638000 | 1 | -4.501693000 | -0.260502000 | -1.646793000 |
|         |              |              |              | 6 | -1.876049000 | -1.336025000 | -0.969932000 |
|         |              |              |              | 8 | -1.993931000 | -0.382504000 | -1.706172000 |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8                         | -2.075412000 | 0.453593000  | 1.176299000  | 6 | 4.165829000  | -0.004506000 | -0.905301000 |
| 1                         | -5.216954000 | 1.421856000  | 0.560211000  | 1 | 5.157172000  | 0.210862000  | -1.276321000 |
| NHC-TS <sub>14-15</sub> : |              |              |              | 6 | 0.301727000  | -3.066474000 | 2.099726000  |
| 8                         | -3.072880000 | 0.277573000  | -1.277808000 | 1 | 0.144395000  | -3.261816000 | 3.157210000  |
| 6                         | -3.556412000 | -0.655513000 | -0.264294000 | 6 | 4.324834000  | 3.071505000  | -0.300189000 |
| 6                         | -4.889550000 | -0.182015000 | 0.316735000  | 1 | 4.013698000  | 2.983978000  | 0.745752000  |
| 1                         | -5.308909000 | -0.973029000 | 0.945803000  | 1 | 4.375395000  | 4.133573000  | -0.559626000 |
| 1                         | -5.597565000 | 0.037606000  | -0.488063000 | 1 | 5.330257000  | 2.646992000  | -0.402424000 |
| 1                         | -4.739649000 | 0.711911000  | 0.924975000  | 6 | 2.518437000  | -2.084050000 | 3.880268000  |
| 6                         | -2.508046000 | -0.935000000 | 0.815988000  | 1 | 3.154303000  | -2.890825000 | 3.498891000  |
| 1                         | -2.819807000 | -1.819073000 | 1.380788000  | 1 | 1.728932000  | -2.532907000 | 4.493075000  |
| 1                         | -1.533955000 | -1.128945000 | 0.357234000  | 1 | 3.126782000  | -1.453791000 | 4.538061000  |
| 1                         | -2.412564000 | -0.087995000 | 1.495169000  | 6 | 1.004903000  | -0.150080000 | 3.288386000  |
| 6                         | -3.776696000 | -1.893520000 | -1.043222000 | 1 | 0.614017000  | 0.481266000  | 2.481670000  |
| 6                         | -3.960373000 | -2.925544000 | -1.641876000 | 1 | 1.537025000  | 0.485003000  | 4.006348000  |
| 1                         | -4.124583000 | -3.838645000 | -2.178876000 | 1 | 0.150852000  | -0.607169000 | 3.804842000  |
| 7                         | 3.177573000  | 0.959366000  | -0.812924000 | 6 | -0.293183000 | -1.134984000 | -2.450604000 |
| 6                         | 2.036553000  | 0.440481000  | -0.322262000 | 1 | -0.221376000 | -0.264829000 | -1.787594000 |
| 7                         | 2.311748000  | -0.867449000 | -0.114274000 | 1 | -1.301496000 | -1.551590000 | -2.341672000 |
| 6                         | 1.359605000  | -1.851325000 | 0.331975000  | 1 | -0.176368000 | -0.789611000 | -3.484992000 |
| 6                         | 0.649039000  | -2.567429000 | -0.647372000 | 6 | 0.608630000  | -3.405926000 | -3.053934000 |
| 6                         | 3.617386000  | -1.164704000 | -0.463265000 | 1 | 1.296602000  | -4.217257000 | -2.790811000 |
| 1                         | 4.022076000  | -2.162171000 | -0.370677000 | 1 | 0.822594000  | -3.099190000 | -4.083485000 |
| 6                         | -0.226916000 | -3.562412000 | -0.205973000 | 1 | -0.412727000 | -3.803033000 | -3.039083000 |
| 1                         | -0.797467000 | -4.138442000 | -0.929063000 | 1 | 0.835988000  | 1.010315000  | 0.046961000  |
| 6                         | 1.205573000  | -2.072092000 | 1.707505000  | 6 | 0.444161000  | 3.555501000  | 0.831609000  |
| 6                         | 3.340963000  | 2.365692000  | -1.225079000 | 6 | -0.500271000 | 2.604353000  | 0.642678000  |
| 1                         | 2.346667000  | 2.805175000  | -1.112718000 | 6 | -1.991406000 | 2.949250000  | 0.817069000  |
| 6                         | -0.395273000 | -3.812059000 | 1.154376000  | 6 | -2.345247000 | 2.881481000  | 2.302245000  |
| 1                         | -1.087283000 | -4.584640000 | 1.479801000  | 8 | -2.792255000 | 1.878213000  | 0.246411000  |
| 6                         | 1.940743000  | -1.237837000 | 2.741923000  | 1 | 1.498888000  | 3.297691000  | 0.849476000  |
| 1                         | 2.779422000  | -0.740146000 | 2.242853000  | 1 | -1.838150000 | 3.688206000  | 2.838456000  |
| 6                         | 3.758532000  | 2.438149000  | -2.689063000 | 1 | -3.426912000 | 2.989907000  | 2.439793000  |
| 1                         | 3.052857000  | 1.891916000  | -3.322934000 | 1 | -2.026804000 | 1.924467000  | 2.728742000  |
| 1                         | 4.761931000  | 2.023638000  | -2.838247000 | 6 | -2.415206000 | 4.286144000  | 0.219448000  |
| 1                         | 3.774544000  | 3.484298000  | -3.009264000 | 1 | -3.503595000 | 4.386585000  | 0.296112000  |
| 6                         | 0.759185000  | -2.204422000 | -2.118715000 | 1 | -1.962343000 | 5.109001000  | 0.779388000  |
| 1                         | 1.750837000  | -1.770624000 | -2.292074000 | 1 | -2.121126000 | 4.366851000  | -0.828428000 |
|                           |              |              |              | 6 | -2.552686000 | 1.481383000  | -0.999156000 |
|                           |              |              |              | 8 | -2.004383000 | 2.122340000  | -1.864076000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8       | -0.282385000 | 1.325372000  | 0.416042000  | 6 | 4.207825000  | 0.374202000  | -0.824379000 |
| 1       | 0.178417000  | 4.590816000  | 1.013027000  | 1 | 5.189513000  | 0.658897000  | -1.173612000 |
|         |              |              |              | 6 | 0.484776000  | -2.769858000 | 2.280787000  |
|         |              |              |              | 1 | 0.282400000  | -2.872270000 | 3.344574000  |
| NHC-15: |              |              |              | 6 | 3.948216000  | 3.499699000  | -0.348713000 |
| 8       | -3.125854000 | -0.041274000 | -1.374833000 | 1 | 3.519332000  | 3.431748000  | 0.656412000  |
| 6       | -3.556382000 | -0.996507000 | -0.355390000 | 1 | 3.911792000  | 4.544863000  | -0.672489000 |
| 6       | -4.942817000 | -0.639663000 | 0.181147000  | 1 | 4.999952000  | 3.194267000  | -0.298653000 |
| 1       | -5.304763000 | -1.461630000 | 0.806113000  | 6 | 2.798543000  | -1.516003000 | 3.866505000  |
| 1       | -5.644483000 | -0.494546000 | -0.645625000 | 1 | 3.577207000  | -2.113403000 | 3.378978000  |
| 1       | -4.896931000 | 0.268627000  | 0.784292000  | 1 | 2.191747000  | -2.187058000 | 4.485501000  |
| 6       | -2.514372000 | -1.155547000 | 0.754052000  | 1 | 3.287417000  | -0.797693000 | 4.534292000  |
| 1       | -2.762646000 | -2.047352000 | 1.337420000  | 6 | 0.851332000  | 0.059768000  | 3.525288000  |
| 1       | -1.517664000 | -1.282046000 | 0.320489000  | 1 | 0.252585000  | 0.607181000  | 2.788488000  |
| 1       | -2.507886000 | -0.286526000 | 1.412327000  | 1 | 1.304741000  | 0.783759000  | 4.212184000  |
| 6       | -3.640007000 | -2.261439000 | -1.115612000 | 1 | 0.178147000  | -0.581237000 | 4.107670000  |
| 6       | -3.715729000 | -3.315987000 | -1.697638000 | 6 | -0.143871000 | -1.996708000 | -2.658822000 |
| 1       | -3.781407000 | -4.247883000 | -2.223149000 | 1 | -0.586023000 | -1.094930000 | -2.218684000 |
| 7       | 3.124625000  | 1.236764000  | -0.841101000 | 1 | -0.873507000 | -2.809708000 | -2.566778000 |
| 6       | 2.003112000  | 0.659478000  | -0.347987000 | 1 | 0.021990000  | -1.809554000 | -3.726120000 |
| 7       | 2.413346000  | -0.599476000 | -0.033768000 | 6 | 1.788305000  | -3.625062000 | -2.589405000 |
| 6       | 1.544141000  | -1.633938000 | 0.455921000  | 1 | 2.738427000  | -3.884412000 | -2.108739000 |
| 6       | 0.969156000  | -2.515398000 | -0.475304000 | 1 | 1.977515000  | -3.468467000 | -3.657260000 |
| 6       | 3.754555000  | -0.798148000 | -0.312934000 | 1 | 1.113092000  | -4.483039000 | -2.491391000 |
| 1       | 4.248196000  | -1.742617000 | -0.132572000 | 1 | 0.437684000  | 1.194561000  | 0.178830000  |
| 6       | 0.153460000  | -3.538656000 | 0.017194000  | 6 | -0.052184000 | 3.686115000  | 0.453473000  |
| 1       | -0.314074000 | -4.231138000 | -0.679552000 | 6 | -0.889526000 | 2.638243000  | 0.501346000  |
| 6       | 1.318790000  | -1.737548000 | 1.837018000  | 6 | -2.399837000 | 2.792344000  | 0.669111000  |
| 6       | 3.179207000  | 2.623697000  | -1.331285000 | 6 | -2.746644000 | 2.710640000  | 2.155037000  |
| 1       | 2.134193000  | 2.942001000  | -1.372631000 | 8 | -3.058291000 | 1.616549000  | 0.115063000  |
| 6       | -0.084966000 | -3.667940000 | 1.382625000  | 1 | 1.023201000  | 3.539643000  | 0.464011000  |
| 1       | -0.729845000 | -4.463603000 | 1.746967000  | 1 | -2.327981000 | 3.576210000  | 2.675917000  |
| 6       | 1.937737000  | -0.775535000 | 2.836573000  | 1 | -3.833918000 | 2.709351000  | 2.287076000  |
| 1       | 2.591366000  | -0.087997000 | 2.289917000  | 1 | -2.333794000 | 1.798925000  | 2.597957000  |
| 6       | 3.770632000  | 2.672995000  | -2.735504000 | 6 | -2.980837000 | 4.052811000  | 0.043133000  |
| 1       | 3.229927000  | 2.002486000  | -3.410955000 | 1 | -4.072779000 | 4.013094000  | 0.112531000  |
| 1       | 4.830181000  | 2.393260000  | -2.733638000 | 1 | -2.641868000 | 4.935639000  | 0.592495000  |
| 1       | 3.693887000  | 3.692384000  | -3.126038000 | 1 | -2.689663000 | 4.151235000  | -1.004419000 |
| 6       | 1.177768000  | -2.362089000 | -1.972075000 | 6 | -2.728045000 | 1.208864000  | -1.106987000 |
| 1       | 1.877922000  | -1.538069000 | -2.141013000 | 8 | -2.177835000 | 1.871127000  | -1.954055000 |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8                         | -0.523955000 | 1.346878000  | 0.520162000  | 1 | 0.653473000  | -0.131847000 | -2.316805000 |
| 1                         | -0.425518000 | 4.702834000  | 0.419218000  | 1 | 1.275981000  | 0.229246000  | -3.942232000 |
| NHC-TS <sub>14-16</sub> : |              |              |              | 1 | -0.131601000 | 1.105964000  | -3.303358000 |
| 7                         | 3.691361000  | -1.052084000 | -0.032230000 | 6 | -0.033787000 | 1.235942000  | 3.414011000  |
| 6                         | 2.446162000  | -0.563597000 | -0.188886000 | 1 | -0.788092000 | 0.737585000  | 2.796325000  |
| 7                         | 2.541408000  | 0.747014000  | 0.132161000  | 1 | -0.475040000 | 2.157773000  | 3.810507000  |
| 6                         | 1.498157000  | 1.741677000  | 0.072965000  | 1 | 0.201160000  | 0.589675000  | 4.267510000  |
| 6                         | 0.918482000  | 2.173417000  | 1.273438000  | 6 | 2.191174000  | 2.410310000  | 3.434924000  |
| 6                         | 3.840778000  | 1.072605000  | 0.484884000  | 1 | 3.135558000  | 2.592075000  | 2.910909000  |
| 1                         | 4.120088000  | 2.079532000  | 0.758030000  | 1 | 2.419151000  | 1.931991000  | 4.394577000  |
| 6                         | 0.008151000  | 3.231828000  | 1.203995000  | 1 | 1.726884000  | 3.382280000  | 3.642248000  |
| 1                         | -0.454438000 | 3.598488000  | 2.116627000  | 1 | 1.427123000  | -1.415142000 | -0.584769000 |
| 6                         | 1.173804000  | 2.294446000  | -1.176398000 | 8 | -3.644138000 | 0.388221000  | 0.040096000  |
| 6                         | 4.072023000  | -2.458373000 | -0.268396000 | 6 | -4.917451000 | -0.299586000 | -0.149066000 |
| 1                         | 3.187763000  | -2.921042000 | -0.711390000 | 6 | -5.360708000 | -1.054085000 | 1.107670000  |
| 6                         | -0.324804000 | 3.809965000  | -0.015427000 | 1 | -6.419078000 | -1.312535000 | 1.009214000  |
| 1                         | -1.038986000 | 4.628618000  | -0.050506000 | 1 | -5.238882000 | -0.419482000 | 1.990991000  |
| 6                         | 1.767154000  | 1.753166000  | -2.465519000 | 1 | -4.784245000 | -1.970928000 | 1.234689000  |
| 1                         | 2.730650000  | 1.286458000  | -2.228226000 | 6 | -4.866670000 | -1.194678000 | -1.387187000 |
| 6                         | 4.395094000  | -3.136377000 | 1.057593000  | 1 | -5.861315000 | -1.615170000 | -1.563906000 |
| 1                         | 3.545465000  | -3.074326000 | 1.745761000  | 1 | -4.567422000 | -0.612019000 | -2.262815000 |
| 1                         | 5.265585000  | -2.669264000 | 1.532562000  | 1 | -4.150380000 | -2.005091000 | -1.239179000 |
| 1                         | 4.625985000  | -4.192047000 | 0.884745000  | 6 | -5.855252000 | 0.818242000  | -0.386730000 |
| 6                         | 1.240833000  | 1.530616000  | 2.611769000  | 6 | -6.651826000 | 1.703595000  | -0.581929000 |
| 1                         | 1.742281000  | 0.574957000  | 2.417150000  | 1 | -7.355378000 | 2.493153000  | -0.755797000 |
| 6                         | 4.567827000  | -0.068160000 | 0.384968000  | 6 | 0.615939000  | -2.572429000 | -1.001358000 |
| 1                         | 5.615529000  | -0.256826000 | 0.567229000  | 6 | -0.767038000 | -2.233225000 | -0.905375000 |
| 6                         | 0.241523000  | 3.334655000  | -1.195552000 | 6 | -1.416193000 | -2.358886000 | 0.499968000  |
| 1                         | -0.042957000 | 3.784177000  | -2.142778000 | 6 | -1.972222000 | -3.771265000 | 0.655736000  |
| 6                         | 5.225857000  | -2.529953000 | -1.260905000 | 8 | -2.603620000 | -1.525449000 | 0.532883000  |
| 1                         | 4.978110000  | -2.003164000 | -2.187823000 | 1 | 0.957236000  | -2.782334000 | -2.018438000 |
| 1                         | 5.432196000  | -3.577368000 | -1.500652000 | 1 | -1.158904000 | -4.501387000 | 0.611619000  |
| 1                         | 6.139434000  | -2.094560000 | -0.841515000 | 1 | -2.480437000 | -3.872921000 | 1.621153000  |
| 6                         | 2.031461000  | 2.839654000  | -3.511833000 | 1 | -2.685359000 | -3.990949000 | -0.145466000 |
| 1                         | 2.625518000  | 3.663550000  | -3.100661000 | 6 | -0.488886000 | -2.000588000 | 1.657638000  |
| 1                         | 1.098929000  | 3.254855000  | -3.909374000 | 1 | -1.073121000 | -1.929773000 | 2.582327000  |
| 1                         | 2.581759000  | 2.410411000  | -4.356261000 | 1 | 0.262206000  | -2.784277000 | 1.794155000  |
| 6                         | 0.839859000  | 0.670813000  | -3.037879000 | 1 | 0.020095000  | -1.049415000 | 1.483521000  |
|                           |              |              |              | 6 | -2.471295000 | -0.238797000 | 0.223896000  |
|                           |              |              |              | 8 | -1.436087000 | 0.378002000  | 0.166740000  |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8       | -1.486223000 | -1.833116000 | -1.833873000 | 1 | 0.661435000  | -3.500973000 | -0.778541000 |
| 1       | 0.979780000  | -3.290263000 | -0.262267000 | 6 | 2.119132000  | -0.959081000 | 1.792424000  |
|         |              |              |              | 6 | 5.069580000  | 2.846781000  | -1.208456000 |
| NHC-16: |              |              |              | 1 | 4.098683000  | 3.316446000  | -1.386762000 |
| 8       | -3.042172000 | 1.246979000  | 0.721864000  | 6 | 0.548836000  | -2.722022000 | 1.221915000  |
| 6       | -2.212331000 | 0.535419000  | -0.223706000 | 1 | -0.270404000 | -3.376211000 | 1.509791000  |
| 6       | -2.288350000 | 1.167730000  | -1.610450000 | 6 | 2.678369000  | 0.012756000  | 2.818526000  |
| 1       | -3.252732000 | 1.004504000  | -2.095046000 | 1 | 3.482579000  | 0.584764000  | 2.345387000  |
| 1       | -1.498495000 | 0.761992000  | -2.249018000 | 6 | 5.806459000  | 2.685589000  | -2.533827000 |
| 1       | -2.119232000 | 2.244596000  | -1.510386000 | 1 | 5.227579000  | 2.067701000  | -3.227859000 |
| 6       | -4.372370000 | 1.137130000  | 0.729948000  | 1 | 6.787381000  | 2.219192000  | -2.385776000 |
| 8       | -5.030918000 | 1.578154000  | 1.638797000  | 1 | 5.964644000  | 3.667206000  | -2.991821000 |
| 8       | -3.137607000 | -1.430010000 | 0.780478000  | 6 | 2.681590000  | -2.049684000 | -1.871228000 |
| 6       | -0.801388000 | 0.670800000  | 0.352225000  | 1 | 3.467349000  | -1.296279000 | -1.982803000 |
| 1       | -0.777289000 | 0.303278000  | 1.381651000  | 6 | 5.701315000  | 0.614192000  | -0.232145000 |
| 1       | -0.085204000 | 0.098671000  | -0.247205000 | 1 | 6.763321000  | 0.800198000  | -0.304954000 |
| 1       | -0.501597000 | 1.723493000  | 0.337575000  | 6 | 1.075098000  | -1.820744000 | 2.143609000  |
| 6       | -2.565920000 | -0.961319000 | -0.182698000 | 1 | 0.661243000  | -1.777271000 | 3.148618000  |
| 8       | -4.849339000 | 0.549691000  | -0.372654000 | 6 | 5.860305000  | 3.681270000  | -0.206370000 |
| 6       | -6.275367000 | 0.279347000  | -0.487928000 | 1 | 5.322071000  | 3.761849000  | 0.743580000  |
| 6       | -7.032387000 | 1.546481000  | -0.457030000 | 1 | 6.016053000  | 4.688822000  | -0.604741000 |
| 6       | -7.701596000 | 2.550765000  | -0.482064000 | 1 | 6.844133000  | 3.237684000  | -0.014941000 |
| 1       | -8.286285000 | 3.449145000  | -0.488318000 | 6 | 3.278125000  | -0.737752000 | 4.013707000  |
| 6       | -6.730460000 | -0.682038000 | 0.607484000  | 1 | 4.055160000  | -1.441144000 | 3.693463000  |
| 6       | -6.403911000 | -0.361830000 | -1.868418000 | 1 | 2.508344000  | -1.303730000 | 4.551439000  |
| 1       | -7.772602000 | -0.959265000 | 0.423906000  | 1 | 3.727568000  | -0.029313000 | 4.718603000  |
| 1       | -6.653579000 | -0.229380000 | 1.596682000  | 6 | 1.608819000  | 1.008164000  | 3.281945000  |
| 1       | -6.112790000 | -1.584785000 | 0.570018000  | 1 | 1.205967000  | 1.578677000  | 2.438481000  |
| 1       | -7.453292000 | -0.590916000 | -2.071232000 | 1 | 2.037915000  | 1.717070000  | 3.999311000  |
| 1       | -5.826246000 | -1.291305000 | -1.891574000 | 1 | 0.775336000  | 0.494365000  | 3.775936000  |
| 1       | -6.032643000 | 0.315579000  | -2.642510000 | 6 | 1.604356000  | -1.756425000 | -2.921135000 |
| 7       | 4.744603000  | 1.531907000  | -0.636998000 | 1 | 1.160268000  | -0.766474000 | -2.765838000 |
| 6       | 3.473770000  | 1.087328000  | -0.449259000 | 1 | 0.803933000  | -2.505327000 | -2.886474000 |
| 7       | 3.677042000  | -0.150404000 | 0.092683000  | 1 | 2.039904000  | -1.779798000 | -3.926618000 |
| 6       | 2.617002000  | -1.035743000 | 0.481507000  | 6 | 3.314022000  | -3.425806000 | -2.111054000 |
| 6       | 2.118905000  | -1.948458000 | -0.463216000 | 1 | 4.105041000  | -3.632816000 | -1.381534000 |
| 6       | 5.020080000  | -0.461685000 | 0.234945000  | 1 | 3.753414000  | -3.471866000 | -3.113900000 |
| 1       | 5.358152000  | -1.401563000 | 0.648292000  | 1 | 2.564947000  | -4.222840000 | -2.034664000 |
| 6       | 1.072284000  | -2.787448000 | -0.067107000 | 6 | -2.123167000 | -1.798821000 | -1.350187000 |
|         |              |              |              | 1 | -2.756109000 | -1.566845000 | -2.216301000 |

|   |              |              |              |
|---|--------------|--------------|--------------|
| 1 | -1.090353000 | -1.567656000 | -1.630386000 |
| 1 | -2.219609000 | -2.857888000 | -1.102956000 |

NHC-17:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 1 | -4.530668000 | 1.287102000  | -1.673256000 |
| 8 | -1.524022000 | -1.783763000 | -0.964132000 |
| 6 | -2.835889000 | -1.546820000 | -0.385962000 |
| 6 | -3.702840000 | -2.761573000 | -0.693156000 |
| 1 | -3.772764000 | -2.922983000 | -1.773674000 |
| 1 | -4.709904000 | -2.606027000 | -0.294496000 |
| 1 | -3.269775000 | -3.652259000 | -0.226585000 |
| 6 | -1.332017000 | -1.005776000 | -2.031146000 |
| 8 | -0.404265000 | -1.068393000 | -2.784912000 |
| 8 | -2.379288000 | -0.154213000 | -2.196483000 |
| 6 | -2.692719000 | -1.297055000 | 1.103405000  |
| 1 | -2.028939000 | -0.448611000 | 1.291121000  |
| 1 | -3.678034000 | -1.081657000 | 1.529453000  |
| 1 | -2.292610000 | -2.190397000 | 1.593478000  |
| 6 | -3.280266000 | -0.327204000 | -1.166378000 |
| 6 | -4.334601000 | 0.458567000  | -1.000284000 |
| 1 | -5.022863000 | 0.271238000  | -0.182976000 |
| 7 | -0.746233000 | 1.999911000  | 0.913390000  |
| 6 | -0.180632000 | 1.084075000  | 0.080329000  |
| 7 | 0.917774000  | 0.684925000  | 0.793980000  |
| 6 | 1.912468000  | -0.218107000 | 0.285073000  |
| 6 | 2.888647000  | 0.291374000  | -0.586793000 |
| 6 | 1.032583000  | 1.338798000  | 2.011571000  |
| 1 | 1.851505000  | 1.159347000  | 2.693211000  |
| 6 | 3.845677000  | -0.599410000 | -1.085534000 |
| 1 | 4.609469000  | -0.235359000 | -1.768757000 |
| 6 | 1.886635000  | -1.567102000 | 0.682640000  |
| 6 | -1.944125000 | 2.775330000  | 0.563300000  |
| 1 | -2.282816000 | 2.342758000  | -0.382252000 |
| 6 | 3.835526000  | -1.940613000 | -0.718198000 |
| 1 | 4.585216000  | -2.619276000 | -1.116407000 |
| 6 | 0.872047000  | -2.082999000 | 1.688944000  |
| 1 | 0.030944000  | -1.382133000 | 1.700757000  |
| 6 | -1.578725000 | 4.241258000  | 0.351419000  |
| 1 | -0.804885000 | 4.341631000  | -0.416393000 |

|   |              |              |              |
|---|--------------|--------------|--------------|
| 1 | -1.208473000 | 4.689656000  | 1.280864000  |
| 1 | -2.461451000 | 4.804289000  | 0.031187000  |
| 6 | 2.952559000  | 1.758368000  | -0.978692000 |
| 1 | 2.131486000  | 2.284790000  | -0.482820000 |
| 6 | -0.031644000 | 2.176235000  | 2.088050000  |
| 1 | -0.329756000 | 2.869739000  | 2.861398000  |
| 6 | 2.867971000  | -2.416432000 | 0.163261000  |
| 1 | 2.877344000  | -3.465027000 | 0.448330000  |
| 6 | -3.032622000 | 2.604032000  | 1.617864000  |
| 1 | -3.246358000 | 1.545431000  | 1.795971000  |
| 1 | -3.953514000 | 3.090288000  | 1.279258000  |
| 1 | -2.738876000 | 3.064178000  | 2.568695000  |
| 6 | 1.489551000  | -2.112147000 | 3.094775000  |
| 1 | 1.859972000  | -1.127387000 | 3.397877000  |
| 1 | 2.332756000  | -2.813372000 | 3.126289000  |
| 1 | 0.747807000  | -2.440169000 | 3.832578000  |
| 6 | 0.323803000  | -3.467361000 | 1.330991000  |
| 1 | -0.071834000 | -3.490501000 | 0.311151000  |
| 1 | -0.484595000 | -3.735551000 | 2.021273000  |
| 1 | 1.093809000  | -4.242072000 | 1.421875000  |
| 6 | 2.776841000  | 1.939442000  | -2.490013000 |
| 1 | 1.833702000  | 1.502577000  | -2.834150000 |
| 1 | 3.594903000  | 1.462769000  | -3.042963000 |
| 1 | 2.775734000  | 3.005457000  | -2.745132000 |
| 6 | 4.265774000  | 2.393361000  | -0.504290000 |
| 1 | 4.393870000  | 2.282295000  | 0.578504000  |
| 1 | 4.274876000  | 3.463530000  | -0.740687000 |
| 1 | 5.130514000  | 1.933364000  | -0.997148000 |

NHC-TS<sub>17-18</sub>:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 1 | 4.716098000  | -0.554756000 | -1.626283000 |
| 8 | 0.861681000  | 1.476927000  | -1.182406000 |
| 6 | 2.219151000  | 1.841910000  | -0.868757000 |
| 6 | 2.572325000  | 3.074936000  | -1.692988000 |
| 1 | 2.460647000  | 2.867253000  | -2.761550000 |
| 1 | 3.607514000  | 3.371359000  | -1.495899000 |
| 1 | 1.911009000  | 3.904338000  | -1.420862000 |
| 6 | 0.796651000  | 0.189656000  | -1.652560000 |
| 8 | -0.130759000 | -0.218316000 | -2.318514000 |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8 | 2.106701000  | -0.237005000 | -1.920424000 | 1 | -2.674121000 | 2.624841000  | 3.067118000  |
| 6 | 2.378760000  | 2.099642000  | 0.623134000  | 1 | -1.034659000 | 2.576528000  | 3.746707000  |
| 1 | 2.049773000  | 1.235085000  | 1.205427000  | 6 | -0.856417000 | 3.569413000  | 1.188615000  |
| 1 | 3.432345000  | 2.294881000  | 0.849797000  | 1 | -0.477766000 | 3.612292000  | 0.161644000  |
| 1 | 1.793568000  | 2.975953000  | 0.917122000  | 1 | -0.111987000 | 4.023315000  | 1.852830000  |
| 6 | 2.989843000  | 0.618810000  | -1.332536000 | 1 | -1.761180000 | 4.184820000  | 1.246718000  |
| 6 | 4.292631000  | 0.366366000  | -1.238339000 | 6 | -2.664673000 | -2.390499000 | -2.429408000 |
| 1 | 4.956199000  | 1.095454000  | -0.785234000 | 1 | -2.130127000 | -1.685218000 | -3.072338000 |
| 7 | 1.214641000  | -1.597951000 | 1.075318000  | 1 | -3.734265000 | -2.342590000 | -2.664354000 |
| 6 | 0.533877000  | -0.780279000 | 0.240263000  | 1 | -2.324072000 | -3.403821000 | -2.670914000 |
| 7 | -0.676618000 | -0.634260000 | 0.843046000  | 6 | -3.227401000 | -3.027275000 | -0.060226000 |
| 6 | -1.809037000 | 0.060780000  | 0.285109000  | 1 | -3.024593000 | -2.857422000 | 1.002848000  |
| 6 | -2.656327000 | -0.646401000 | -0.584170000 | 1 | -3.003956000 | -4.076105000 | -0.287620000 |
| 6 | -0.744119000 | -1.343910000 | 2.032630000  | 1 | -4.298546000 | -2.862294000 | -0.231358000 |
| 1 | -1.633420000 | -1.353388000 | 2.645965000  |   |              |              |              |
| 6 | -3.780411000 | 0.020976000  | -1.075883000 |   | NHC-18:      |              |              |
| 1 | -4.459346000 | -0.494667000 | -1.749817000 | 1 | 4.062032000  | -2.062899000 | -2.085271000 |
| 6 | -2.040771000 | 1.392821000  | 0.654310000  | 8 | 1.813635000  | 1.285780000  | -0.402056000 |
| 6 | 2.574400000  | -2.104001000 | 0.820391000  | 6 | 2.951843000  | 1.203111000  | -1.261848000 |
| 1 | 2.834734000  | -1.717066000 | -0.165866000 | 6 | 2.692985000  | 1.940735000  | -2.578820000 |
| 6 | -4.042037000 | 1.341523000  | -0.718675000 | 1 | 1.839279000  | 1.503229000  | -3.102189000 |
| 1 | -4.921319000 | 1.844391000  | -1.113049000 | 1 | 3.576646000  | 1.886671000  | -3.223861000 |
| 6 | -1.127086000 | 2.125621000  | 1.619409000  | 1 | 2.472864000  | 2.993341000  | -2.368438000 |
| 1 | -0.168095000 | 1.597607000  | 1.636527000  | 6 | 0.894517000  | 0.214667000  | -0.741938000 |
| 6 | 2.568184000  | -3.628469000 | 0.772393000  | 8 | -0.011521000 | 0.453705000  | -1.579204000 |
| 1 | 1.833880000  | -3.992848000 | 0.046789000  | 8 | 1.872972000  | -0.864406000 | -1.176219000 |
| 1 | 2.335593000  | -4.058201000 | 1.753301000  | 6 | 4.146878000  | 1.798060000  | -0.532166000 |
| 1 | 3.557920000  | -3.987886000 | 0.473418000  | 1 | 4.330749000  | 1.285266000  | 0.417309000  |
| 6 | -2.393706000 | -2.096054000 | -0.952012000 | 1 | 5.048282000  | 1.724311000  | -1.148987000 |
| 1 | -1.334355000 | -2.302015000 | -0.768284000 | 1 | 3.958902000  | 2.857324000  | -0.327101000 |
| 6 | 0.457567000  | -1.952866000 | 2.181898000  | 6 | 3.054389000  | -0.300076000 | -1.493593000 |
| 1 | 0.829857000  | -2.600947000 | 2.962018000  | 6 | 4.114310000  | -0.989466000 | -1.930915000 |
| 6 | -3.179385000 | 2.019888000  | 0.135799000  | 1 | 5.041239000  | -0.475759000 | -2.162916000 |
| 1 | -3.394454000 | 3.050596000  | 0.404288000  | 7 | 1.074943000  | -0.777968000 | 1.667241000  |
| 6 | 3.550252000  | -1.561022000 | 1.857655000  | 6 | 0.374894000  | -0.313178000 | 0.621228000  |
| 1 | 3.539524000  | -0.466611000 | 1.873620000  | 7 | -0.926164000 | -0.386236000 | 0.949351000  |
| 1 | 4.566092000  | -1.890647000 | 1.616105000  | 6 | -2.085598000 | -0.005062000 | 0.172353000  |
| 1 | 3.301216000  |              |              |   |              |              |              |

|   |              |              |              |                           |              |              |              |
|---|--------------|--------------|--------------|---------------------------|--------------|--------------|--------------|
| 1 | -2.018191000 | -1.046888000 | 2.677597000  | NHC-TS <sub>18-19</sub> : |              |              |              |
| 6 | -3.894258000 | -0.627894000 | -1.254654000 | 1                         | -3.821782000 | 3.348290000  | -1.534024000 |
| 1 | -4.415227000 | -1.366436000 | -1.859266000 | 8                         | -1.982703000 | -0.715319000 | -0.816878000 |
| 6 | -2.551167000 | 1.309887000  | 0.279781000  | 6                         | -2.999757000 | -0.074419000 | -1.635294000 |
| 6 | 2.546936000  | -0.940051000 | 1.749163000  | 6                         | -2.701941000 | -0.284011000 | -3.115783000 |
| 1 | 2.948980000  | -0.341498000 | 0.936525000  | 1                         | -1.780194000 | 0.221109000  | -3.410971000 |
| 6 | -4.388853000 | 0.671374000  | -1.173708000 | 1                         | -3.526067000 | 0.111342000  | -3.717065000 |
| 1 | -5.295054000 | 0.939649000  | -1.710074000 | 1                         | -2.607836000 | -1.355665000 | -3.327412000 |
| 6 | -1.808412000 | 2.378794000  | 1.061941000  | 6                         | -0.867614000 | 0.015341000  | -0.630418000 |
| 1 | -0.972763000 | 1.907000000  | 1.590931000  | 8                         | -0.160600000 | 0.472680000  | -1.502351000 |
| 6 | 2.907496000  | -2.404120000 | 1.538351000  | 8                         | -2.224142000 | 1.657386000  | -0.175010000 |
| 1 | 2.536173000  | -2.757338000 | 0.571806000  | 6                         | -4.297855000 | -0.767790000 | -1.237845000 |
| 1 | 2.484267000  | -3.028060000 | 2.333855000  | 1                         | -4.525592000 | -0.596376000 | -0.180684000 |
| 1 | 3.996278000  | -2.514811000 | 1.555533000  | 1                         | -5.124514000 | -0.372710000 | -1.835222000 |
| 6 | -2.171814000 | -2.402314000 | -0.723367000 | 1                         | -4.223353000 | -1.847126000 | -1.415459000 |
| 1 | -1.284924000 | -2.494261000 | -0.086966000 | 6                         | -2.991867000 | 1.420091000  | -1.187072000 |
| 6 | 0.207039000  | -1.157788000 | 2.669115000  | 6                         | -3.782403000 | 2.309796000  | -1.851216000 |
| 1 | 0.553238000  | -1.569954000 | 3.604722000  | 1                         | -4.400666000 | 2.005558000  | -2.689996000 |
| 6 | -3.721646000 | 1.629283000  | -0.415076000 | 7                         | -0.993022000 | -0.341959000 | 1.913335000  |
| 1 | -4.109435000 | 2.644097000  | -0.367753000 | 6                         | -0.328756000 | -0.156043000 | 0.764126000  |
| 6 | 3.062039000  | -0.378982000 | 3.067573000  | 7                         | 0.987135000  | -0.161471000 | 1.042971000  |
| 1 | 2.734528000  | 0.655877000  | 3.208941000  | 6                         | 2.090669000  | -0.059692000 | 0.111709000  |
| 1 | 4.155959000  | -0.395356000 | 3.049673000  | 6                         | 2.678250000  | 1.196163000  | -0.083510000 |
| 1 | 2.733866000  | -0.977444000 | 3.923916000  | 6                         | 1.159024000  | -0.359576000 | 2.391455000  |
| 6 | -2.705916000 | 3.039467000  | 2.113152000  | 1                         | 2.143677000  | -0.406405000 | 2.832753000  |
| 1 | -3.121599000 | 2.298852000  | 2.805878000  | 6                         | 3.768869000  | 1.255053000  | -0.955284000 |
| 1 | -3.540520000 | 3.573717000  | 1.644877000  | 1                         | 4.254189000  | 2.210779000  | -1.137350000 |
| 1 | -2.130803000 | 3.767329000  | 2.696518000  | 6                         | 2.532938000  | -1.233944000 | -0.510285000 |
| 6 | -1.220054000 | 3.420135000  | 0.100831000  | 6                         | -2.469670000 | -0.425203000 | 2.093183000  |
| 1 | -0.586570000 | 2.936800000  | -0.650181000 | 1                         | -2.875997000 | 0.103077000  | 1.232921000  |
| 1 | -0.616757000 | 4.149966000  | 0.653233000  | 6                         | 4.236334000  | 0.111678000  | -1.597370000 |
| 1 | -2.019863000 | 3.963256000  | -0.417098000 | 1                         | 5.082404000  | 0.179861000  | -2.275773000 |
| 6 | -1.723972000 | -2.648941000 | -2.169199000 | 6                         | 1.861354000  | -2.580972000 | -0.299619000 |
| 1 | -0.999870000 | -1.888983000 | -2.481130000 | 1                         | 1.090937000  | -2.473289000 | 0.472020000  |
| 1 | -2.579061000 | -2.616553000 | -2.855248000 | 6                         | -2.882271000 | 0.309982000  | 3.360775000  |
| 1 | -1.257367000 | -3.636773000 | -2.258539000 | 1                         | -2.486009000 | 1.330086000  | 3.372536000  |
| 6 | -3.181297000 | -3.460514000 | -0.266399000 | 1                         | -2.563566000 | -0.213074000 | 4.268470000  |
| 1 | -3.484396000 | -3.301299000 | 0.774750000  | 1                         | -3.974533000 | 0.368403000  | 3.378571000  |
| 1 | -2.740122000 | -4.460447000 | -0.344945000 | 6                         | 2.168535000  | 2.457592000  | 0.591843000  |
| 1 | -4.084041000 | -3.444256000 | -0.887916000 |                           |              |              |              |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | 1.296889000  | 2.200184000  | 1.202610000  | 1 | 5.029702000  | 0.986268000  | -1.798276000 |
| 6       | -0.083372000 | -0.470352000 | 2.935985000  | 1 | 4.041314000  | 2.186540000  | -0.933319000 |
| 1       | -0.386068000 | -0.624351000 | 3.960283000  | 6 | 3.161929000  | -1.121352000 | -1.562779000 |
| 6       | 3.622583000  | -1.118321000 | -1.378431000 | 6 | 3.573501000  | -1.743335000 | -2.711581000 |
| 1       | 3.993316000  | -2.002503000 | -1.891081000 | 1 | 3.685680000  | -1.214929000 | -3.651579000 |
| 6       | -2.888262000 | -1.889203000 | 2.093782000  | 7 | 0.914962000  | 0.015368000  | 2.031084000  |
| 1       | -2.605971000 | -2.377125000 | 1.156454000  | 6 | 0.274973000  | 0.011937000  | 0.855249000  |
| 1       | -3.975216000 | -1.953895000 | 2.205938000  | 7 | -1.047046000 | 0.011358000  | 1.094576000  |
| 1       | -2.425074000 | -2.425226000 | 2.930614000  | 6 | -2.111728000 | 0.051537000  | 0.113662000  |
| 6       | 2.858211000  | -3.634270000 | 0.196805000  | 6 | -2.671559000 | -1.163601000 | -0.301455000 |
| 1       | 3.356338000  | -3.308452000 | 1.116669000  | 6 | -1.250476000 | 0.026983000  | 2.451776000  |
| 1       | 3.629302000  | -3.837470000 | -0.554656000 | 1 | -2.245631000 | 0.041682000  | 2.871613000  |
| 1       | 2.338252000  | -4.575926000 | 0.404046000  | 6 | -3.723592000 | -1.093146000 | -1.218181000 |
| 6       | 1.170420000  | -3.044376000 | -1.588457000 | 1 | -4.189183000 | -2.012095000 | -1.565271000 |
| 1       | 0.449025000  | -2.301434000 | -1.946878000 | 6 | -2.537922000 | 1.305873000  | -0.343163000 |
| 1       | 0.638490000  | -3.986715000 | -1.415283000 | 6 | 2.393993000  | -0.026232000 | 2.238798000  |
| 1       | 1.905956000  | -3.212131000 | -2.383980000 | 1 | 2.793576000  | -0.425121000 | 1.302587000  |
| 6       | 1.714164000  | 3.490227000  | -0.446156000 | 6 | -4.174832000 | 0.133311000  | -1.698565000 |
| 1       | 0.950752000  | 3.072499000  | -1.110101000 | 1 | -4.991010000 | 0.165583000  | -2.415271000 |
| 1       | 2.557367000  | 3.829230000  | -1.059162000 | 6 | -1.888099000 | 2.606488000  | 0.098548000  |
| 1       | 1.290058000  | 4.366173000  | 0.057155000  | 1 | -1.213331000 | 2.396496000  | 0.935736000  |
| 6       | 3.232615000  | 3.050316000  | 1.523185000  | 6 | 2.726913000  | -0.993485000 | 3.366004000  |
| 1       | 3.557089000  | 2.324238000  | 2.277160000  | 1 | 2.273784000  | -1.974499000 | 3.192266000  |
| 1       | 2.831855000  | 3.927930000  | 2.042344000  | 1 | 2.410723000  | -0.618102000 | 4.345252000  |
| 1       | 4.116134000  | 3.368754000  | 0.957668000  | 1 | 3.812990000  | -1.121525000 | 3.392609000  |
| NHC-19: |              |              |              | 6 | -2.177878000 | -2.510964000 | 0.195137000  |
| 1       | 3.806487000  | -2.805397000 | -2.691938000 | 1 | -1.327920000 | -2.346743000 | 0.866329000  |
| 8       | 1.963954000  | 0.740549000  | -0.563106000 | 6 | -0.019260000 | 0.026764000  | 3.037646000  |
| 6       | 2.963568000  | 0.425141000  | -1.596220000 | 1 | 0.259766000  | 0.022019000  | 4.080088000  |
| 6       | 2.516820000  | 1.032440000  | -2.917892000 | 6 | -3.586341000 | 1.318743000  | -1.267895000 |
| 1       | 1.638814000  | 0.523439000  | -3.321462000 | 1 | -3.944439000 | 2.268551000  | -1.656189000 |
| 1       | 3.327799000  | 0.968909000  | -3.649047000 | 6 | 2.898193000  | 1.386372000  | 2.500828000  |
| 1       | 2.282374000  | 2.093248000  | -2.772256000 | 1 | 2.656767000  | 2.051426000  | 1.666653000  |
| 6       | 0.870385000  | 0.004280000  | -0.522182000 | 1 | 3.985901000  | 1.361965000  | 2.620011000  |
| 8       | 0.320266000  | -0.561547000 | -1.435184000 | 1 | 2.462749000  | 1.793615000  | 3.421166000  |
| 8       | 2.972679000  | -1.654485000 | -0.411545000 | 6 | -2.923189000 | 3.621721000  | 0.593938000  |
| 6       | 4.218949000  | 1.114000000  | -1.075205000 | 1 | -3.533942000 | 3.207108000  | 1.403344000  |
| 1       | 4.528074000  | 0.674021000  | -0.121497000 | 1 | -3.593681000 | 3.934765000  | -0.213806000 |
|         |              |              |              | 1 | -2.416517000 | 4.516791000  | 0.970744000  |
|         |              |              |              | 6 | -1.050270000 | 3.195344000  | -1.043542000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | -0.295591000 | 2.484342000  | -1.399071000 | 1 | 2.391007000  | -2.436796000 | 2.297845000  |
| 1       | -0.535697000 | 4.102911000  | -0.708517000 | 6 | 0.132678000  | -2.651841000 | -0.877060000 |
| 1       | -1.688392000 | 3.459348000  | -1.895041000 | 6 | -4.079614000 | 1.238455000  | -0.112016000 |
| 6       | -1.685217000 | -3.380053000 | -0.968239000 | 1 | -3.560078000 | 1.762417000  | -0.913238000 |
| 1       | -0.910273000 | -2.863956000 | -1.543256000 | 6 | 2.180463000  | -3.201718000 | 0.303661000  |
| 1       | -2.507459000 | -3.638262000 | -1.645620000 | 1 | 3.151030000  | -3.690702000 | 0.315265000  |
| 1       | -1.263244000 | -4.314474000 | -0.582051000 | 6 | -0.752203000 | -2.776325000 | -2.104383000 |
| 6       | -3.270669000 | -3.232554000 | 0.993585000  | 1 | -1.538872000 | -2.018103000 | -2.039184000 |
| 1       | -3.611499000 | -2.630819000 | 1.843536000  | 6 | -4.136646000 | 2.114796000  | 1.131803000  |
| 1       | -2.888906000 | -4.183985000 | 1.379810000  | 1 | -3.131201000 | 2.389557000  | 1.463708000  |
| 1       | -4.139544000 | -3.449619000 | 0.361151000  | 1 | -4.650011000 | 1.592941000  | 1.947018000  |
|         |              |              |              | 1 | -4.692674000 | 3.029063000  | 0.902864000  |
|         |              |              |              | 6 | 0.026253000  | -1.138814000 | 2.688388000  |
|         |              |              |              | 1 | -0.840064000 | -0.520705000 | 2.425713000  |
|         |              |              |              | 6 | -3.705947000 | -1.081947000 | 0.836410000  |
|         |              |              |              | 1 | -4.722502000 | -1.165556000 | 1.189043000  |
|         |              |              |              | 6 | 1.379396000  | -3.279684000 | -0.832884000 |
|         |              |              |              | 1 | 1.728708000  | -3.834399000 | -1.699459000 |
|         |              |              |              | 6 | -5.453117000 | 0.808784000  | -0.608146000 |
|         |              |              |              | 1 | -5.372214000 | 0.106498000  | -1.443395000 |
|         |              |              |              | 1 | -5.985412000 | 1.698631000  | -0.955929000 |
|         |              |              |              | 1 | -6.051999000 | 0.352629000  | 0.186152000  |
|         |              |              |              | 6 | -1.422379000 | -4.156099000 | -2.133948000 |
|         |              |              |              | 1 | -2.011305000 | -4.336369000 | -1.227164000 |
|         |              |              |              | 1 | -0.668278000 | -4.948670000 | -2.210210000 |
|         |              |              |              | 1 | -2.090708000 | -4.238031000 | -2.998715000 |
|         |              |              |              | 6 | 0.020744000  | -2.517747000 | -3.400497000 |
|         |              |              |              | 1 | 0.546729000  | -1.559470000 | -3.357496000 |
|         |              |              |              | 1 | -0.673421000 | -2.495790000 | -4.247940000 |
|         |              |              |              | 1 | 0.754173000  | -3.308069000 | -3.595510000 |
|         |              |              |              | 6 | 1.088645000  | -0.204179000 | 3.273760000  |
|         |              |              |              | 1 | 1.426027000  | 0.511857000  | 2.517902000  |
|         |              |              |              | 1 | 1.948899000  | -0.767367000 | 3.654690000  |
|         |              |              |              | 1 | 0.659336000  | 0.349450000  | 4.117452000  |
|         |              |              |              | 6 | -0.422909000 | -2.169838000 | 3.733891000  |
|         |              |              |              | 1 | -1.204064000 | -2.833870000 | 3.347259000  |
|         |              |              |              | 1 | -0.812705000 | -1.663264000 | 4.624066000  |
|         |              |              |              | 1 | 0.425209000  | -2.793229000 | 4.042338000  |
|         |              |              |              | 8 | 2.659274000  | 0.376296000  | -1.022611000 |
|         |              |              |              | 6 | 3.941240000  | 0.814171000  | -0.623938000 |
| NHC-20: |              |              |              |   |              |              |              |
| 1       | 1.978382000  | 0.829830000  | -0.452621000 |   |              |              |              |
| 1       | 1.733322000  | 3.785762000  | 2.085254000  |   |              |              |              |
| 8       | -1.312500000 | 2.035502000  | -0.575620000 |   |              |              |              |
| 6       | -0.328788000 | 3.131807000  | -0.682318000 |   |              |              |              |
| 6       | 0.440095000  | 3.101463000  | -2.000282000 |   |              |              |              |
| 1       | 1.137290000  | 2.263894000  | -2.045609000 |   |              |              |              |
| 1       | 1.003709000  | 4.037888000  | -2.076403000 |   |              |              |              |
| 1       | -0.247335000 | 3.041919000  | -2.851715000 |   |              |              |              |
| 6       | -1.043715000 | 0.783540000  | -0.891948000 |   |              |              |              |
| 8       | -0.281693000 | 0.336691000  | -1.710249000 |   |              |              |              |
| 8       | 1.020697000  | 1.670607000  | 0.632678000  |   |              |              |              |
| 6       | -1.205765000 | 4.371163000  | -0.601629000 |   |              |              |              |
| 1       | -1.774074000 | 4.396685000  | 0.333076000  |   |              |              |              |
| 1       | -0.592282000 | 5.273455000  | -0.664137000 |   |              |              |              |
| 1       | -1.907046000 | 4.380509000  | -1.443509000 |   |              |              |              |
| 6       | 0.627810000  | 2.895068000  | 0.510011000  |   |              |              |              |
| 6       | 1.006454000  | 3.947228000  | 1.292526000  |   |              |              |              |
| 1       | 0.616601000  | 4.949394000  | 1.156925000  |   |              |              |              |
| 7       | -3.246582000 | 0.037906000  | 0.182626000  |   |              |              |              |
| 6       | -1.958478000 | -0.146655000 | -0.133259000 |   |              |              |              |
| 7       | -1.590977000 | -1.364952000 | 0.296442000  |   |              |              |              |
| 6       | -0.265256000 | -1.954072000 | 0.271111000  |   |              |              |              |
| 6       | 0.510441000  | -1.849332000 | 1.434988000  |   |              |              |              |
| 6       | -2.668481000 | -1.959920000 | 0.909055000  |   |              |              |              |
| 1       | -2.592474000 | -2.945405000 | 1.343724000  |   |              |              |              |
| 6       | 1.751572000  | -2.492937000 | 1.421301000  |   |              |              |              |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6                         | 4.941665000  | 0.176735000  | -1.588394000 | 6 | -2.703567000 | -1.850853000 | 1.682846000  |
| 6                         | 4.036427000  | 2.343846000  | -0.678306000 | 1 | -2.547517000 | -2.689319000 | 2.354906000  |
| 6                         | 4.244450000  | 0.353781000  | 0.758596000  | 6 | -3.147486000 | 0.295550000  | -0.082244000 |
| 6                         | 4.508000000  | -0.021661000 | 1.877751000  | 6 | 1.822916000  | 3.303923000  | -0.429588000 |
| 1                         | 4.729648000  | -0.347191000 | 2.874141000  | 1 | 2.361514000  | 2.529540000  | -0.973837000 |
| 1                         | 3.836213000  | 2.673403000  | -1.704147000 | 6 | -3.894631000 | -1.764623000 | 0.964449000  |
| 1                         | 3.294454000  | 2.795221000  | -0.011380000 | 1 | -4.654883000 | -2.531779000 | 1.085096000  |
| 1                         | 4.716863000  | 0.513663000  | -2.605885000 | 6 | -3.454174000 | 1.469258000  | -1.007713000 |
| 1                         | 4.858059000  | -0.914164000 | -1.552539000 | 1 | -2.539998000 | 2.055879000  | -1.151941000 |
| 1                         | 5.967344000  | 0.463299000  | -1.336336000 | 6 | 2.639978000  | 3.759923000  | 0.772637000  |
| 1                         | 5.034202000  | 2.687330000  | -0.384445000 | 1 | 2.826819000  | 2.928913000  | 1.460452000  |
| NHC-TS <sub>20-21</sub> : |              |              |              | 1 | 2.126772000  | 4.560466000  | 1.316728000  |
| 8                         | 0.272021000  | -1.405844000 | -0.502743000 | 1 | 3.602138000  | 4.148569000  | 0.425578000  |
| 1                         | 1.324724000  | -2.026844000 | 0.004131000  | 6 | -0.444821000 | -0.930562000 | 2.388262000  |
| 1                         | 4.207692000  | -3.462748000 | -1.212911000 | 1 | 0.366399000  | -0.500878000 | 1.796486000  |
| 8                         | 2.063373000  | 0.179895000  | 0.387178000  | 6 | -0.382487000 | 3.364855000  | 0.762910000  |
| 6                         | 3.403761000  | -0.395298000 | 0.275639000  | 1 | -0.281359000 | 4.416979000  | 0.982562000  |
| 6                         | 4.310311000  | 0.508254000  | -0.549891000 | 6 | -4.115539000 | -0.701127000 | 0.099235000  |
| 1                         | 4.042550000  | 0.508627000  | -1.608084000 | 1 | -5.053999000 | -0.638032000 | -0.445448000 |
| 1                         | 5.347716000  | 0.176960000  | -0.445829000 | 6 | 1.487832000  | 4.438141000  | -1.389525000 |
| 1                         | 4.254311000  | 1.530891000  | -0.160859000 | 1 | 0.876748000  | 4.077224000  | -2.222383000 |
| 6                         | 1.256687000  | 0.431389000  | -0.664071000 | 1 | 2.419281000  | 4.845263000  | -1.793561000 |
| 8                         | 1.581752000  | 0.502472000  | -1.831717000 | 1 | 0.955796000  | 5.250165000  | -0.882351000 |
| 8                         | 2.278011000  | -2.530979000 | 0.290961000  | 6 | -4.518819000 | 2.379551000  | -0.374814000 |
| 6                         | 3.859627000  | -0.411426000 | 1.735217000  | 1 | -4.244033000 | 2.711612000  | 0.630879000  |
| 1                         | 3.191229000  | -1.039319000 | 2.331777000  | 1 | -5.474449000 | 1.847041000  | -0.299412000 |
| 1                         | 4.874941000  | -0.813350000 | 1.800479000  | 1 | -4.675122000 | 3.267649000  | -0.997355000 |
| 1                         | 3.853410000  | 0.605081000  | 2.143568000  | 6 | -3.938239000 | 1.036934000  | -2.398555000 |
| 6                         | 3.309698000  | -1.843533000 | -0.208680000 | 1 | -3.197445000 | 0.431815000  | -2.927023000 |
| 6                         | 4.268553000  | -2.406671000 | -0.964510000 | 1 | -4.136963000 | 1.928712000  | -3.003555000 |
| 1                         | 5.122653000  | -1.847423000 | -1.328319000 | 1 | -4.870964000 | 0.465681000  | -2.340028000 |
| 7                         | 0.564003000  | 2.672700000  | 0.045533000  | 6 | -0.024066000 | -2.354782000 | 2.752444000  |
| 6                         | 0.194071000  | 1.385380000  | -0.074332000 | 1 | 0.017440000  | -2.992585000 | 1.863708000  |
| 7                         | -0.994897000 | 1.250601000  | 0.551825000  | 1 | -0.707116000 | -2.806663000 | 3.481866000  |
| 6                         | -1.953285000 | 0.160028000  | 0.643374000  | 1 | 0.973435000  | -2.338331000 | 3.204539000  |
| 6                         | -1.707523000 | -0.883518000 | 1.547908000  | 6 | -0.622374000 | -0.084191000 | 3.657640000  |
| 6                         | -1.351911000 | 2.477366000  | 1.083870000  | 1 | -0.863425000 | 0.959268000  | 3.423356000  |
| 1                         | -2.272475000 | 2.592685000  | 1.634953000  | 1 | 0.300008000  | -0.091461000 | 4.250335000  |
|                           |              |              |              | 1 | -1.430608000 | -0.486677000 | 4.281066000  |
|                           |              |              |              | 6 | -0.161035000 | -2.101249000 | -1.647421000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6       | -1.123993000 | -1.237450000 | -2.468958000 | 6 | -2.723123000 | -2.044681000 | 1.606892000  |
| 6       | 1.004711000  | -2.560049000 | -2.544922000 | 1 | -2.551000000 | -2.869850000 | 2.291520000  |
| 6       | -0.904018000 | -3.315383000 | -1.199181000 | 6 | -3.208432000 | 0.068804000  | -0.189559000 |
| 6       | -1.508979000 | -4.297429000 | -0.831282000 | 6 | 1.714466000  | 3.230327000  | -0.134651000 |
| 1       | -2.043082000 | -5.164400000 | -0.498114000 | 1 | 2.294887000  | 2.446417000  | -0.614762000 |
| 1       | 1.582195000  | -1.683728000 | -2.853277000 | 6 | -3.872551000 | -2.039336000 | 0.819757000  |
| 1       | 1.665369000  | -3.242535000 | -2.004456000 | 1 | -4.586338000 | -2.855010000 | 0.898895000  |
| 1       | -0.617633000 | -0.311408000 | -2.762285000 | 6 | -3.533677000 | 1.224288000  | -1.130111000 |
| 1       | -2.002196000 | -0.999546000 | -1.868745000 | 1 | -2.620457000 | 1.808614000  | -1.293473000 |
| 1       | -1.452521000 | -1.762889000 | -3.372840000 | 6 | 2.428256000  | 3.726439000  | 1.116935000  |
| 1       | 0.620465000  | -3.071006000 | -3.435244000 | 1 | 2.531329000  | 2.924023000  | 1.853850000  |
| NHC-21: |              |              |              | 1 | 1.889969000  | 4.560503000  | 1.581560000  |
| 8       | 0.409055000  | -0.995606000 | -0.608839000 | 1 | 3.427476000  | 4.080985000  | 0.844604000  |
| 1       | 1.579845000  | -1.815627000 | 0.562510000  | 6 | -0.570220000 | -0.980010000 | 2.431290000  |
| 1       | 4.419620000  | -3.614538000 | -0.195391000 | 1 | 0.246881000  | -0.490938000 | 1.890591000  |
| 8       | 2.097253000  | 0.264694000  | 0.282930000  | 6 | -0.555965000 | 3.252783000  | 0.939543000  |
| 6       | 3.415250000  | -0.243248000 | 0.038917000  | 1 | -0.463915000 | 4.291017000  | 1.220658000  |
| 6       | 4.068963000  | 0.282621000  | -1.241248000 | 6 | -4.111237000 | -0.994156000 | -0.064332000 |
| 1       | 3.617655000  | -0.138501000 | -2.139677000 | 1 | -5.015082000 | -0.999920000 | -0.667547000 |
| 1       | 5.135975000  | 0.038205000  | -1.224371000 | 6 | 1.434593000  | 4.342821000  | -1.136458000 |
| 1       | 3.974531000  | 1.371654000  | -1.285658000 | 1 | 0.910405000  | 3.952980000  | -2.014227000 |
| 6       | 1.027522000  | 0.322814000  | -0.732174000 | 1 | 2.383846000  | 4.777436000  | -1.464960000 |
| 8       | 1.320438000  | 0.733261000  | -1.891856000 | 1 | 0.832801000  | 5.141914000  | -0.688481000 |
| 8       | 2.379372000  | -2.363024000 | 0.724948000  | 6 | -4.597090000 | 2.141056000  | -0.503141000 |
| 6       | 4.204904000  | 0.267798000  | 1.252304000  | 1 | -4.305516000 | 2.516699000  | 0.481093000  |
| 1       | 3.744717000  | -0.083038000 | 2.182430000  | 1 | -5.541092000 | 1.595263000  | -0.385602000 |
| 1       | 5.238749000  | -0.087681000 | 1.213511000  | 1 | -4.783516000 | 3.002094000  | -1.154843000 |
| 1       | 4.205199000  | 1.363139000  | 1.251143000  | 6 | -4.044027000 | 0.769013000  | -2.504606000 |
| 6       | 3.431005000  | -1.779561000 | 0.095306000  | 1 | -3.351804000 | 0.090224000  | -3.008863000 |
| 6       | 4.453197000  | -2.536195000 | -0.322324000 | 1 | -4.181210000 | 1.647032000  | -3.145278000 |
| 1       | 5.336304000  | -2.100084000 | -0.773824000 | 1 | -5.015268000 | 0.269269000  | -2.423406000 |
| 7       | 0.436793000  | 2.586351000  | 0.254139000  | 6 | -0.087288000 | -2.376682000 | 2.828596000  |
| 6       | 0.073712000  | 1.312284000  | 0.043123000  | 1 | 0.021633000  | -3.031807000 | 1.957303000  |
| 7       | -1.158169000 | 1.161802000  | 0.579890000  | 1 | -0.777942000 | -2.854466000 | 3.533284000  |
| 6       | -2.054145000 | 0.022293000  | 0.611088000  | 1 | 0.887591000  | -2.302117000 | 3.321355000  |
| 6       | -1.789513000 | -1.010430000 | 1.524755000  | 6 | -0.867673000 | -0.147567000 | 3.687429000  |
| 6       | -1.551892000 | 2.362387000  | 1.150480000  | 1 | -1.155722000 | 0.879180000  | 3.436923000  |
| 1       | -2.494754000 | 2.453771000  | 1.666284000  | 1 | 0.018327000  | -0.103971000 | 4.331206000  |
|         |              |              |              | 1 | -1.685376000 | -0.601480000 | 4.260561000  |
|         |              |              |              | 6 | 0.118555000  | -1.789364000 | -1.775677000 |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6                         | -0.954272000 | -1.131644000 | -2.643722000 | 6 | -2.561677000 | -2.296262000 | 1.407270000  |
| 6                         | 1.362356000  | -2.145456000 | -2.598371000 | 1 | -2.257171000 | -3.181699000 | 1.957690000  |
| 6                         | -0.439111000 | -3.038547000 | -1.206251000 | 6 | -3.395895000 | -0.020866000 | -0.026058000 |
| 6                         | -0.903027000 | -4.066867000 | -0.773579000 | 6 | 1.244224000  | 3.344212000  | -0.321610000 |
| 1                         | -1.311479000 | -4.975614000 | -0.378735000 | 1 | 1.808035000  | 2.578637000  | -0.855395000 |
| 1                         | 1.762037000  | -1.247374000 | -3.070792000 | 6 | -3.743902000 | -2.321154000 | 0.675581000  |
| 1                         | 2.129714000  | -2.597603000 | -1.964251000 | 1 | -4.351228000 | -3.222303000 | 0.658382000  |
| 1                         | -0.588244000 | -0.173845000 | -3.020470000 | 6 | -3.862695000 | 1.215163000  | -0.790151000 |
| 1                         | -1.852273000 | -0.977141000 | -2.044245000 | 1 | -3.620910000 | 2.094270000  | -0.184671000 |
| 1                         | -1.206767000 | -1.783398000 | -3.486815000 | 6 | 2.100530000  | 3.937329000  | 0.790248000  |
| 1                         | 1.081736000  | -2.869989000 | -3.370554000 | 1 | 2.380647000  | 3.167331000  | 1.516412000  |
| NHC-TS <sub>21-22</sub> : |              |              |              | 1 | 1.573243000  | 4.739772000  | 1.319200000  |
| 8                         | 0.711313000  | -1.148239000 | -0.654654000 | 1 | 3.014188000  | 4.364116000  | 0.363680000  |
| 1                         | 2.022550000  | -1.971367000 | 0.604326000  | 6 | -0.500365000 | -1.094431000 | 2.291244000  |
| 1                         | 4.899006000  | -2.831025000 | -1.017781000 | 1 | 0.233577000  | -0.479396000 | 1.763573000  |
| 8                         | 2.022438000  | 0.309775000  | 0.387507000  | 6 | -0.835900000 | 3.245407000  | 1.088395000  |
| 6                         | 3.455320000  | 0.054916000  | 0.383154000  | 1 | -0.752408000 | 4.276452000  | 1.399122000  |
| 6                         | 4.211555000  | 1.079887000  | -0.452898000 | 6 | -4.159817000 | -1.192735000 | -0.025696000 |
| 1                         | 4.022294000  | 0.959216000  | -1.520519000 | 1 | -5.095499000 | -1.225568000 | -0.574760000 |
| 1                         | 5.285964000  | 0.989562000  | -0.263688000 | 6 | 0.766625000  | 4.397376000  | -1.316613000 |
| 1                         | 3.901780000  | 2.083759000  | -0.147361000 | 1 | 0.151259000  | 3.938992000  | -2.098110000 |
| 6                         | 1.300860000  | 0.096463000  | -0.791309000 | 1 | 1.628568000  | 4.876544000  | -1.791955000 |
| 8                         | 1.645107000  | 0.554556000  | -1.869511000 | 1 | 0.177277000  | 5.176228000  | -0.818543000 |
| 8                         | 2.932971000  | -2.323482000 | 0.555406000  | 6 | -5.374417000 | 1.240240000  | -1.027927000 |
| 6                         | 3.827749000  | 0.208069000  | 1.859117000  | 1 | -5.936961000 | 1.083149000  | -0.100966000 |
| 1                         | 3.271779000  | -0.504143000 | 2.476029000  | 1 | -5.685348000 | 0.478304000  | -1.751913000 |
| 1                         | 4.899322000  | 0.032838000  | 1.994561000  | 1 | -5.660741000 | 2.214679000  | -1.437749000 |
| 1                         | 3.588693000  | 1.222785000  | 2.193357000  | 6 | -3.126641000 | 1.373610000  | -2.128083000 |
| 6                         | 3.730547000  | -1.384815000 | -0.038336000 | 1 | -2.042454000 | 1.440640000  | -1.993448000 |
| 6                         | 4.741592000  | -1.774809000 | -0.818523000 | 1 | -3.465021000 | 2.287279000  | -2.630326000 |
| 1                         | 5.431783000  | -1.062469000 | -1.253325000 | 1 | -3.340402000 | 0.524166000  | -2.788343000 |
| 7                         | 0.085073000  | 2.636998000  | 0.249933000  | 6 | 0.134598000  | -2.466492000 | 2.525604000  |
| 6                         | -0.227743000 | 1.344570000  | 0.007358000  | 1 | 0.266953000  | -3.016719000 | 1.587032000  |
| 7                         | -1.383066000 | 1.154345000  | 0.705352000  | 1 | -0.472519000 | -3.087683000 | 3.195251000  |
| 6                         | -2.186718000 | -0.040648000 | 0.695914000  | 1 | 1.115575000  | -2.344841000 | 2.998548000  |
| 6                         | -1.756838000 | -1.152844000 | 1.437660000  | 6 | -0.804463000 | -0.419803000 | 3.636714000  |
| 6                         | -1.763874000 | 2.305423000  | 1.382257000  | 1 | -1.203800000 | 0.591276000  | 3.503038000  |
| 1                         | -2.652153000 | 2.340077000  | 1.996633000  | 1 | 0.109184000  | -0.346576000 | 4.238613000  |
|                           |              |              |              | 1 | -1.540566000 | -1.004123000 | 4.203102000  |
|                           |              |              |              | 6 | 0.302853000  | -1.889880000 | -1.833034000 |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6 | -0.806654000 | -1.160428000 | -2.587338000 | 6 | -1.784175000 | -2.383120000 | 1.678343000  |
| 6 | 1.493874000  | -2.237475000 | -2.732673000 | 1 | -1.201508000 | -2.995744000 | 2.359391000  |
| 6 | -0.232562000 | -3.150637000 | -1.276904000 | 6 | -3.278776000 | -0.856747000 | -0.144175000 |
| 6 | -0.663553000 | -4.200718000 | -0.865370000 | 6 | -0.411016000 | 3.968902000  | -0.914615000 |
| 1 | -1.050718000 | -5.125845000 | -0.486856000 | 1 | 0.359394000  | 3.384523000  | -1.425030000 |
| 1 | 1.889728000  | -1.341838000 | -3.211957000 | 6 | -2.784048000 | -2.983095000 | 0.913541000  |
| 1 | 2.282231000  | -2.713707000 | -2.142479000 | 1 | -2.974213000 | -4.048721000 | 1.014382000  |
| 1 | -0.435366000 | -0.208227000 | -2.973188000 | 6 | -4.064998000 | -0.068289000 | -1.178743000 |
| 1 | -1.656274000 | -0.983676000 | -1.923067000 | 1 | -3.729235000 | 0.972725000  | -1.149341000 |
| 1 | -1.141618000 | -1.779944000 | -3.425610000 | 6 | 0.245970000  | 4.926455000  | 0.074282000  |
| 1 | 1.159172000  | -2.941195000 | -3.501478000 | 1 | 0.801238000  | 4.381007000  | 0.844272000  |
|   |              |              |              | 1 | -0.502304000 | 5.557136000  | 0.568242000  |
|   |              |              |              | 1 | 0.942496000  | 5.584455000  | -0.455388000 |
|   |              |              |              | 6 | -0.435004000 | -0.357503000 | 2.417885000  |
|   |              |              |              | 1 | 0.069425000  | 0.387754000  | 1.789952000  |
|   |              |              |              | 6 | -2.270712000 | 3.298885000  | 0.645541000  |
|   |              |              |              | 1 | -2.557696000 | 4.317905000  | 0.862493000  |
|   |              |              |              | 6 | -3.523605000 | -2.227158000 | 0.013093000  |
|   |              |              |              | 1 | -4.291215000 | -2.706353000 | -0.590651000 |
|   |              |              |              | 6 | -1.256455000 | 4.704630000  | -1.949461000 |
|   |              |              |              | 1 | -1.707568000 | 3.998840000  | -2.654216000 |
|   |              |              |              | 1 | -0.631671000 | 5.405651000  | -2.512429000 |
|   |              |              |              | 1 | -2.057625000 | 5.275687000  | -1.466017000 |
|   |              |              |              | 6 | -5.567129000 | -0.085767000 | -0.872825000 |
|   |              |              |              | 1 | -5.776933000 | 0.320995000  | 0.122841000  |
|   |              |              |              | 1 | -5.968375000 | -1.105282000 | -0.913190000 |
|   |              |              |              | 1 | -6.110396000 | 0.517497000  | -1.608984000 |
|   |              |              |              | 6 | -3.789643000 | -0.603752000 | -2.589414000 |
|   |              |              |              | 1 | -2.718835000 | -0.581654000 | -2.819631000 |
|   |              |              |              | 1 | -4.312741000 | 0.005772000  | -3.335201000 |
|   |              |              |              | 1 | -4.139636000 | -1.637632000 | -2.695169000 |
|   |              |              |              | 6 | 0.628515000  | -1.335964000 | 2.920051000  |
|   |              |              |              | 1 | 1.060097000  | -1.918997000 | 2.101137000  |
|   |              |              |              | 1 | 0.219604000  | -2.026687000 | 3.667402000  |
|   |              |              |              | 1 | 1.438393000  | -0.777678000 | 3.402610000  |
|   |              |              |              | 6 | -1.070994000 | 0.366678000  | 3.614628000  |
|   |              |              |              | 1 | -1.797498000 | 1.121951000  | 3.300921000  |
|   |              |              |              | 1 | -0.298388000 | 0.866639000  | 4.210576000  |
|   |              |              |              | 1 | -1.586227000 | -0.354374000 | 4.261684000  |
|   |              |              |              | 6 | 1.067206000  | -2.869283000 | -1.263711000 |

NHC-22:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 8 | 1.673886000  | -1.998632000 | -0.260019000 |
| 1 | 4.684107000  | -1.115610000 | 0.627332000  |
| 1 | 6.405772000  | 1.054118000  | -1.547212000 |
| 8 | 2.669045000  | -0.258391000 | 0.499548000  |
| 6 | 3.490024000  | 0.947562000  | 0.411098000  |
| 6 | 2.728374000  | 2.096049000  | -0.232554000 |
| 1 | 2.589515000  | 1.950290000  | -1.304180000 |
| 1 | 3.267624000  | 3.032663000  | -0.060334000 |
| 1 | 1.746404000  | 2.172318000  | 0.244381000  |
| 6 | 2.235282000  | -0.845785000 | -0.625963000 |
| 8 | 2.361010000  | -0.418005000 | -1.746450000 |
| 8 | 5.297636000  | -0.641015000 | 0.039634000  |
| 6 | 3.781944000  | 1.263320000  | 1.878465000  |
| 1 | 4.272073000  | 0.423636000  | 2.381494000  |
| 1 | 4.435257000  | 2.137912000  | 1.938923000  |
| 1 | 2.844786000  | 1.482846000  | 2.400112000  |
| 6 | 4.782701000  | 0.577457000  | -0.300634000 |
| 6 | 5.451192000  | 1.370850000  | -1.137986000 |
| 1 | 5.055083000  | 2.335102000  | -1.430648000 |
| 7 | -1.224281000 | 2.971914000  | -0.204929000 |
| 6 | -1.048215000 | 1.630379000  | -0.333369000 |
| 7 | -2.016199000 | 1.128568000  | 0.491348000  |
| 6 | -2.277067000 | -0.275414000 | 0.646131000  |
| 6 | -1.508594000 | -1.018508000 | 1.565074000  |
| 6 | -2.778901000 | 2.122774000  | 1.087640000  |
| 1 | -3.596036000 | 1.903436000  | 1.760259000  |



|                         |              |              |              |        |              |              |              |
|-------------------------|--------------|--------------|--------------|--------|--------------|--------------|--------------|
| NHO-TS <sub>7-8</sub> : |              |              |              | 1      | -4.279237000 | 1.472936000  | 1.644110000  |
| 7                       | -0.807860000 | 0.383375000  | 0.555715000  | 1      | -5.445469000 | 1.229993000  | 0.330160000  |
| 7                       | 0.689885000  | 1.947325000  | 0.456340000  | 1      | -4.711923000 | 2.823880000  | 0.577126000  |
| 6                       | -1.794442000 | -0.581309000 | 0.142013000  | 6      | -3.715023000 | 1.797978000  | -1.781774000 |
| 6                       | 0.134472000  | 0.939693000  | -0.248530000 | 1      | -2.895107000 | 1.559674000  | -2.468247000 |
| 6                       | -1.469495000 | -1.949236000 | 0.169223000  | 1      | -3.897209000 | 2.877481000  | -1.827818000 |
| 6                       | 1.741712000  | 2.834250000  | -0.074019000 | 1      | -4.617634000 | 1.289195000  | -2.139142000 |
| 1                       | 2.351974000  | 2.197685000  | -0.721454000 | 6      | 0.280845000  | -3.796285000 | 0.078201000  |
| 6                       | -0.842995000 | 1.060225000  | 1.768539000  | 1      | 0.186960000  | -3.839571000 | -1.012277000 |
| 1                       | -1.533177000 | 0.779208000  | 2.550096000  | 1      | -0.334344000 | -4.593217000 | 0.512899000  |
| 6                       | -3.046146000 | -0.098831000 | -0.269394000 | 1      | 1.324066000  | -4.010473000 | 0.332595000  |
| 6                       | -4.010524000 | -1.042608000 | -0.641427000 | 6      | 3.110926000  | -0.572443000 | 0.596113000  |
| 1                       | -4.991166000 | -0.703328000 | -0.966145000 | 6      | 2.709292000  | -0.216514000 | 1.683231000  |
| 6                       | 0.092436000  | 2.035584000  | 1.703867000  | 6      | 3.571201000  | -1.050386000 | -0.751605000 |
| 1                       | 0.394993000  | 2.767824000  | 2.436308000  | 1      | 2.352463000  | 0.095876000  | 2.644326000  |
| 6                       | 0.530078000  | 0.468092000  | -1.556259000 | 6      | 4.387388000  | -2.334998000 | -0.520786000 |
| 1                       | 0.842010000  | 1.284439000  | -2.211890000 | 6      | 4.495475000  | 0.026850000  | -1.353757000 |
| 1                       | -0.274831000 | -0.105318000 | -2.024440000 | 8      | 2.493265000  | -1.310866000 | -1.575186000 |
| 6                       | -3.376054000 | 1.383425000  | -0.344384000 | 1      | 1.533334000  | -0.367278000 | -1.495532000 |
| 1                       | -2.494933000 | 1.955968000  | -0.037522000 | 1      | 3.756285000  | -3.103025000 | -0.062102000 |
| 6                       | -3.725568000 | -2.402178000 | -0.611698000 | 1      | 5.256262000  | -2.158788000 | 0.125043000  |
| 1                       | -4.484705000 | -3.121086000 | -0.908573000 | 1      | 4.736985000  | -2.705858000 | -1.490828000 |
| 6                       | -2.465661000 | -2.849239000 | -0.215871000 | 1      | 3.929723000  | 0.943712000  | -1.551157000 |
| 1                       | -2.256854000 | -3.914394000 | -0.214108000 | 1      | 5.340291000  | 0.268901000  | -0.697468000 |
| 6                       | -0.098111000 | -2.419592000 | 0.624609000  | 1      | 4.884330000  | -0.344703000 | -2.308895000 |
| 1                       | 0.646388000  | -1.710333000 | 0.243364000  | NHO-8: |              |              |              |
| 6                       | -0.015987000 | -2.425476000 | 2.157598000  | 7      | 0.759572000  | -0.402263000 | 0.375595000  |
| 1                       | -0.215842000 | -1.436192000 | 2.583039000  | 7      | -0.885464000 | -1.787418000 | 0.146918000  |
| 1                       | 0.984744000  | -2.734687000 | 2.480635000  | 6      | 1.855533000  | 0.483624000  | 0.070502000  |
| 1                       | -0.744945000 | -3.130279000 | 2.577349000  | 6      | -0.091991000 | -0.938277000 | -0.516204000 |
| 6                       | 2.616180000  | 3.376662000  | 1.046964000  | 6      | 1.588408000  | 1.850475000  | -0.112501000 |
| 1                       | 3.007908000  | 2.571312000  | 1.675324000  | 6      | -1.990431000 | -2.545594000 | -0.486305000 |
| 1                       | 2.070109000  | 4.091095000  | 1.672973000  | 1      | -2.489045000 | -1.799228000 | -1.115247000 |
| 1                       | 3.463438000  | 3.905900000  | 0.601006000  | 6      | 0.491761000  | -0.916250000 | 1.631382000  |
| 6                       | 1.102534000  | 3.955740000  | -0.888496000 | 1      | 1.058335000  | -0.611998000 | 2.498583000  |
| 1                       | 0.473817000  | 3.558487000  | -1.691583000 | 6      | 3.142320000  | -0.070925000 | -0.004897000 |
| 1                       | 1.880506000  | 4.581695000  | -1.336847000 | 6      | 4.205003000  | 0.806070000  | -0.246168000 |
| 1                       | 0.482336000  | 4.585293000  | -0.240008000 | 1      | 5.217632000  | 0.414505000  | -0.302556000 |
| 6                       | -4.519507000 | 1.745597000  | 0.610438000  |        |              |              |              |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6 | -0.538073000 | -1.786918000 | 1.483645000  | 6 | -3.518313000 | 0.946358000  | -0.273127000 |
| 1 | -1.062545000 | -2.377529000 | 2.218008000  | 1 | -2.554264000 | 0.486348000  | 3.369457000  |
| 6 | -0.077734000 | -0.670938000 | -1.974352000 | 6 | -3.858147000 | 2.447293000  | -0.446864000 |
| 1 | 0.624896000  | -1.343338000 | -2.479959000 | 6 | -4.808005000 | 0.134348000  | -0.552889000 |
| 1 | 0.232871000  | 0.360727000  | -2.154580000 | 8 | -2.481430000 | 0.552379000  | -1.059330000 |
| 6 | 3.413581000  | -1.556540000 | 0.166400000  | 1 | -2.989817000 | 3.056525000  | -0.174587000 |
| 1 | 2.456718000  | -2.076772000 | 0.277737000  | 1 | -4.713043000 | 2.766483000  | 0.163992000  |
| 6 | 3.979916000  | 2.167484000  | -0.418195000 | 1 | -4.089848000 | 2.628730000  | -1.503811000 |
| 1 | 4.816601000  | 2.835018000  | -0.606320000 | 1 | -4.616605000 | -0.935640000 | -0.413411000 |
| 6 | 2.686138000  | 2.680422000  | -0.359537000 | 1 | -5.649370000 | 0.425074000  | 0.090014000  |
| 1 | 2.528628000  | 3.745155000  | -0.504263000 | 1 | -5.092163000 | 0.297652000  | -1.599923000 |
| 6 | 0.182705000  | 2.420321000  | -0.008300000 |   |              |              |              |
| 1 | -0.553319000 | 1.632743000  | -0.226907000 |   | NHO-9:       |              |              |
| 6 | -0.071091000 | 2.916273000  | 1.421846000  | 7 | 2.303947000  | -0.288459000 | 0.730009000  |
| 1 | 0.042805000  | 2.107566000  | 2.152994000  | 7 | 0.553199000  | -1.107921000 | 1.703566000  |
| 1 | -1.089884000 | 3.310550000  | 1.511945000  | 6 | 3.229665000  | 0.123011000  | -0.299071000 |
| 1 | 0.632874000  | 3.716852000  | 1.684016000  | 6 | 1.014767000  | -0.632774000 | 0.541300000  |
| 6 | -2.966435000 | -3.045188000 | 0.567647000  | 6 | 3.291233000  | 1.480160000  | -0.657875000 |
| 1 | -3.329436000 | -2.229497000 | 1.200745000  | 6 | -0.816192000 | -1.648302000 | 1.896380000  |
| 1 | -2.516293000 | -3.819726000 | 1.199342000  | 1 | -1.457614000 | -1.044008000 | 1.239943000  |
| 1 | -3.825133000 | -3.491063000 | 0.057072000  | 6 | 2.658515000  | -0.554040000 | 2.040070000  |
| 6 | -1.420538000 | -3.693186000 | -1.313381000 | 1 | 3.655036000  | -0.356646000 | 2.406201000  |
| 1 | -0.720443000 | -3.339606000 | -2.076261000 | 6 | 4.032972000  | -0.866663000 | -0.883480000 |
| 1 | -2.237687000 | -4.216131000 | -1.820073000 | 6 | 4.956212000  | -0.453267000 | -1.850622000 |
| 1 | -0.900086000 | -4.409325000 | -0.666713000 | 1 | 5.598643000  | -1.191226000 | -2.324806000 |
| 6 | 4.236466000  | -1.816363000 | 1.433868000  | 6 | 1.559401000  | -1.070950000 | 2.647051000  |
| 1 | 3.735103000  | -1.423774000 | 2.325461000  | 1 | 1.409741000  | -1.400643000 | 3.663636000  |
| 1 | 5.221317000  | -1.340072000 | 1.361268000  | 6 | 0.236867000  | -0.488896000 | -0.709863000 |
| 1 | 4.391076000  | -2.892166000 | 1.572896000  | 1 | 0.031015000  | -1.471032000 | -1.150272000 |
| 6 | 4.117536000  | -2.139261000 | -1.064682000 | 1 | 0.798936000  | 0.106681000  | -1.433332000 |
| 1 | 3.545778000  | -1.950890000 | -1.979796000 | 6 | 3.926758000  | -2.338795000 | -0.520479000 |
| 1 | 4.235948000  | -3.222515000 | -0.951041000 | 1 | 3.129495000  | -2.462661000 | 0.220012000  |
| 1 | 5.115449000  | -1.705599000 | -1.193603000 | 6 | 5.056158000  | 0.883977000  | -2.216367000 |
| 6 | -0.056530000 | 3.546364000  | -1.018955000 | 1 | 5.777701000  | 1.187297000  | -2.970248000 |
| 1 | 0.194191000  | 3.230990000  | -2.038249000 | 6 | 4.227334000  | 1.838790000  | -1.630160000 |
| 1 | 0.527603000  | 4.443573000  | -0.783441000 | 1 | 4.309124000  | 2.876798000  | -1.938207000 |
| 1 | -1.113100000 | 3.831337000  | -1.008698000 | 6 | 2.400567000  | 2.516087000  | 0.004885000  |
| 1 | -1.083731000 | -0.790292000 | -2.376645000 | 1 | 1.465614000  | 2.025209000  | 0.298087000  |
| 6 | -3.182786000 | 0.762655000  | 1.189479000  | 6 | 3.064640000  | 3.049092000  | 1.281710000  |
| 6 | -2.855849000 | 0.616766000  | 2.349855000  |   |              |              |              |

|   |              |              |              |                          |              |              |              |
|---|--------------|--------------|--------------|--------------------------|--------------|--------------|--------------|
| 1 | 3.272296000  | 2.246340000  | 1.998295000  | 6                        | -4.034600000 | -1.538464000 | -0.740501000 |
| 1 | 2.411583000  | 3.781428000  | 1.769445000  | 6                        | -4.186339000 | -2.645803000 | -0.026259000 |
| 1 | 4.014546000  | 3.542527000  | 1.040373000  | 6                        | -5.027176000 | -0.432552000 | -1.033151000 |
| 6 | -1.276670000 | -1.439854000 | 3.331128000  | 1                        | -3.390365000 | -3.377721000 | 0.051489000  |
| 1 | -1.172833000 | -0.393437000 | 3.633227000  | 6                        | -5.519971000 | 0.265507000  | 0.220577000  |
| 1 | -0.732504000 | -2.078818000 | 4.036321000  | 6                        | -6.160321000 | -0.912588000 | -1.931116000 |
| 1 | -2.336970000 | -1.704436000 | 3.388008000  | 8                        | -4.211403000 | 0.482152000  | -1.809928000 |
| 6 | -0.810676000 | -3.122558000 | 1.504309000  | 1                        | -5.126083000 | -2.835482000 | 0.481147000  |
| 1 | -0.578869000 | -3.255097000 | 0.441720000  | 1                        | -4.654555000 | 0.581060000  | 0.808231000  |
| 1 | -1.793985000 | -3.559634000 | 1.700000000  | 1                        | -6.138644000 | -0.427940000 | 0.800252000  |
| 1 | -0.068868000 | -3.672617000 | 2.096032000  | 1                        | -6.132893000 | 1.131728000  | -0.051324000 |
| 6 | 5.229347000  | -2.845292000 | 0.110117000  | 1                        | -5.764362000 | -1.389118000 | -2.833836000 |
| 1 | 5.494312000  | -2.266542000 | 1.001921000  | 1                        | -6.775924000 | -1.638211000 | -1.390664000 |
| 1 | 6.061898000  | -2.774114000 | -0.599303000 | 1                        | -6.788179000 | -0.063677000 | -2.220392000 |
| 1 | 5.124890000  | -3.896012000 | 0.402581000  | NHO-TS <sub>9-10</sub> : |              |              |              |
| 6 | 3.549722000  | -3.178040000 | -1.747348000 | 7                        | 2.625460000  | -0.267583000 | 0.730269000  |
| 1 | 2.623205000  | -2.815496000 | -2.206147000 | 7                        | 0.788337000  | -1.015022000 | 1.593330000  |
| 1 | 3.402476000  | -4.224322000 | -1.457311000 | 6                        | 3.613782000  | 0.159118000  | -0.228581000 |
| 1 | 4.339872000  | -3.147316000 | -2.506339000 | 6                        | 1.366229000  | -0.646735000 | 0.443033000  |
| 6 | 2.031268000  | 3.675335000  | -0.922097000 | 6                        | 3.722508000  | 1.528033000  | -0.513645000 |
| 1 | 1.607076000  | 3.319207000  | -1.867560000 | 6                        | -0.593634000 | -1.553173000 | 1.691282000  |
| 1 | 2.896601000  | 4.308382000  | -1.149243000 | 1                        | -1.163159000 | -1.022367000 | 0.918077000  |
| 1 | 1.282987000  | 4.306194000  | -0.430717000 | 6                        | 2.845614000  | -0.396348000 | 2.088502000  |
| 1 | -0.727064000 | -0.000406000 | -0.477179000 | 1                        | 3.796343000  | -0.140059000 | 2.532394000  |
| 6 | -0.895269000 | 2.041149000  | 1.795940000  | 6                        | 4.421759000  | -0.820571000 | -0.825226000 |
| 6 | 0.020098000  | 2.019961000  | 2.593643000  | 6                        | 5.381699000  | -0.383583000 | -1.743071000 |
| 6 | -2.036740000 | 2.021894000  | 0.804494000  | 1                        | 6.031461000  | -1.111538000 | -2.222739000 |
| 1 | 0.825350000  | 1.995952000  | 3.300180000  | 6                        | 1.690869000  | -0.868208000 | 2.626802000  |
| 6 | -1.571034000 | 2.841328000  | -0.424053000 | 1                        | 1.437158000  | -1.101149000 | 3.649323000  |
| 6 | -3.202258000 | 2.791596000  | 1.473280000  | 6                        | 0.736965000  | -0.658741000 | -0.897342000 |
| 8 | -2.376853000 | 0.744332000  | 0.469244000  | 1                        | 0.477054000  | -1.682714000 | -1.184862000 |
| 1 | -0.710858000 | 2.357608000  | -0.900342000 | 1                        | 1.427194000  | -0.242904000 | -1.634249000 |
| 1 | -1.298488000 | 3.872711000  | -0.163629000 | 6                        | 4.277145000  | -2.301890000 | -0.519131000 |
| 1 | -2.388985000 | 2.859921000  | -1.153639000 | 1                        | 3.478466000  | -2.430228000 | 0.219296000  |
| 1 | -3.561194000 | 2.238078000  | 2.349038000  | 6                        | 5.513825000  | 0.967152000  | -2.052682000 |
| 1 | -2.911418000 | 3.800914000  | 1.791972000  | 1                        | 6.262311000  | 1.286697000  | -2.772756000 |
| 1 | -4.025503000 | 2.876861000  | 0.753645000  | 6                        | 4.690397000  | 1.911496000  | -1.446105000 |
| 8 | -2.880758000 | -1.249044000 | -1.426949000 | 1                        | 4.796456000  | 2.962745000  | -1.701720000 |
| 6 | -2.987595000 | -0.013982000 | -1.989272000 |                          |              |              |              |
| 8 | -2.126030000 | 0.474557000  | -2.665031000 |                          |              |              |              |

|   |              |              |              |         |              |              |              |
|---|--------------|--------------|--------------|---------|--------------|--------------|--------------|
| 6 | 2.818466000  | 2.565177000  | 0.126465000  | 8       | -3.961786000 | -1.148591000 | 0.234570000  |
| 1 | 2.231575000  | 2.072708000  | 0.907232000  | 6       | -3.173861000 | -0.897303000 | -0.892877000 |
| 6 | 3.620699000  | 3.690533000  | 0.788014000  | 8       | -2.260687000 | -1.632001000 | -1.190308000 |
| 1 | 4.338371000  | 3.296616000  | 1.516311000  | 6       | -5.229155000 | -0.693283000 | 0.025787000  |
| 1 | 2.940682000  | 4.372666000  | 1.310870000  | 6       | -6.173049000 | -0.705635000 | 0.962987000  |
| 1 | 4.174899000  | 4.278176000  | 0.047011000  | 6       | -5.324517000 | -0.271563000 | -1.427806000 |
| 6 | -1.191020000 | -1.231922000 | 3.053080000  | 1       | -5.964303000 | -1.066982000 | 1.964793000  |
| 1 | -1.127736000 | -0.162221000 | 3.275904000  | 6       | -5.960140000 | 1.088784000  | -1.649597000 |
| 1 | -0.707186000 | -1.796817000 | 3.858538000  | 6       | -6.015555000 | -1.354636000 | -2.255790000 |
| 1 | -2.247809000 | -1.515331000 | 3.038086000  | 8       | -3.937342000 | -0.228882000 | -1.809310000 |
| 6 | -0.565651000 | -3.052220000 | 1.417658000  | 1       | -7.171877000 | -0.351396000 | 0.731825000  |
| 1 | -0.145922000 | -3.271486000 | 0.431044000  | 1       | -5.452266000 | 1.864995000  | -1.072803000 |
| 1 | -1.587715000 | -3.442446000 | 1.442039000  | 1       | -7.012799000 | 1.060177000  | -1.350820000 |
| 1 | 0.025528000  | -3.574731000 | 2.179889000  | 1       | -5.911228000 | 1.348033000  | -2.712244000 |
| 6 | 5.564202000  | -2.870761000 | 0.089665000  | 1       | -5.533158000 | -2.325272000 | -2.099450000 |
| 1 | 5.849254000  | -2.329050000 | 0.998282000  | 1       | -7.068147000 | -1.434987000 | -1.966026000 |
| 1 | 6.396767000  | -2.807611000 | -0.620287000 | 1       | -5.958151000 | -1.099083000 | -3.318999000 |
| 1 | 5.422571000  | -3.925658000 | 0.349101000  |         |              |              |              |
| 6 | 3.876797000  | -3.082250000 | -1.777470000 | NHO-10: |              |              |              |
| 1 | 2.957790000  | -2.681944000 | -2.219548000 | 7       | -2.284621000 | 0.457405000  | 0.464890000  |
| 1 | 3.706267000  | -4.135817000 | -1.529596000 | 7       | -0.784941000 | 1.986888000  | 0.765149000  |
| 1 | 4.666098000  | -3.038175000 | -2.537077000 | 6       | -3.051234000 | -0.590632000 | -0.162674000 |
| 6 | 1.832189000  | 3.129287000  | -0.903206000 | 6       | -1.180149000 | 1.012588000  | -0.063696000 |
| 1 | 1.201263000  | 2.339396000  | -1.326074000 | 6       | -2.633391000 | -1.918832000 | 0.010144000  |
| 1 | 2.366726000  | 3.620013000  | -1.725853000 | 6       | 0.391001000  | 2.863107000  | 0.529655000  |
| 1 | 1.176609000  | 3.870186000  | -0.432196000 | 1       | 1.150071000  | 2.209379000  | 0.086537000  |
| 1 | -0.201547000 | -0.082393000 | -0.865040000 | 6       | -2.601723000 | 1.099129000  | 1.646246000  |
| 6 | -1.085302000 | 2.116423000  | 1.347146000  | 1       | -3.457311000 | 0.807232000  | 2.236747000  |
| 6 | -0.136359000 | 2.356923000  | 2.063846000  | 6       | -4.170567000 | -0.219666000 | -0.923671000 |
| 6 | -2.269261000 | 1.790743000  | 0.480791000  | 6       | -4.910750000 | -1.250456000 | -1.510472000 |
| 1 | 0.691385000  | 2.576758000  | 2.708050000  | 1       | -5.789676000 | -1.009482000 | -2.101940000 |
| 6 | -2.445340000 | 2.945925000  | -0.526555000 | 6       | -1.662571000 | 2.061981000  | 1.831024000  |
| 6 | -3.492653000 | 1.749006000  | 1.420062000  | 1       | -1.535978000 | 2.772470000  | 2.632830000  |
| 8 | -2.031203000 | 0.596323000  | -0.163032000 | 6       | -0.570966000 | 0.594591000  | -1.346476000 |
| 1 | -1.552634000 | 3.026016000  | -1.156712000 | 1       | -1.341601000 | 0.569958000  | -2.124676000 |
| 1 | -2.621626000 | 3.912234000  | -0.037130000 | 1       | -0.117077000 | -0.400614000 | -1.255166000 |
| 1 | -3.298938000 | 2.710960000  | -1.171912000 | 6       | -4.594706000 | 1.230847000  | -1.084897000 |
| 1 | -3.414872000 | 0.895019000  | 2.102238000  | 1       | -3.748852000 | 1.871216000  | -0.808443000 |
| 1 | -3.578683000 | 2.669824000  | 2.009776000  | 6       | -4.533464000 | -2.580531000 | -1.349618000 |
| 1 | -4.406804000 | 1.633908000  | 0.831247000  |         |              |              |              |

|   |              |              |              |                           |              |              |              |
|---|--------------|--------------|--------------|---------------------------|--------------|--------------|--------------|
| 1 | -5.119186000 | -3.367803000 | -1.816539000 | 1                         | 2.801234000  | 1.487750000  | 1.353494000  |
| 6 | -3.405215000 | -2.909976000 | -0.602582000 | 1                         | 3.553572000  | 0.804599000  | 2.814269000  |
| 1 | -3.121063000 | -3.952808000 | -0.494366000 | 1                         | 4.203172000  | 0.412867000  | 1.209788000  |
| 6 | -1.433776000 | -2.273995000 | 0.871182000  | 8                         | 2.683753000  | 0.662861000  | -1.042208000 |
| 1 | -0.756707000 | -1.413324000 | 0.904196000  | 6                         | 2.451392000  | -0.843559000 | -0.790723000 |
| 6 | -1.901344000 | -2.566451000 | 2.303975000  | 8                         | 1.801232000  | -1.392642000 | -1.711898000 |
| 1 | -2.408468000 | -1.700488000 | 2.746565000  | 6                         | 3.955150000  | 0.861821000  | -1.398968000 |
| 1 | -1.046463000 | -2.822586000 | 2.939684000  | 6                         | 4.476627000  | 2.058631000  | -1.709018000 |
| 1 | -2.601700000 | -3.411191000 | 2.312866000  | 6                         | 4.675988000  | -0.483841000 | -1.393302000 |
| 6 | 0.909573000  | 3.421645000  | 1.847022000  | 1                         | 3.862677000  | 2.954864000  | -1.709736000 |
| 1 | 1.078624000  | 2.632006000  | 2.585556000  | 6                         | 6.053318000  | -0.450014000 | -0.747647000 |
| 1 | 0.219514000  | 4.162683000  | 2.265012000  | 6                         | 4.767265000  | -1.053489000 | -2.813158000 |
| 1 | 1.862590000  | 3.924453000  | 1.656973000  | 8                         | 3.810883000  | -1.272603000 | -0.581785000 |
| 6 | 0.013535000  | 3.974211000  | -0.444747000 | 1                         | 5.523259000  | 2.147266000  | -1.980062000 |
| 1 | -0.345518000 | 3.574249000  | -1.397887000 | 1                         | 6.015555000  | -0.034482000 | 0.263239000  |
| 1 | 0.892465000  | 4.594982000  | -0.644684000 | 1                         | 6.739039000  | 0.156748000  | -1.347809000 |
| 1 | -0.768919000 | 4.608568000  | -0.012870000 | 1                         | 6.456351000  | -1.467217000 | -0.693695000 |
| 6 | -5.756764000 | 1.547730000  | -0.133969000 | 1                         | 3.777964000  | -1.089671000 | -3.275219000 |
| 1 | -5.494864000 | 1.331066000  | 0.907405000  | 1                         | 5.430954000  | -0.435410000 | -3.427451000 |
| 1 | -6.636947000 | 0.946901000  | -0.392958000 | 1                         | 5.171749000  | -2.071313000 | -2.770633000 |
| 1 | -6.032889000 | 2.605769000  | -0.206337000 | NHO-TS <sub>10-11</sub> : |              |              |              |
| 6 | -4.976555000 | 1.573451000  | -2.528395000 | 7                         | -2.297328000 | 0.408346000  | 0.542484000  |
| 1 | -4.175469000 | 1.316910000  | -3.229828000 | 7                         | -0.683669000 | 1.749082000  | 1.070827000  |
| 1 | -5.173318000 | 2.647649000  | -2.612737000 | 6                         | -3.153168000 | -0.454925000 | -0.234869000 |
| 1 | -5.885134000 | 1.047216000  | -2.840255000 | 6                         | -1.127803000 | 0.920224000  | 0.118384000  |
| 6 | -0.624558000 | -3.447017000 | 0.315873000  | 6                         | -2.892797000 | -1.834050000 | -0.241627000 |
| 1 | -0.340066000 | -3.278076000 | -0.727592000 | 6                         | 0.574230000  | 2.533560000  | 0.977267000  |
| 1 | -1.174597000 | -4.393014000 | 0.383003000  | 1                         | 1.309296000  | 1.858051000  | 0.527152000  |
| 1 | 0.298617000  | -3.553782000 | 0.895166000  | 6                         | -2.600391000 | 0.926564000  | 1.786600000  |
| 1 | 0.225290000  | 1.274993000  | -1.647450000 | 1                         | -3.499209000 | 0.644597000  | 2.314406000  |
| 6 | 1.207810000  | -0.351709000 | 2.616963000  | 6                         | -4.210669000 | 0.139348000  | -0.940354000 |
| 6 | 0.296305000  | -0.146698000 | 3.384201000  | 6                         | -5.059894000 | -0.713276000 | -1.652513000 |
| 6 | 2.362748000  | -0.618257000 | 1.724204000  | 1                         | -5.899020000 | -0.295866000 | -2.202865000 |
| 1 | -0.506773000 | 0.030393000  | 4.070864000  | 6                         | -1.588062000 | 1.770607000  | 2.114568000  |
| 6 | 3.090151000  | -1.864448000 | 2.248393000  | 1                         | -1.428074000 | 2.360876000  | 3.002957000  |
| 6 | 3.288066000  | 0.604638000  | 1.770702000  | 6                         | -0.499340000 | 0.622387000  | -1.189989000 |
| 8 | 1.756857000  | -0.885821000 | 0.453922000  | 1                         | -1.056270000 | 1.118212000  | -1.994003000 |
| 1 | 2.417557000  | -2.727439000 | 2.220289000  | 1                         | -0.505775000 | -0.455624000 | -1.370618000 |
| 1 | 3.414932000  | -1.705903000 | 3.282238000  |                           |              |              |              |
| 1 | 3.961359000  | -2.070794000 | 1.623668000  |                           |              |              |              |

|   |              |              |              |         |              |              |              |
|---|--------------|--------------|--------------|---------|--------------|--------------|--------------|
| 6 | -4.461880000 | 1.638321000  | -0.919645000 | 1       | 2.338249000  | -3.240676000 | 1.558465000  |
| 1 | -3.570386000 | 2.133657000  | -0.517862000 | 1       | 3.320597000  | -2.507922000 | 2.847444000  |
| 6 | -4.841940000 | -2.087332000 | -1.667942000 | 1       | 3.919919000  | -2.512782000 | 1.169881000  |
| 1 | -5.511101000 | -2.733571000 | -2.229590000 | 1       | 2.863315000  | 1.048246000  | 1.643440000  |
| 6 | -3.766933000 | -2.640029000 | -0.976153000 | 1       | 3.517281000  | 0.048174000  | 2.963224000  |
| 1 | -3.608501000 | -3.714035000 | -1.006851000 | 1       | 4.245219000  | -0.018218000 | 1.345801000  |
| 6 | -1.748954000 | -2.437361000 | 0.555241000  | 8       | 2.788438000  | 1.018165000  | -0.900754000 |
| 1 | -0.989319000 | -1.665126000 | 0.718199000  | 6       | 2.512999000  | -0.886547000 | -0.934346000 |
| 6 | -2.260071000 | -2.888210000 | 1.930369000  | 8       | 1.929420000  | -1.136313000 | -1.979980000 |
| 1 | -2.691635000 | -2.050610000 | 2.491493000  | 6       | 4.062363000  | 1.163865000  | -1.123608000 |
| 1 | -1.440710000 | -3.312987000 | 2.521110000  | 6       | 4.758934000  | 2.328930000  | -1.136182000 |
| 1 | -3.035857000 | -3.655930000 | 1.818123000  | 6       | 4.721489000  | -0.198721000 | -1.415399000 |
| 6 | 1.043736000  | 2.950940000  | 2.362746000  | 1       | 4.250573000  | 3.276915000  | -0.980230000 |
| 1 | 1.120550000  | 2.094890000  | 3.041148000  | 6       | 6.102496000  | -0.389306000 | -0.807686000 |
| 1 | 0.378007000  | 3.700493000  | 2.805155000  | 6       | 4.764800000  | -0.460047000 | -2.923237000 |
| 1 | 2.036414000  | 3.400608000  | 2.266083000  | 8       | 3.857887000  | -1.139729000 | -0.752166000 |
| 6 | 0.361710000  | 3.732490000  | 0.060471000  | 1       | 5.825662000  | 2.345460000  | -1.332832000 |
| 1 | 0.046818000  | 3.422953000  | -0.941099000 | 1       | 6.098184000  | -0.204415000 | 0.270433000  |
| 1 | 1.303547000  | 4.281432000  | -0.036504000 | 1       | 6.817855000  | 0.295484000  | -1.272160000 |
| 1 | -0.395131000 | 4.407809000  | 0.476370000  | 1       | 6.447770000  | -1.413453000 | -0.987902000 |
| 6 | -5.640253000 | 1.966938000  | 0.006538000  | 1       | 3.786682000  | -0.294089000 | -3.378561000 |
| 1 | -5.466568000 | 1.600196000  | 1.024059000  | 1       | 5.494523000  | 0.211271000  | -3.387914000 |
| 1 | -6.561854000 | 1.504703000  | -0.367125000 | 1       | 5.069221000  | -1.495988000 | -3.113295000 |
| 1 | -5.797956000 | 3.050298000  | 0.053558000  |         |              |              |              |
| 6 | -4.706258000 | 2.203899000  | -2.322677000 | NHO-11: |              |              |              |
| 1 | -3.892482000 | 1.945564000  | -3.008451000 | 7       | -2.201752000 | 0.445517000  | 0.536216000  |
| 1 | -4.777508000 | 3.295819000  | -2.273381000 | 7       | -0.621649000 | 1.841178000  | 1.021517000  |
| 1 | -5.643544000 | 1.831199000  | -2.749792000 | 6       | -3.037637000 | -0.469807000 | -0.202982000 |
| 6 | -1.058336000 | -3.593159000 | -0.172137000 | 6       | -1.051021000 | 0.981663000  | 0.089599000  |
| 1 | -0.729741000 | -3.297562000 | -1.174319000 | 6       | -2.736679000 | -1.839867000 | -0.166118000 |
| 1 | -1.710727000 | -4.468889000 | -0.264610000 | 6       | 0.586922000  | 2.693891000  | 0.883749000  |
| 1 | -0.173363000 | -3.900843000 | 0.394923000  | 1       | 1.329717000  | 2.083792000  | 0.357658000  |
| 1 | 0.542299000  | 0.948114000  | -1.212107000 | 6       | -2.507645000 | 0.980626000  | 1.772335000  |
| 6 | 1.168988000  | -0.960588000 | 2.430917000  | 1       | -3.391440000 | 0.681887000  | 2.316114000  |
| 6 | 0.231199000  | -0.872611000 | 3.187992000  | 6       | -4.123205000 | 0.066141000  | -0.913643000 |
| 6 | 2.355144000  | -1.070565000 | 1.549522000  | 6       | -4.952015000 | -0.835858000 | -1.586985000 |
| 1 | -0.595430000 | -0.808696000 | 3.867022000  | 1       | -5.810358000 | -0.464171000 | -2.140678000 |
| 6 | 3.028805000  | -2.425767000 | 1.795645000  | 6       | -1.517691000 | 1.860838000  | 2.072394000  |
| 6 | 3.306290000  | 0.082757000  | 1.889059000  | 1       | -1.367944000 | 2.477780000  | 2.944613000  |
| 8 | 1.781322000  | -1.028344000 | 0.226235000  |         |              |              |              |

|   |              |              |              |                           |              |              |              |
|---|--------------|--------------|--------------|---------------------------|--------------|--------------|--------------|
| 6 | -0.429388000 | 0.682545000  | -1.221087000 | 6                         | 2.967226000  | -2.395201000 | 1.963228000  |
| 1 | -0.962589000 | 1.216021000  | -2.017501000 | 6                         | 3.248308000  | 0.123978000  | 1.841944000  |
| 1 | -0.487207000 | -0.390846000 | -1.419952000 | 8                         | 1.651597000  | -1.120506000 | 0.352716000  |
| 6 | -4.426678000 | 1.555163000  | -0.940684000 | 1                         | 2.251151000  | -3.217063000 | 1.869217000  |
| 1 | -3.558542000 | 2.093722000  | -0.544170000 | 1                         | 3.356866000  | -2.382942000 | 2.985763000  |
| 6 | -4.693879000 | -2.203239000 | -1.557117000 | 1                         | 3.798458000  | -2.552821000 | 1.271037000  |
| 1 | -5.351182000 | -2.888383000 | -2.085770000 | 1                         | 2.845594000  | 1.022577000  | 1.369954000  |
| 6 | -3.595899000 | -2.697782000 | -0.859254000 | 1                         | 3.379803000  | 0.301955000  | 2.913886000  |
| 1 | -3.404783000 | -3.767331000 | -0.848935000 | 1                         | 4.221777000  | -0.090270000 | 1.400503000  |
| 6 | -1.558369000 | -2.389691000 | 0.617438000  | 8                         | 2.724939000  | 1.361140000  | -1.111741000 |
| 1 | -0.894251000 | -1.560505000 | 0.878232000  | 6                         | 2.331212000  | -1.174407000 | -0.810964000 |
| 6 | -2.046830000 | -3.026480000 | 1.924578000  | 8                         | 1.731417000  | -1.415951000 | -1.831344000 |
| 1 | -2.604937000 | -2.307855000 | 2.536708000  | 6                         | 4.000405000  | 1.225850000  | -1.194109000 |
| 1 | -1.194941000 | -3.387628000 | 2.511902000  | 6                         | 4.941688000  | 2.209385000  | -1.038794000 |
| 1 | -2.705641000 | -3.879145000 | 1.717887000  | 6                         | 4.449442000  | -0.218322000 | -1.539449000 |
| 6 | 1.119470000  | 3.079429000  | 2.255343000  | 1                         | 4.620522000  | 3.233555000  | -0.859540000 |
| 1 | 1.252571000  | 2.202075000  | 2.896951000  | 6                         | 5.879367000  | -0.579470000 | -1.168419000 |
| 1 | 0.460866000  | 3.794970000  | 2.760492000  | 6                         | 4.201472000  | -0.503219000 | -3.018915000 |
| 1 | 2.094979000  | 3.557015000  | 2.123346000  | 8                         | 3.654868000  | -1.094766000 | -0.668849000 |
| 6 | 0.245832000  | 3.908546000  | 0.028066000  | 1                         | 6.006285000  | 2.015622000  | -1.100428000 |
| 1 | -0.103601000 | 3.605987000  | -0.964662000 | 1                         | 6.076705000  | -0.390823000 | -0.108489000 |
| 1 | 1.142819000  | 4.522275000  | -0.100904000 | 1                         | 6.584823000  | 0.003790000  | -1.765945000 |
| 1 | -0.529826000 | 4.516176000  | 0.508916000  | 1                         | 6.055613000  | -1.640741000 | -1.375970000 |
| 6 | -5.627691000 | 1.869572000  | -0.039107000 | 1                         | 3.210194000  | -0.172593000 | -3.330598000 |
| 1 | -5.452869000 | 1.542256000  | 0.991695000  | 1                         | 4.955792000  | 0.038980000  | -3.599532000 |
| 1 | -6.527552000 | 1.362297000  | -0.407100000 | 1                         | 4.302064000  | -1.573735000 | -3.229508000 |
| 1 | -5.824851000 | 2.947385000  | -0.028620000 |                           |              |              |              |
| 6 | -4.671844000 | 2.067781000  | -2.363765000 | NHO-TS <sub>11-12</sub> : |              |              |              |
| 1 | -3.836493000 | 1.823984000  | -3.028645000 | 7                         | 1.996458000  | -0.096608000 | 0.671109000  |
| 1 | -4.790600000 | 3.156563000  | -2.349270000 | 7                         | 0.754801000  | -1.753209000 | 1.328890000  |
| 1 | -5.585059000 | 1.641792000  | -2.793532000 | 6                         | 2.873869000  | 0.678027000  | -0.164069000 |
| 6 | -0.727335000 | -3.381587000 | -0.200102000 | 6                         | 1.184489000  | -1.094834000 | 0.223451000  |
| 1 | -0.366140000 | -2.926665000 | -1.128394000 | 6                         | 2.531706000  | 2.002840000  | -0.477952000 |
| 1 | -1.296780000 | -4.284696000 | -0.448183000 | 6                         | -0.114544000 | -2.939960000 | 1.273825000  |
| 1 | 0.149475000  | -3.689769000 | 0.380092000  | 1                         | -0.802556000 | -2.753415000 | 0.440802000  |
| 1 | 0.627302000  | 0.967037000  | -1.235587000 | 6                         | 2.084272000  | -0.149691000 | 2.058934000  |
| 6 | 1.137711000  | -0.875513000 | 2.570725000  | 1                         | 2.686153000  | 0.557267000  | 2.610449000  |
| 6 | 0.231467000  | -0.734849000 | 3.356576000  | 6                         | 4.054589000  | 0.065669000  | -0.617319000 |
| 6 | 2.288785000  | -1.058009000 | 1.659646000  | 6                         | 4.898838000  | 0.819266000  | -1.438565000 |
| 1 | -0.567563000 | -0.620337000 | 4.061794000  |                           |              |              |              |

|   |              |              |              |         |              |              |              |
|---|--------------|--------------|--------------|---------|--------------|--------------|--------------|
| 1 | 5.820907000  | 0.376844000  | -1.808109000 | 6       | -1.405821000 | 3.529180000  | 2.772396000  |
| 6 | 1.314267000  | -1.184078000 | 2.465046000  | 6       | -2.641355000 | 1.502618000  | 1.515629000  |
| 1 | 1.100871000  | -1.551544000 | 3.456874000  | 1       | -0.911167000 | 4.329486000  | 3.286224000  |
| 6 | 0.799912000  | -1.349937000 | -1.128951000 | 6       | -3.896726000 | 1.123911000  | 2.302534000  |
| 1 | 0.745582000  | -2.414856000 | -1.362419000 | 6       | -1.641366000 | 0.348969000  | 1.401778000  |
| 1 | 1.427304000  | -0.814238000 | -1.843669000 | 8       | -2.982589000 | 2.061739000  | 0.215092000  |
| 6 | 4.440752000  | -1.354472000 | -0.235102000 | 1       | -4.592953000 | 1.967440000  | 2.330017000  |
| 1 | 3.657234000  | -1.770345000 | 0.407920000  | 1       | -3.614577000 | 0.870472000  | 3.329030000  |
| 6 | 4.576293000  | 2.128035000  | -1.784125000 | 1       | -4.387201000 | 0.262194000  | 1.846566000  |
| 1 | 5.241287000  | 2.699042000  | -2.426655000 | 1       | -0.832783000 | 0.623507000  | 0.718010000  |
| 6 | 3.407732000  | 2.713468000  | -1.304276000 | 1       | -1.218757000 | 0.156722000  | 2.392489000  |
| 1 | 3.172817000  | 3.737240000  | -1.580903000 | 1       | -2.121425000 | -0.560160000 | 1.032028000  |
| 6 | 1.237490000  | 2.630887000  | 0.008930000  | 8       | -1.650032000 | -0.568556000 | -1.715922000 |
| 1 | 0.913378000  | 2.091804000  | 0.907156000  | 6       | -3.423400000 | 1.336024000  | -0.828989000 |
| 6 | 1.400581000  | 4.103909000  | 0.391935000  | 8       | -3.488191000 | 1.846479000  | -1.919288000 |
| 1 | 2.194025000  | 4.243282000  | 1.135092000  | 6       | -2.553811000 | -1.530749000 | -1.608302000 |
| 1 | 0.462605000  | 4.478096000  | 0.815412000  | 6       | -2.314300000 | -2.855520000 | -1.734575000 |
| 1 | 1.633454000  | 4.726851000  | -0.478519000 | 6       | -3.974584000 | -0.993705000 | -1.381128000 |
| 6 | -0.920831000 | -3.092207000 | 2.556338000  | 1       | -1.326535000 | -3.218131000 | -2.003145000 |
| 1 | -1.468937000 | -2.178544000 | 2.804965000  | 6       | -4.880436000 | -1.947474000 | -0.611875000 |
| 1 | -0.281782000 | -3.363998000 | 3.403809000  | 6       | -4.620993000 | -0.616664000 | -2.714207000 |
| 1 | -1.647977000 | -3.897810000 | 2.417272000  | 8       | -3.855415000 | 0.133219000  | -0.461606000 |
| 6 | 0.719052000  | -4.186264000 | 0.984435000  | 1       | -3.099172000 | -3.591135000 | -1.605810000 |
| 1 | 1.304529000  | -4.074331000 | 0.066187000  | 1       | -4.427470000 | -2.237414000 | 0.341909000  |
| 1 | 0.060749000  | -5.053412000 | 0.867456000  | 1       | -5.080273000 | -2.848530000 | -1.196098000 |
| 1 | 1.407753000  | -4.382440000 | 1.814620000  | 1       | -5.837314000 | -1.453305000 | -0.414299000 |
| 6 | 5.747104000  | -1.366409000 | 0.568517000  | 1       | -3.949851000 | -0.033073000 | -3.343647000 |
| 1 | 5.669796000  | -0.739403000 | 1.463888000  | 1       | -4.880796000 | -1.545068000 | -3.233152000 |
| 1 | 6.585436000  | -0.997772000 | -0.034152000 | 1       | -5.537914000 | -0.042266000 | -2.544510000 |
| 1 | 5.986058000  | -2.387856000 | 0.885192000  |         |              |              |              |
| 6 | 4.554827000  | -2.252979000 | -1.471873000 | NHO-12: |              |              |              |
| 1 | 3.621694000  | -2.261915000 | -2.045077000 | 7       | -1.899680000 | 0.132875000  | 0.462987000  |
| 1 | 4.782129000  | -3.282152000 | -1.171690000 | 7       | -0.999628000 | 2.130043000  | 0.576251000  |
| 1 | 5.358763000  | -1.911392000 | -2.134367000 | 6       | -2.685584000 | -0.929102000 | -0.092097000 |
| 6 | 0.146347000  | 2.469041000  | -1.057675000 | 6       | -1.331779000 | 1.129358000  | -0.306785000 |
| 1 | -0.027484000 | 1.415471000  | -1.306851000 | 6       | -2.055993000 | -2.142279000 | -0.419385000 |
| 1 | 0.435074000  | 2.992434000  | -1.978020000 | 6       | -0.505587000 | 3.438881000  | 0.140365000  |
| 1 | -0.801077000 | 2.890003000  | -0.703266000 | 1       | 0.185855000  | 3.231570000  | -0.685290000 |
| 1 | -0.557877000 | -0.921252000 | -1.423520000 | 6       | -1.972113000 | 0.555116000  | 1.795256000  |
| 6 | -1.969073000 | 2.635310000  | 2.188289000  |         |              |              |              |

|   |              |              |              |                           |             |              |              |
|---|--------------|--------------|--------------|---------------------------|-------------|--------------|--------------|
| 1 | -2.388740000 | -0.081554000 | 2.561701000  | 1                         | 1.166639000 | -3.270691000 | -1.061809000 |
| 6 | -4.054442000 | -0.704789000 | -0.312004000 | 6                         | 2.192011000 | -1.034163000 | 3.325294000  |
| 6 | -4.814057000 | -1.765091000 | -0.819711000 | 6                         | 1.722549000 | -1.525287000 | 4.322609000  |
| 1 | -5.878678000 | -1.625035000 | -0.993184000 | 6                         | 2.758495000 | -0.385346000 | 2.123287000  |
| 6 | -1.421496000 | 1.783456000  | 1.860451000  | 1                         | 1.305187000 | -1.969166000 | 5.204469000  |
| 1 | -1.245392000 | 2.422591000  | 2.712203000  | 6                         | 4.052288000 | 0.333296000  | 2.511185000  |
| 6 | -1.115528000 | 1.085360000  | -1.671838000 | 6                         | 1.708293000 | 0.554982000  | 1.528633000  |
| 1 | -0.895155000 | 2.002437000  | -2.205168000 | 8                         | 3.016844000 | -1.519016000 | 1.242095000  |
| 1 | -1.568461000 | 0.274530000  | -2.233840000 | 1                         | 4.792957000 | -0.390303000 | 2.864599000  |
| 6 | -4.712631000 | 0.641423000  | -0.055880000 | 1                         | 3.837808000 | 1.034969000  | 3.322722000  |
| 1 | -3.959749000 | 1.330203000  | 0.340819000  | 1                         | 4.458651000 | 0.886183000  | 1.663029000  |
| 6 | -4.222040000 | -2.987714000 | -1.117883000 | 1                         | 0.834951000 | -0.018334000 | 1.198774000  |
| 1 | -4.826290000 | -3.800532000 | -1.512423000 | 1                         | 1.388425000 | 1.255469000  | 2.305308000  |
| 6 | -2.852769000 | -3.169980000 | -0.930183000 | 1                         | 2.115186000 | 1.118006000  | 0.684919000  |
| 1 | -2.401460000 | -4.123393000 | -1.189216000 | 8                         | 1.605776000 | -0.048759000 | -1.779402000 |
| 6 | -0.564812000 | -2.323948000 | -0.196397000 | 6                         | 3.407448000 | -1.411461000 | -0.037779000 |
| 1 | -0.087119000 | -1.348757000 | -0.350751000 | 8                         | 3.412870000 | -2.390109000 | -0.742216000 |
| 6 | -0.291306000 | -2.756988000 | 1.249904000  | 6                         | 2.552026000 | 0.889500000  | -2.010716000 |
| 1 | -0.687774000 | -2.031881000 | 1.970059000  | 6                         | 2.315162000 | 2.120029000  | -2.485553000 |
| 1 | 0.786811000  | -2.853533000 | 1.420831000  | 6                         | 3.937895000 | 0.344060000  | -1.694595000 |
| 1 | -0.761070000 | -3.728269000 | 1.451802000  | 1                         | 1.311706000 | 2.427682000  | -2.761960000 |
| 6 | 0.269745000  | 4.133209000  | 1.252289000  | 6                         | 5.000412000 | 1.425659000  | -1.562190000 |
| 1 | 1.069017000  | 3.495259000  | 1.642234000  | 6                         | 4.359041000 | -0.683557000 | -2.744540000 |
| 1 | -0.386552000 | 4.424371000  | 2.079702000  | 8                         | 3.846609000 | -0.191123000 | -0.335693000 |
| 1 | 0.722784000  | 5.045248000  | 0.852343000  | 1                         | 3.118698000 | 2.832094000  | -2.625863000 |
| 6 | -1.665853000 | 4.298369000  | -0.360318000 | 1                         | 4.714623000 | 2.171297000  | -0.814041000 |
| 1 | -2.228558000 | 3.785102000  | -1.147148000 | 1                         | 5.159717000 | 1.925413000  | -2.520774000 |
| 1 | -1.292961000 | 5.245710000  | -0.763583000 | 1                         | 5.942848000 | 0.960812000  | -1.257054000 |
| 1 | -2.350457000 | 4.519533000  | 0.467477000  | 1                         | 3.575264000 | -1.411800000 | -2.949616000 |
| 6 | -5.834626000 | 0.529620000  | 0.982417000  | 1                         | 4.587030000 | -0.134948000 | -3.664340000 |
| 1 | -5.463480000 | 0.123312000  | 1.929858000  | 1                         | 5.260405000 | -1.212333000 | -2.420568000 |
| 1 | -6.639985000 | -0.122871000 | 0.625104000  | 1                         | 0.687517000 | 0.357214000  | -1.772479000 |
| 1 | -6.266446000 | 1.517347000  | 1.179489000  | NHO-TS <sub>11-13</sub> : |             |              |              |
| 6 | -5.240296000 | 1.242520000  | -1.364656000 | 6                         | 4.914717000 | -2.063231000 | -1.907235000 |
| 1 | -4.437770000 | 1.345032000  | -2.103871000 | 6                         | 5.124844000 | -3.074247000 | -2.531720000 |
| 1 | -5.664891000 | 2.236007000  | -1.180019000 | 6                         | 4.704368000 | -0.824708000 | -1.128641000 |
| 1 | -6.027042000 | 0.614938000  | -1.799651000 | 1                         | 5.310092000 | -3.971540000 | -3.088258000 |
| 6 | 0.078873000  | -3.305058000 | -1.177414000 | 6                         | 5.423843000 | 0.335088000  | -1.818267000 |
| 1 | -0.161008000 | -3.051515000 | -2.216655000 |                           |             |              |              |
| 1 | -0.244632000 | -4.336232000 | -0.991678000 |                           |             |              |              |

|   |              |              |              |         |              |              |              |
|---|--------------|--------------|--------------|---------|--------------|--------------|--------------|
| 6 | 5.181427000  | -1.049798000 | 0.307209000  | 1       | -1.120225000 | -0.439507000 | 2.837194000  |
| 8 | 3.253977000  | -0.657484000 | -1.188864000 | 1       | -2.256605000 | 0.688572000  | 1.988847000  |
| 1 | 5.006221000  | 0.499022000  | -2.816096000 | 6       | -4.592631000 | -1.821249000 | 0.009165000  |
| 1 | 6.484208000  | 0.085942000  | -1.920542000 | 1       | -3.592802000 | -2.255952000 | 0.106522000  |
| 1 | 5.331691000  | 1.248824000  | -1.229140000 | 6       | -5.491489000 | 1.809289000  | -0.722992000 |
| 1 | 4.601449000  | -1.849957000 | 0.776288000  | 1       | -6.390322000 | 2.413051000  | -0.816836000 |
| 1 | 6.234233000  | -1.346498000 | 0.286035000  | 6       | -4.238715000 | 2.405967000  | -0.857939000 |
| 1 | 5.078731000  | -0.137511000 | 0.896222000  | 1       | -4.179310000 | 3.472533000  | -1.050363000 |
| 8 | 2.386517000  | 0.380912000  | 2.438630000  | 6       | -1.693971000 | 2.283212000  | -0.916359000 |
| 6 | 2.571783000  | 0.273018000  | -0.505359000 | 1       | -1.004768000 | 1.768482000  | -0.233958000 |
| 8 | 1.363915000  | 0.238499000  | -0.473168000 | 6       | -1.182398000 | 2.066140000  | -2.346910000 |
| 6 | 1.895853000  | 1.439940000  | 2.008409000  | 1       | -1.132106000 | 1.002240000  | -2.601157000 |
| 6 | 0.655935000  | 1.984969000  | 2.466146000  | 1       | -0.177257000 | 2.488763000  | -2.462089000 |
| 6 | 2.694344000  | 2.181298000  | 0.906492000  | 1       | -1.845590000 | 2.560647000  | -3.067970000 |
| 1 | 0.446516000  | 1.782418000  | 3.518589000  | 6       | 1.659474000  | -2.978820000 | 0.781804000  |
| 6 | 3.859583000  | 2.894830000  | 1.585540000  | 1       | 2.086663000  | -2.379291000 | -0.026289000 |
| 6 | 1.903233000  | 3.142266000  | 0.031746000  | 1       | 1.330530000  | -3.942861000 | 0.375957000  |
| 8 | 3.343335000  | 1.194386000  | 0.054842000  | 1       | 2.443076000  | -3.178181000 | 1.519182000  |
| 1 | 0.388679000  | 2.993045000  | 2.153347000  | 6       | -0.161876000 | -3.151218000 | 2.506317000  |
| 1 | 4.473388000  | 2.178106000  | 2.139061000  | 1       | -0.995531000 | -2.648903000 | 3.005965000  |
| 1 | 3.477213000  | 3.644009000  | 2.285834000  | 1       | 0.562192000  | -3.453399000 | 3.270303000  |
| 1 | 4.481224000  | 3.400413000  | 0.838544000  | 1       | -0.545791000 | -4.054930000 | 2.018067000  |
| 1 | 1.020629000  | 2.658850000  | -0.389805000 | 6       | -5.322358000 | -2.572180000 | -1.110962000 |
| 1 | 1.592449000  | 4.015232000  | 0.612459000  | 1       | -4.813061000 | -2.447836000 | -2.073056000 |
| 1 | 2.543491000  | 3.492271000  | -0.785841000 | 1       | -6.350636000 | -2.207833000 | -1.222151000 |
| 7 | -2.023594000 | -0.536294000 | -0.400041000 | 1       | -5.366699000 | -3.643134000 | -0.883482000 |
| 7 | -0.468338000 | -1.764729000 | 0.500359000  | 6       | -5.307836000 | -2.014859000 | 1.351866000  |
| 6 | -3.203179000 | 0.275967000  | -0.497457000 | 1       | -4.788128000 | -1.484322000 | 2.157483000  |
| 6 | -1.304754000 | -0.726734000 | 0.745534000  | 1       | -5.339647000 | -3.079448000 | 1.609604000  |
| 6 | -3.067289000 | 1.652988000  | -0.746707000 | 1       | -6.339877000 | -1.647606000 | 1.310421000  |
| 6 | 0.518321000  | -2.249519000 | 1.477066000  | 6       | -1.677464000 | 3.772868000  | -0.567351000 |
| 1 | 0.922041000  | -1.348226000 | 1.956389000  | 1       | -2.078297000 | 3.957964000  | 0.435949000  |
| 6 | -1.628170000 | -1.467404000 | -1.355714000 | 1       | -2.258812000 | 4.363764000  | -1.284448000 |
| 1 | -2.080366000 | -1.493872000 | -2.335846000 | 1       | -0.651000000 | 4.151144000  | -0.598022000 |
| 6 | -4.450115000 | -0.345383000 | -0.325048000 | 1       | -0.293151000 | 1.082569000  | 1.968897000  |
| 6 | -5.594709000 | 0.449813000  | -0.454326000 |         |              |              |              |
| 1 | -6.575597000 | -0.003491000 | -0.333410000 | NHO-13: |              |              |              |
| 6 | -0.658346000 | -2.223358000 | -0.794635000 | 6       | -0.845417000 | 1.655634000  | -1.923596000 |
| 1 | -0.075658000 | -3.030212000 | -1.210754000 | 6       | 0.254392000  | 1.912452000  | -2.348642000 |
| 6 | -1.349409000 | 0.087273000  | 1.911761000  |         |              |              |              |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6 | -2.201662000 | 1.372274000  | -1.413093000 | 1 | 4.896446000  | -3.358019000 | 1.361664000  |
| 1 | 1.242054000  | 2.122820000  | -2.712052000 | 6 | 3.200488000  | 2.341701000  | -0.752469000 |
| 6 | -3.185876000 | 1.372138000  | -2.584129000 | 1 | 3.610221000  | 3.275984000  | -1.104824000 |
| 6 | -2.555222000 | 2.394321000  | -0.332748000 | 6 | 0.941478000  | 0.491063000  | 1.359527000  |
| 8 | -2.050267000 | 0.036034000  | -0.836691000 | 1 | 0.364420000  | 1.157605000  | 1.987538000  |
| 1 | -2.942834000 | 0.562907000  | -3.279664000 | 1 | 0.746944000  | -0.573646000 | 1.410863000  |
| 1 | -3.099842000 | 2.324552000  | -3.115306000 | 6 | 4.726813000  | -0.644691000 | 1.410931000  |
| 1 | -4.211885000 | 1.257262000  | -2.232029000 | 1 | 4.326640000  | 0.363945000  | 1.265930000  |
| 1 | -1.868585000 | 2.292539000  | 0.513139000  | 6 | 3.307419000  | -3.900570000 | 0.021305000  |
| 1 | -2.453152000 | 3.400644000  | -0.750148000 | 1 | 3.490343000  | -4.967597000 | 0.119597000  |
| 1 | -3.580997000 | 2.256576000  | 0.013392000  | 6 | 2.267445000  | -3.446713000 | -0.789564000 |
| 8 | -4.032028000 | 0.181219000  | 2.401911000  | 1 | 1.643069000  | -4.168220000 | -1.308597000 |
| 6 | -3.004742000 | -0.608316000 | -0.167919000 | 6 | 0.907845000  | -1.557656000 | -1.833576000 |
| 8 | -2.765170000 | -1.630364000 | 0.429991000  | 1 | 0.494572000  | -0.662204000 | -1.355398000 |
| 6 | -4.844732000 | -0.625865000 | 2.001502000  | 6 | 1.478187000  | -1.148390000 | -3.198314000 |
| 6 | -5.521807000 | -1.615993000 | 2.906799000  | 1 | 2.256747000  | -0.383773000 | -3.098197000 |
| 6 | -5.279119000 | -0.605061000 | 0.522566000  | 1 | 0.686220000  | -0.743545000 | -3.839523000 |
| 1 | -5.270950000 | -1.396420000 | 3.945824000  | 1 | 1.918180000  | -2.017041000 | -3.705101000 |
| 6 | -6.416604000 | 0.408404000  | 0.401849000  | 6 | 1.558241000  | 4.675658000  | -0.013296000 |
| 6 | -5.695062000 | -1.958445000 | -0.041532000 | 1 | 1.118315000  | 4.486498000  | -0.998339000 |
| 8 | -4.208119000 | -0.035573000 | -0.261559000 | 1 | 2.577863000  | 5.054360000  | -0.146274000 |
| 1 | -6.608030000 | -1.593242000 | 2.768258000  | 1 | 0.976091000  | 5.461714000  | 0.477387000  |
| 1 | -6.088916000 | 1.395734000  | 0.740265000  | 6 | 2.197096000  | 3.662234000  | 2.209593000  |
| 1 | -7.270377000 | 0.091003000  | 1.008061000  | 1 | 2.183328000  | 2.756625000  | 2.824667000  |
| 1 | -6.738496000 | 0.474089000  | -0.642234000 | 1 | 1.678223000  | 4.457727000  | 2.755176000  |
| 1 | -4.918746000 | -2.714119000 | 0.088693000  | 1 | 3.240973000  | 3.966281000  | 2.064850000  |
| 1 | -6.611500000 | -2.301576000 | 0.446973000  | 6 | 6.179930000  | -0.650712000 | 0.921055000  |
| 1 | -5.904916000 | -1.842707000 | -1.109947000 | 1 | 6.244056000  | -0.399169000 | -0.143561000 |
| 1 | -5.181432000 | -2.627008000 | 2.653103000  | 1 | 6.636725000  | -1.637880000 | 1.063037000  |
| 7 | 2.636760000  | 0.223078000  | -0.408608000 | 1 | 6.774777000  | 0.080282000  | 1.480664000  |
| 7 | 2.152245000  | 2.293139000  | 0.166968000  | 6 | 4.656032000  | -0.954481000 | 2.910557000  |
| 6 | 2.851890000  | -1.181179000 | -0.247247000 | 1 | 3.618210000  | -0.961252000 | 3.261487000  |
| 6 | 1.832293000  | 0.974263000  | 0.446426000  | 1 | 5.204215000  | -0.193957000 | 3.478145000  |
| 6 | 2.017533000  | -2.080353000 | -0.937514000 | 1 | 5.102267000  | -1.929392000 | 3.138813000  |
| 6 | 1.532605000  | 3.422361000  | 0.853795000  | 6 | -0.244219000 | -2.545567000 | -2.018345000 |
| 1 | 0.484615000  | 3.133968000  | 1.006338000  | 1 | -0.635514000 | -2.892016000 | -1.056183000 |
| 6 | 3.502859000  | 1.076586000  | -1.104304000 | 1 | 0.054534000  | -3.419799000 | -2.609731000 |
| 1 | 4.231856000  | 0.686604000  | -1.799421000 | 1 | -1.063982000 | -2.051632000 | -2.551948000 |
| 6 | 3.876899000  | -1.615960000 | 0.608540000  |   |              |              |              |
| 6 | 4.099999000  | -2.994064000 | 0.716323000  |   |              |              |              |

NHO-14:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 7 | -1.199619000 | 0.269260000  | 0.649506000  |
| 7 | 0.172089000  | 1.993282000  | 0.609306000  |
| 6 | -2.115889000 | -0.696400000 | 0.130192000  |
| 6 | -0.257492000 | 0.914937000  | -0.143002000 |
| 6 | -1.770723000 | -2.058403000 | 0.186055000  |
| 6 | 0.980007000  | 3.077139000  | 0.053709000  |
| 1 | 1.686583000  | 2.600930000  | -0.633356000 |
| 6 | -1.394645000 | 0.998785000  | 1.829252000  |
| 1 | -2.086374000 | 0.660512000  | 2.586613000  |
| 6 | -3.319571000 | -0.250792000 | -0.441233000 |
| 6 | -4.220087000 | -1.216738000 | -0.905749000 |
| 1 | -5.166173000 | -0.900066000 | -1.339327000 |
| 6 | -0.555418000 | 2.051046000  | 1.800029000  |
| 1 | -0.371131000 | 2.809980000  | 2.545039000  |
| 6 | 0.134647000  | 0.541677000  | -1.398958000 |
| 1 | 0.856897000  | 1.122790000  | -1.957661000 |
| 1 | -0.306247000 | -0.334320000 | -1.859672000 |
| 6 | -3.651504000 | 1.226134000  | -0.576928000 |
| 1 | -2.798479000 | 1.807013000  | -0.210772000 |
| 6 | -3.914598000 | -2.571774000 | -0.830091000 |
| 1 | -4.624020000 | -3.308225000 | -1.198689000 |
| 6 | -2.694338000 | -2.988075000 | -0.299105000 |
| 1 | -2.460478000 | -4.048656000 | -0.265542000 |
| 6 | -0.445854000 | -2.486045000 | 0.790303000  |
| 1 | 0.263027000  | -1.667532000 | 0.632612000  |
| 6 | -0.593054000 | -2.681917000 | 2.304383000  |
| 1 | -0.936478000 | -1.762374000 | 2.790917000  |
| 1 | 0.368334000  | -2.963053000 | 2.749020000  |
| 1 | -1.318404000 | -3.476727000 | 2.520984000  |
| 6 | 1.778578000  | 3.772344000  | 1.149318000  |
| 1 | 2.332969000  | 3.045246000  | 1.750693000  |
| 1 | 1.128993000  | 4.357408000  | 1.810129000  |
| 1 | 2.494053000  | 4.464417000  | 0.694016000  |
| 6 | 0.098864000  | 4.055378000  | -0.723216000 |
| 1 | -0.452440000 | 3.540166000  | -1.517635000 |
| 1 | 0.708482000  | 4.842167000  | -1.180733000 |
| 1 | -0.624787000 | 4.527431000  | -0.047546000 |
| 6 | -4.871983000 | 1.599306000  | 0.272554000  |

|   |              |              |              |
|---|--------------|--------------|--------------|
| 1 | -4.712199000 | 1.352531000  | 1.328260000  |
| 1 | -5.767115000 | 1.065648000  | -0.068959000 |
| 1 | -5.071778000 | 2.674473000  | 0.200165000  |
| 6 | -3.867925000 | 1.609783000  | -2.045355000 |
| 1 | -2.987786000 | 1.360927000  | -2.648897000 |
| 1 | -4.046858000 | 2.687843000  | -2.130375000 |
| 1 | -4.734682000 | 1.091056000  | -2.471981000 |
| 6 | 0.139639000  | -3.738602000 | 0.137032000  |
| 1 | 0.195770000  | -3.634367000 | -0.952788000 |
| 1 | -0.450175000 | -4.634162000 | 0.365799000  |
| 1 | 1.153652000  | -3.907620000 | 0.515029000  |
| 8 | 3.047462000  | 0.757556000  | 0.385591000  |
| 6 | 2.535308000  | -0.324706000 | 1.026870000  |
| 8 | 1.938953000  | -0.263240000 | 2.062888000  |
| 6 | 3.649070000  | 0.356520000  | -0.791794000 |
| 6 | 4.134340000  | 1.221551000  | -1.670037000 |
| 6 | 3.657478000  | -1.159281000 | -0.795217000 |
| 1 | 4.079197000  | 2.291406000  | -1.496085000 |
| 6 | 5.048419000  | -1.712503000 | -0.514617000 |
| 6 | 3.016944000  | -1.776775000 | -2.023836000 |
| 8 | 2.820916000  | -1.444916000 | 0.360476000  |
| 1 | 4.605452000  | 0.860730000  | -2.577982000 |
| 1 | 5.468971000  | -1.264210000 | 0.391274000  |
| 1 | 5.707285000  | -1.484255000 | -1.357936000 |
| 1 | 4.997268000  | -2.798270000 | -0.387026000 |
| 1 | 1.999607000  | -1.398945000 | -2.153260000 |
| 1 | 3.607701000  | -1.522230000 | -2.909419000 |
| 1 | 2.994139000  | -2.866200000 | -1.921586000 |

NHO-TS<sub>14-15</sub>:

|   |              |              |              |
|---|--------------|--------------|--------------|
| 7 | -0.880036000 | -1.127932000 | 0.565865000  |
| 7 | -2.643212000 | 0.159309000  | 0.593173000  |
| 6 | 0.388878000  | -1.693476000 | 0.215692000  |
| 6 | -1.443367000 | -0.025459000 | -0.028935000 |
| 6 | 1.465770000  | -1.560313000 | 1.112782000  |
| 6 | -3.612498000 | 1.192495000  | 0.202545000  |
| 1 | -3.010424000 | 2.049661000  | -0.109400000 |
| 6 | -1.760136000 | -1.646518000 | 1.513727000  |
| 1 | -1.519753000 | -2.533127000 | 2.079410000  |

|   |              |              |              |   |              |              |              |
|---|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 6 | 0.506136000  | -2.378472000 | -1.007491000 | 8 | 0.074643000  | 3.315429000  | -0.839316000 |
| 6 | 1.753297000  | -2.919480000 | -1.334288000 | 6 | -0.062143000 | 2.455147000  | 0.257498000  |
| 1 | 1.874152000  | -3.454835000 | -2.272936000 | 8 | -0.908502000 | 2.648577000  | 1.106814000  |
| 6 | -2.850771000 | -0.851239000 | 1.525430000  | 6 | 1.247593000  | 3.022427000  | -1.475603000 |
| 1 | -3.747071000 | -0.905066000 | 2.123643000  | 6 | 1.511299000  | 3.391336000  | -2.724847000 |
| 6 | -0.871996000 | 0.793481000  | -1.002558000 | 6 | 2.124583000  | 2.289274000  | -0.477992000 |
| 1 | -1.544520000 | 1.400911000  | -1.598397000 | 1 | 0.783758000  | 3.943278000  | -3.311074000 |
| 1 | -0.011824000 | 0.393808000  | -1.528326000 | 6 | 3.132065000  | 3.249797000  | 0.152023000  |
| 6 | -0.676540000 | -2.601258000 | -1.936124000 | 6 | 2.808714000  | 1.053474000  | -1.039088000 |
| 1 | -1.510487000 | -1.980198000 | -1.597025000 | 8 | 1.168936000  | 1.924129000  | 0.539416000  |
| 6 | 2.833477000  | -2.805017000 | -0.464291000 | 1 | 2.473834000  | 3.160212000  | -3.168262000 |
| 1 | 3.793361000  | -3.239565000 | -0.731403000 | 1 | 2.624044000  | 4.138196000  | 0.540538000  |
| 6 | 2.685133000  | -2.141209000 | 0.749961000  | 1 | 3.867522000  | 3.563125000  | -0.596114000 |
| 1 | 3.535832000  | -2.062877000 | 1.421973000  | 1 | 3.653926000  | 2.752136000  | 0.976026000  |
| 6 | 1.322357000  | -0.858033000 | 2.453092000  | 1 | 2.081528000  | 0.317000000  | -1.392206000 |
| 1 | 0.443925000  | -0.205606000 | 2.398901000  | 1 | 3.454021000  | 1.339669000  | -1.876222000 |
| 6 | 1.105090000  | -1.887655000 | 3.572973000  | 1 | 3.434260000  | 0.590425000  | -0.269552000 |
| 1 | 0.241643000  | -2.531806000 | 3.382432000  |   |              |              |              |
| 1 | 0.948351000  | -1.380580000 | 4.531905000  |   | NHO-15:      |              |              |
| 1 | 1.987997000  | -2.531858000 | 3.669650000  | 7 | -0.828603000 | -1.267298000 | 0.358603000  |
| 6 | -4.457962000 | 1.613274000  | 1.396915000  | 7 | -2.726790000 | -0.231243000 | 0.304836000  |
| 1 | -3.828418000 | 1.900141000  | 2.244869000  | 6 | 0.558474000  | -1.618081000 | 0.170644000  |
| 1 | -5.138555000 | 0.814555000  | 1.711901000  | 6 | -1.451971000 | -0.164108000 | -0.101410000 |
| 1 | -5.068327000 | 2.475857000  | 1.113266000  | 6 | 1.432877000  | -1.456704000 | 1.257820000  |
| 6 | -4.469860000 | 0.697773000  | -0.959649000 | 6 | -3.795938000 | 0.752205000  | 0.010975000  |
| 1 | -3.850626000 | 0.407437000  | -1.814999000 | 1 | -3.292405000 | 1.587195000  | -0.474718000 |
| 1 | -5.153254000 | 1.489323000  | -1.284556000 | 6 | -1.733690000 | -2.048625000 | 1.052182000  |
| 1 | -5.066200000 | -0.169431000 | -0.652022000 | 1 | -1.440765000 | -2.987667000 | 1.496751000  |
| 6 | -1.128060000 | -4.066127000 | -1.863003000 | 6 | 0.952626000  | -2.155889000 | -1.064591000 |
| 1 | -1.394155000 | -4.347912000 | -0.837928000 | 6 | 2.293583000  | -2.527948000 | -1.201356000 |
| 1 | -0.330847000 | -4.737801000 | -2.203706000 | 1 | 2.637459000  | -2.945786000 | -2.144351000 |
| 1 | -2.004495000 | -4.227394000 | -2.501088000 | 6 | -2.922496000 | -1.396288000 | 1.019059000  |
| 6 | -0.362770000 | -2.201034000 | -3.381376000 | 1 | -3.882550000 | -1.655621000 | 1.439655000  |
| 1 | 0.002657000  | -1.169791000 | -3.440268000 | 6 | -0.848296000 | 0.910087000  | -0.920230000 |
| 1 | -1.268356000 | -2.276139000 | -3.993457000 | 1 | -1.562402000 | 1.214322000  | -1.691089000 |
| 1 | 0.393139000  | -2.858241000 | -3.826264000 | 1 | 0.047886000  | 0.529284000  | -1.417151000 |
| 6 | 2.533215000  | 0.015100000  | 2.799506000  | 6 | -0.012939000 | -2.383119000 | -2.215958000 |
| 1 | 2.788811000  |              |              |   |              |              |              |

|   |              |              |              |                           |              |              |              |
|---|--------------|--------------|--------------|---------------------------|--------------|--------------|--------------|
| 1 | 4.221945000  | -2.693072000 | -0.265206000 | 1                         | 1.931994000  | 4.276173000  | 1.033582000  |
| 6 | 2.756105000  | -1.867969000 | 1.074235000  | 1                         | 3.467726000  | 3.875517000  | 0.224776000  |
| 1 | 3.465504000  | -1.768852000 | 1.891364000  | 1                         | 2.955824000  | 2.966695000  | 1.665778000  |
| 6 | 0.977367000  | -0.912219000 | 2.602011000  | 1                         | 2.272258000  | 0.560579000  | -1.136682000 |
| 1 | 0.005014000  | -0.425955000 | 2.466016000  | 1                         | 3.606322000  | 1.733745000  | -1.206320000 |
| 6 | 0.813314000  | -2.061479000 | 3.607505000  | 1                         | 3.268602000  | 0.863782000  | 0.304190000  |
| 1 | 0.120520000  | -2.828322000 | 3.245385000  | NHO-TS <sub>15-16</sub> : |              |              |              |
| 1 | 0.433866000  | -1.679789000 | 4.561916000  | 7                         | -1.022081000 | -1.258262000 | 0.171027000  |
| 1 | 1.780530000  | -2.544107000 | 3.794170000  | 7                         | -2.777482000 | -0.007716000 | -0.010730000 |
| 6 | -4.395372000 | 1.254146000  | 1.316025000  | 6                         | 0.350893000  | -1.704631000 | 0.183056000  |
| 1 | -3.610665000 | 1.678585000  | 1.947377000  | 6                         | -1.453303000 | -0.039478000 | -0.198620000 |
| 1 | -4.911524000 | 0.452383000  | 1.855786000  | 6                         | 1.058638000  | -1.614299000 | 1.392973000  |
| 1 | -5.126888000 | 2.037033000  | 1.093852000  | 6                         | -3.678866000 | 1.142023000  | -0.269177000 |
| 6 | -4.823484000 | 0.116307000  | -0.917130000 | 1                         | -3.027168000 | 1.960560000  | -0.576665000 |
| 1 | -4.354097000 | -0.245315000 | -1.838016000 | 6                         | -2.098656000 | -2.018079000 | 0.582893000  |
| 1 | -5.578758000 | 0.861949000  | -1.183687000 | 1                         | -1.974203000 | -3.037908000 | 0.914978000  |
| 1 | -5.331857000 | -0.722831000 | -0.429014000 | 6                         | 0.894514000  | -2.226781000 | -0.998927000 |
| 6 | -0.220576000 | -3.885604000 | -2.447152000 | 6                         | 2.211476000  | -2.693856000 | -0.940553000 |
| 1 | -0.576050000 | -4.383577000 | -1.538177000 | 1                         | 2.671878000  | -3.103483000 | -1.836094000 |
| 1 | 0.716113000  | -4.365620000 | -2.753918000 | 6                         | -3.199432000 | -1.231400000 | 0.469313000  |
| 1 | -0.959989000 | -4.049150000 | -3.238958000 | 1                         | -4.237669000 | -1.432619000 | 0.687089000  |
| 6 | 0.464555000  | -1.697719000 | -3.501132000 | 6                         | -0.598950000 | 1.059564000  | -0.722964000 |
| 1 | 0.642577000  | -0.627870000 | -3.345985000 | 1                         | -1.140603000 | 1.602684000  | -1.499020000 |
| 1 | -0.290607000 | -1.807841000 | -4.287217000 | 1                         | 0.293822000  | 0.630065000  | -1.180966000 |
| 1 | 1.395456000  | -2.145124000 | -3.867509000 | 6                         | 0.120165000  | -2.293414000 | -2.303940000 |
| 6 | 1.939091000  | 0.141357000  | 3.158974000  | 1                         | -0.860609000 | -1.829343000 | -2.154145000 |
| 1 | 2.087390000  | 0.949482000  | 2.438440000  | 6                         | 2.935616000  | -2.643682000 | 0.246495000  |
| 1 | 2.911585000  | -0.293397000 | 3.417120000  | 1                         | 3.955984000  | -3.016331000 | 0.272680000  |
| 1 | 1.519085000  | 0.574441000  | 4.073778000  | 6                         | 2.365125000  | -2.109878000 | 1.399207000  |
| 8 | -0.124883000 | 3.201038000  | -1.077634000 | 1                         | 2.948683000  | -2.069601000 | 2.314641000  |
| 6 | -0.512789000 | 2.171594000  | -0.039238000 | 6                         | 0.437059000  | -1.043205000 | 2.657160000  |
| 8 | -1.440995000 | 2.547792000  | 0.731966000  | 1                         | -0.428108000 | -0.432645000 | 2.370612000  |
| 6 | 1.195776000  | 3.155477000  | -1.298918000 | 6                         | -0.053760000 | -2.180104000 | 3.565190000  |
| 6 | 1.799719000  | 3.697650000  | -2.364547000 | 1                         | -0.778479000 | -2.826285000 | 3.058653000  |
| 6 | 1.865820000  | 2.446051000  | -0.127776000 | 1                         | -0.529360000 | -1.771019000 | 4.463552000  |
| 1 | 1.228509000  | 4.206613000  | -3.134802000 | 1                         | 0.792001000  | -2.803446000 | 3.880241000  |
| 6 | 2.603173000  | 3.458339000  | 0.752283000  | 6                         | -4.381306000 | 1.532113000  | 1.024016000  |
| 6 | 2.808564000  | 1.331701000  | -0.572446000 | 1                         | -3.650086000 | 1.743654000  | 1.808794000  |
| 8 | 0.768418000  | 1.921697000  | 0.611379000  |                           |              |              |              |
| 1 | 2.880098000  | 3.663372000  | -2.458790000 |                           |              |              |              |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | -5.058999000 | 0.740271000  | 1.362044000  | 6 | 0.222073000  | -1.765282000 | 0.154233000  |
| 1       | -4.974493000 | 2.434399000  | 0.847807000  | 6 | -1.406822000 | 0.040271000  | -0.268165000 |
| 6       | -4.644345000 | 0.783562000  | -1.391384000 | 6 | 0.788522000  | -1.729866000 | 1.438134000  |
| 1       | -4.104543000 | 0.494055000  | -2.298510000 | 6 | -3.503748000 | 1.419383000  | -0.438499000 |
| 1       | -5.267138000 | 1.652910000  | -1.621928000 | 1 | -2.755182000 | 2.204278000  | -0.561033000 |
| 1       | -5.304060000 | -0.039320000 | -1.095107000 | 6 | -2.284643000 | -1.952060000 | 0.172726000  |
| 6       | -0.115140000 | -3.750157000 | -2.721075000 | 1 | -2.277047000 | -3.009727000 | 0.390298000  |
| 1       | -0.652954000 | -4.304884000 | -1.944105000 | 6 | 0.884023000  | -2.261511000 | -0.976540000 |
| 1       | 0.836276000  | -4.261900000 | -2.907295000 | 6 | 2.183646000  | -2.743961000 | -0.789242000 |
| 1       | -0.706088000 | -3.789462000 | -3.642711000 | 1 | 2.734343000  | -3.135338000 | -1.641059000 |
| 6       | 0.842115000  | -1.517597000 | -3.412492000 | 6 | -3.303207000 | -1.066531000 | 0.014222000  |
| 1       | 1.029373000  | -0.476988000 | -3.122957000 | 1 | -4.373091000 | -1.202769000 | 0.065496000  |
| 1       | 0.236406000  | -1.513623000 | -4.325367000 | 6 | -0.390979000 | 1.098551000  | -0.502779000 |
| 1       | 1.806403000  | -1.980019000 | -3.652164000 | 1 | -0.749344000 | 1.840693000  | -1.223461000 |
| 6       | 1.401813000  | -0.134727000 | 3.426293000  | 1 | 0.500303000  | 0.645812000  | -0.939140000 |
| 1       | 1.822784000  | 0.638788000  | 2.777185000  | 6 | 0.247954000  | -2.284799000 | -2.355403000 |
| 1       | 2.222335000  | -0.706338000 | 3.874615000  | 1 | -0.750012000 | -1.837562000 | -2.287070000 |
| 1       | 0.864410000  | 0.362397000  | 4.241228000  | 6 | 2.778217000  | -2.727268000 | 0.468900000  |
| 8       | 0.351698000  | 3.447518000  | -1.116275000 | 1 | 3.789400000  | -3.105323000 | 0.592464000  |
| 6       | -0.260099000 | 2.055898000  | 0.402386000  | 6 | 2.087702000  | -2.227565000 | 1.570146000  |
| 8       | -1.160871000 | 2.485742000  | 1.100970000  | 1 | 2.566228000  | -2.221694000 | 2.545814000  |
| 6       | 1.546243000  | 2.995137000  | -1.290438000 | 6 | 0.023081000  | -1.224109000 | 2.649748000  |
| 6       | 2.307302000  | 3.082124000  | -2.420445000 | 1 | -0.836514000 | -0.640458000 | 2.302489000  |
| 6       | 2.124039000  | 2.325371000  | -0.016956000 | 6 | -0.509725000 | -2.412077000 | 3.462793000  |
| 1       | 1.928931000  | 3.614824000  | -3.289125000 | 1 | -1.163114000 | -3.051874000 | 2.859281000  |
| 6       | 2.997342000  | 3.328378000  | 0.736819000  | 1 | -1.081514000 | -2.056019000 | 4.326870000  |
| 6       | 2.893680000  | 1.031265000  | -0.252173000 | 1 | 0.319939000  | -3.027096000 | 3.831758000  |
| 8       | 1.011485000  | 2.073454000  | 0.875314000  | 6 | -4.321066000 | 1.701648000  | 0.815074000  |
| 1       | 3.313532000  | 2.679355000  | -2.466775000 | 1 | -3.674984000 | 1.740269000  | 1.696370000  |
| 1       | 2.455763000  | 4.268421000  | 0.881802000  | 1 | -5.092284000 | 0.938363000  | 0.964210000  |
| 1       | 3.912023000  | 3.532262000  | 0.171955000  | 1 | -4.819007000 | 2.669227000  | 0.703513000  |
| 1       | 3.272052000  | 2.925979000  | 1.719000000  | 6 | -4.354213000 | 1.310762000  | -1.697007000 |
| 1       | 2.288418000  | 0.270740000  | -0.756734000 | 1 | -3.735788000 | 1.091827000  | -2.572912000 |
| 1       | 3.778120000  | 1.223421000  | -0.866466000 | 1 | -4.869778000 | 2.260873000  | -1.864282000 |
| 1       | 3.230834000  | 0.623674000  | 0.707172000  | 1 | -5.110836000 | 0.525278000  | -1.591908000 |
|         |              |              |              | 6 | 0.078840000  | -3.726337000 | -2.849887000 |
|         |              |              |              | 1 | -0.520900000 | -4.321350000 | -2.152091000 |
|         |              |              |              | 1 | 1.052353000  | -4.216191000 | -2.966965000 |
|         |              |              |              | 1 | -0.422177000 | -3.734559000 | -3.824103000 |
|         |              |              |              | 6 | 1.064258000  | -1.455883000 | -3.354075000 |
| NHO-16: |              |              |              |   |              |              |              |
| 7       | -1.114259000 | -1.243874000 | -0.002591000 |   |              |              |              |
| 7       | -2.736442000 | 0.164331000  | -0.250607000 |   |              |              |              |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | 1.202964000  | -0.426272000 | -3.003680000 | 1 | 2.906655000  | 1.320334000  | -0.055541000 |
| 1       | 0.551122000  | -1.420853000 | -4.321484000 | 7 | -1.602576000 | -1.544975000 | 0.231062000  |
| 1       | 2.055488000  | -1.895658000 | -3.514106000 | 7 | 0.386044000  | -2.394889000 | 0.159052000  |
| 6       | 0.869526000  | -0.300867000 | 3.530668000  | 6 | -2.665055000 | -0.569476000 | 0.168510000  |
| 1       | 1.313212000  | 0.513756000  | 2.948937000  | 6 | -0.292385000 | -1.247097000 | 0.210635000  |
| 1       | 1.676340000  | -0.847999000 | 4.031302000  | 6 | -3.130052000 | -0.195863000 | -1.102720000 |
| 1       | 0.238828000  | 0.144239000  | 4.307671000  | 6 | 1.860287000  | -2.536512000 | 0.047791000  |
| 8       | 0.698925000  | 3.682727000  | -1.253543000 | 1 | 2.257057000  | -1.517221000 | -0.015647000 |
| 6       | -0.098837000 | 1.845394000  | 0.799450000  | 6 | -1.756672000 | -2.915901000 | 0.205475000  |
| 8       | -0.975572000 | 1.963865000  | 1.634759000  | 1 | -2.733872000 | -3.375232000 | 0.222975000  |
| 6       | 1.687400000  | 2.872941000  | -1.301811000 | 6 | -3.158842000 | -0.034744000 | 1.366742000  |
| 6       | 2.337851000  | 2.418608000  | -2.423019000 | 6 | -4.164492000 | 0.931899000  | 1.261908000  |
| 6       | 2.212999000  | 2.410552000  | 0.087979000  | 1 | -4.574196000 | 1.374438000  | 2.166275000  |
| 1       | 2.038272000  | 2.789137000  | -3.400874000 | 6 | -0.506581000 | -3.447730000 | 0.162166000  |
| 6       | 3.075615000  | 3.527390000  | 0.669023000  | 1 | -0.176352000 | -4.475171000 | 0.132527000  |
| 6       | 2.965331000  | 1.085211000  | 0.142834000  | 6 | 0.253216000  | 0.133164000  | 0.205807000  |
| 8       | 1.103228000  | 2.334525000  | 1.044725000  | 1 | 1.167926000  | 0.199344000  | 0.807682000  |
| 1       | 3.159824000  | 1.713071000  | -2.377767000 | 1 | -0.470737000 | 0.809515000  | 0.664744000  |
| 1       | 2.522134000  | 4.470716000  | 0.655781000  | 6 | -2.659194000 | -0.476213000 | 2.731551000  |
| 1       | 3.982995000  | 3.639559000  | 0.068084000  | 1 | -1.859492000 | -1.210660000 | 2.588361000  |
| 1       | 3.360786000  | 3.294841000  | 1.701189000  | 6 | -4.649873000 | 1.328579000  | 0.019088000  |
| 1       | 2.397857000  | 0.251718000  | -0.286170000 | 1 | -5.431293000 | 2.081406000  | -0.040423000 |
| 1       | 3.910344000  | 1.164710000  | -0.401949000 | 6 | -4.142443000 | 0.766552000  | -1.149649000 |
| 1       | 3.198305000  | 0.844681000  | 1.186365000  | 1 | -4.534607000 | 1.084502000  | -2.112033000 |
|         |              |              |              | 6 | -2.603955000 | -0.829672000 | -2.379565000 |
|         |              |              |              | 1 | -1.673231000 | -1.359121000 | -2.149845000 |
|         |              |              |              | 6 | -3.616858000 | -1.855345000 | -2.906253000 |
|         |              |              |              | 1 | -3.824763000 | -2.631985000 | -2.161608000 |
|         |              |              |              | 1 | -3.231121000 | -2.339811000 | -3.810053000 |
|         |              |              |              | 1 | -4.564752000 | -1.365043000 | -3.159092000 |
|         |              |              |              | 6 | 2.191288000  | -3.274658000 | -1.242765000 |
|         |              |              |              | 1 | 1.744204000  | -2.765661000 | -2.100995000 |
|         |              |              |              | 1 | 1.837640000  | -4.311445000 | -1.209470000 |
|         |              |              |              | 1 | 3.277439000  | -3.287731000 | -1.373726000 |
|         |              |              |              | 6 | 2.395065000  | -3.239013000 | 1.288666000  |
|         |              |              |              | 1 | 2.106582000  | -2.708523000 | 2.201667000  |
|         |              |              |              | 1 | 3.487766000  | -3.274821000 | 1.237182000  |
|         |              |              |              | 1 | 2.021301000  | -4.267715000 | 1.347656000  |
|         |              |              |              | 6 | -3.782682000 | -1.162528000 | 3.518333000  |
|         |              |              |              | 1 | -4.188256000 | -2.020124000 | 2.969923000  |
| NHO-17: |              |              |              |   |              |              |              |
| 8       | 3.372855000  | 0.505034000  | -0.417011000 |   |              |              |              |
| 6       | 4.546974000  | 0.320010000  | 0.356784000  |   |              |              |              |
| 6       | 5.188885000  | -0.923236000 | -0.129475000 |   |              |              |              |
| 6       | 4.194855000  | 0.157887000  | 1.841665000  |   |              |              |              |
| 6       | 5.500735000  | 1.503914000  | 0.158402000  |   |              |              |              |
| 6       | 5.725025000  | -1.940435000 | -0.502625000 |   |              |              |              |
| 1       | 6.200548000  | -2.837922000 | -0.844495000 |   |              |              |              |
| 1       | 5.094387000  | -0.009068000 | 2.443401000  |   |              |              |              |
| 1       | 3.518803000  | -0.693056000 | 1.979816000  |   |              |              |              |
| 1       | 3.691124000  | 1.067878000  | 2.183693000  |   |              |              |              |
| 1       | 5.006551000  | 2.415781000  | 0.511617000  |   |              |              |              |
| 1       | 5.739157000  | 1.620818000  | -0.903100000 |   |              |              |              |
| 1       | 6.430317000  | 1.364622000  | 0.719858000  |   |              |              |              |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1                         | -4.604290000 | -0.464250000 | 3.715668000  | 6 | -3.366619000 | 0.225213000  | 1.223948000  |
| 1                         | -3.404100000 | -1.519775000 | 4.482266000  | 6 | -3.847147000 | 1.137470000  | 2.168598000  |
| 6                         | -2.076929000 | 0.699702000  | 3.522923000  | 1 | -4.477439000 | 0.782982000  | 2.980275000  |
| 1                         | -1.268578000 | 1.195532000  | 2.972786000  | 6 | -2.130411000 | -1.554845000 | -2.522429000 |
| 1                         | -1.674582000 | 0.345123000  | 4.478350000  | 1 | -2.345821000 | -2.100797000 | -3.428321000 |
| 1                         | -2.845749000 | 1.450217000  | 3.740465000  | 6 | -0.030121000 | -0.985552000 | 0.442792000  |
| 6                         | -2.277800000 | 0.212848000  | -3.452656000 | 1 | -0.055387000 | -1.928662000 | 0.995649000  |
| 1                         | -1.598970000 | 0.982230000  | -3.070424000 | 1 | -0.309068000 | -0.175486000 | 1.116213000  |
| 1                         | -3.183542000 | 0.704865000  | -3.824675000 | 6 | -3.731211000 | -1.245548000 | 1.339121000  |
| 1                         | -1.788110000 | -0.273007000 | -4.303274000 | 1 | -3.299698000 | -1.785950000 | 0.489499000  |
| 8                         | 2.167978000  | 2.477068000  | 0.805698000  | 6 | -3.527692000 | 2.488607000  | 2.082986000  |
| 6                         | 0.607237000  | 0.545877000  | -1.221936000 | 1 | -3.912779000 | 3.183210000  | 2.824454000  |
| 8                         | 0.757519000  | -0.291636000 | -2.086711000 | 6 | -2.713999000 | 2.957449000  | 1.054935000  |
| 6                         | 0.950877000  | 2.906891000  | 0.730413000  | 1 | -2.473357000 | 4.015348000  | 1.006813000  |
| 6                         | 0.364091000  | 2.975118000  | -0.698878000 | 6 | -1.335344000 | 2.595253000  | -1.050579000 |
| 6                         | 1.021926000  | 4.145708000  | -1.424770000 | 1 | -0.756775000 | 1.749218000  | -1.438768000 |
| 6                         | -1.154331000 | 3.071740000  | -0.802643000 | 6 | -2.219459000 | 3.137174000  | -2.181819000 |
| 8                         | 0.795617000  | 1.826050000  | -1.508377000 | 1 | -2.923672000 | 2.381475000  | -2.547026000 |
| 1                         | 2.109788000  | 4.035017000  | -1.399212000 | 1 | -1.599956000 | 3.461623000  | -3.025900000 |
| 1                         | 0.749497000  | 5.083059000  | -0.930759000 | 1 | -2.799936000 | 4.000593000  | -1.834162000 |
| 1                         | 0.690203000  | 4.183117000  | -2.467883000 | 6 | 0.828581000  | -2.589251000 | -3.111673000 |
| 1                         | -1.669013000 | 2.266748000  | -0.265411000 | 1 | 1.371765000  | -1.674656000 | -2.858437000 |
| 1                         | -1.502004000 | 4.024251000  | -0.393198000 | 1 | 0.272910000  | -2.435268000 | -4.044046000 |
| 1                         | -1.447270000 | 3.032404000  | -1.857170000 | 1 | 1.559010000  | -3.388496000 | -3.271060000 |
| 6                         | 0.198489000  | 3.354003000  | 1.777889000  | 6 | -0.891255000 | -4.257173000 | -2.270705000 |
| 1                         | -0.822881000 | 3.697377000  | 1.662678000  | 1 | -1.609943000 | -4.472939000 | -1.473824000 |
| 1                         | 0.633938000  | 3.382857000  | 2.773977000  | 1 | -0.185088000 | -5.090132000 | -2.333819000 |
| NHO-TS <sub>17-18</sub> : |              |              |              | 1 | -1.424678000 | -4.197918000 | -3.225139000 |
| 1                         | 2.680924000  | 1.128872000  | 1.142368000  | 6 | -5.249811000 | -1.447460000 | 1.280130000  |
| 7                         | -2.074549000 | -0.196193000 | -0.795766000 | 1 | -5.671099000 | -1.035210000 | 0.356571000  |
| 7                         | -1.053428000 | -1.866130000 | -1.716920000 | 1 | -5.747808000 | -0.963324000 | 2.127574000  |
| 6                         | -2.548254000 | 0.733360000  | 0.204173000  | 1 | -5.487816000 | -2.516283000 | 1.316919000  |
| 6                         | -1.019829000 | -1.026602000 | -0.672905000 | 6 | -3.150313000 | -1.850832000 | 2.623085000  |
| 6                         | -2.198396000 | 2.086718000  | 0.090128000  | 1 | -2.065745000 | -1.706961000 | 2.678631000  |
| 6                         | -0.110810000 | -2.981530000 | -1.980675000 | 1 | -3.357823000 | -2.925971000 | 2.660933000  |
| 1                         | 0.463203000  | -3.099774000 | -1.060289000 | 1 | -3.598566000 | -1.388942000 | 3.510455000  |
| 6                         | -2.776900000 | -0.513239000 | -1.941011000 | 6 | -0.335833000 | 3.659801000  | -0.596355000 |
| 1                         | -3.672105000 | 0.022875000  | -2.218041000 | 1 | 0.290753000  | 3.296996000  | 0.225464000  |
|                           |              |              |              | 1 | -0.841165000 | 4.576205000  | -0.271130000 |
|                           |              |              |              | 1 | 0.322272000  | 3.929211000  | -1.428774000 |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 8       | 3.136255000  | 2.011258000  | 0.795263000  | 1 | -0.799467000 | -2.813080000 | 1.357490000  |
| 6       | 1.415718000  | -0.770990000 | -0.056231000 | 6 | 2.628308000  | -0.396052000 | 2.007229000  |
| 8       | 2.134717000  | -1.721685000 | -0.336204000 | 1 | 3.535307000  | 0.131171000  | 2.262030000  |
| 6       | 3.015946000  | 2.228191000  | -0.519755000 | 6 | 3.308208000  | -0.061600000 | -1.220407000 |
| 6       | 2.595237000  | 1.021788000  | -1.368753000 | 6 | 3.887539000  | 0.707431000  | -2.234360000 |
| 6       | 3.808634000  | 0.097430000  | -1.514728000 | 1 | 4.489300000  | 0.218674000  | -2.996648000 |
| 6       | 2.084292000  | 1.415178000  | -2.751615000 | 6 | 1.922880000  | -1.348182000 | 2.665438000  |
| 8       | 1.438407000  | 0.441294000  | -0.706011000 | 1 | 2.086208000  | -1.811216000 | 3.626893000  |
| 1       | 4.172512000  | -0.254959000 | -0.548841000 | 6 | -0.038270000 | -1.031000000 | -0.425849000 |
| 1       | 4.597665000  | 0.680944000  | -2.001726000 | 1 | -0.057374000 | -2.053866000 | -0.813709000 |
| 1       | 3.573996000  | -0.771548000 | -2.133783000 | 1 | 0.355778000  | -0.373753000 | -1.203807000 |
| 1       | 1.263119000  | 2.135665000  | -2.682570000 | 6 | 3.531599000  | -1.565321000 | -1.193110000 |
| 1       | 2.883134000  | 1.850270000  | -3.358867000 | 1 | 3.019923000  | -1.985650000 | -0.319888000 |
| 1       | 1.720637000  | 0.517442000  | -3.261919000 | 6 | 3.706696000  | 2.086009000  | -2.277141000 |
| 8       | 2.021064000  | -0.041483000 | 1.668843000  | 1 | 4.168056000  | 2.667126000  | -3.071055000 |
| 6       | 2.758749000  | -0.824796000 | 2.553935000  | 6 | 2.935498000  | 2.724645000  | -1.309792000 |
| 6       | 4.083512000  | -1.232285000 | 1.992126000  | 1 | 2.801748000  | 3.801106000  | -1.358970000 |
| 6       | 1.984111000  | -2.095761000 | 2.937920000  | 6 | 1.509254000  | 2.699881000  | 0.791455000  |
| 6       | 3.040857000  | 0.003258000  | 3.821345000  | 1 | 0.821602000  | 1.959990000  | 1.217042000  |
| 6       | 5.186649000  | -1.552791000 | 1.609921000  | 6 | 2.421966000  | 3.224307000  | 1.908504000  |
| 1       | 6.152519000  | -1.835263000 | 1.242686000  | 1 | 3.008417000  | 2.423451000  | 2.370096000  |
| 1       | 2.531298000  | -2.683163000 | 3.683754000  | 1 | 1.823570000  | 3.701937000  | 2.692937000  |
| 1       | 1.814250000  | -2.720312000 | 2.056284000  | 1 | 3.122028000  | 3.970574000  | 1.512848000  |
| 1       | 1.017665000  | -1.801135000 | 3.363922000  | 6 | -0.815890000 | -2.499394000 | 3.467954000  |
| 1       | 2.085247000  | 0.291116000  | 4.273356000  | 1 | -1.353690000 | -1.550729000 | 3.383678000  |
| 1       | 3.592100000  | 0.912687000  | 3.560842000  | 1 | -0.129090000 | -2.448932000 | 4.320955000  |
| 1       | 3.625560000  | -0.565946000 | 4.552994000  | 1 | -1.544517000 | -3.292143000 | 3.663042000  |
| 6       | 3.336217000  | 3.422038000  | -1.050562000 | 6 | 0.708303000  | -4.113039000 | 2.230375000  |
| 1       | 3.262879000  | 3.618143000  | -2.112747000 | 1 | 1.249002000  | -4.287695000 | 1.293842000  |
| 1       | 3.684014000  | 4.223767000  | -0.404897000 | 1 | 0.010914000  | -4.942048000 | 2.384996000  |
|         |              |              |              | 1 | 1.427765000  | -4.116739000 | 3.056909000  |
|         |              |              |              | 6 | 5.022046000  | -1.897159000 | -1.053658000 |
| NHO-18: |              |              |              | 1 | 5.450714000  | -1.438578000 | -0.155691000 |
| 1       | -2.541648000 | 1.346355000  | -1.298175000 | 1 | 5.586978000  | -1.540896000 | -1.922541000 |
| 7       | 1.971567000  | -0.166605000 | 0.812971000  | 1 | 5.161123000  | -2.981696000 | -0.984757000 |
| 7       | 0.854696000  | -1.695339000 | 1.860826000  | 6 | 2.944745000  | -2.228920000 | -2.444798000 |
| 6       | 2.534754000  | 0.614600000  | -0.263729000 | 1 | 1.881465000  | -1.994813000 | -2.563177000 |
| 6       | 0.886392000  | -0.967231000 | 0.735924000  | 1 | 3.052453000  | -3.317428000 | -2.380735000 |
| 6       | 2.326701000  | 2.001631000  | -0.279828000 | 1 | 3.467722000  | -1.891399000 | -3.347017000 |
| 6       | -0.076278000 | -2.807635000 | 2.174415000  | 6 | 0.665912000  | 3.844124000  | 0.226068000  |

|                           |              |              |              |   |              |              |              |
|---------------------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1                         | 0.029662000  | 3.507009000  | -0.599099000 | 6 | -0.930088000 | -1.069710000 | -0.201045000 |
| 1                         | 1.292422000  | 4.668430000  | -0.133905000 | 6 | -1.993965000 | 2.193812000  | 0.243882000  |
| 1                         | 0.015645000  | 4.246868000  | 1.009463000  | 6 | -0.223691000 | -3.327348000 | -1.054684000 |
| 8                         | -2.828057000 | 2.284099000  | -1.152365000 | 1 | 0.408135000  | -3.268223000 | -0.167637000 |
| 6                         | -1.528350000 | -0.637432000 | -0.089484000 | 6 | -2.132828000 | -0.391727000 | -1.992619000 |
| 8                         | -2.206290000 | -1.497467000 | 0.546411000  | 1 | -2.778889000 | 0.260294000  | -2.561382000 |
| 6                         | -2.736024000 | 2.606318000  | 0.159073000  | 6 | -3.570051000 | 0.386719000  | 0.818230000  |
| 6                         | -2.428632000 | 1.434166000  | 1.096882000  | 6 | -4.270461000 | 1.286075000  | 1.628048000  |
| 6                         | -3.742761000 | 0.669198000  | 1.315597000  | 1 | -5.150532000 | 0.946310000  | 2.169367000  |
| 6                         | -1.898547000 | 1.902169000  | 2.450688000  | 6 | -1.579123000 | -1.583610000 | -2.297958000 |
| 8                         | -1.354000000 | 0.684993000  | 0.499896000  | 1 | -1.633829000 | -2.168790000 | -3.203686000 |
| 1                         | -4.147626000 | 0.275177000  | 0.382196000  | 6 | -0.270764000 | -1.063380000 | 1.030614000  |
| 1                         | -4.463718000 | 1.374298000  | 1.744605000  | 1 | -0.017734000 | -2.016739000 | 1.479123000  |
| 1                         | -3.596975000 | -0.168922000 | 1.998491000  | 1 | -0.559123000 | -0.273545000 | 1.718724000  |
| 1                         | -1.015019000 | 2.537500000  | 2.333783000  | 6 | -4.054956000 | -1.050257000 | 0.698984000  |
| 1                         | -2.658415000 | 2.456634000  | 3.009953000  | 1 | -3.402361000 | -1.585442000 | 0.001607000  |
| 1                         | -1.619127000 | 1.019303000  | 3.034733000  | 6 | -3.858043000 | 2.609424000  | 1.747023000  |
| 8                         | -2.092908000 | -0.269314000 | -1.451005000 | 1 | -4.415231000 | 3.295884000  | 2.379287000  |
| 6                         | -2.876106000 | -1.201928000 | -2.185736000 | 6 | -2.733384000 | 3.057351000  | 1.059283000  |
| 6                         | -4.209910000 | -1.436197000 | -1.574514000 | 1 | -2.424120000 | 4.093244000  | 1.163602000  |
| 6                         | -2.162535000 | -2.543324000 | -2.383803000 | 6 | -0.784083000 | 2.689264000  | -0.528400000 |
| 6                         | -3.097710000 | -0.529475000 | -3.547145000 | 1 | -0.123522000 | 1.830504000  | -0.691280000 |
| 6                         | -5.340510000 | -1.639285000 | -1.197200000 | 6 | -1.215854000 | 3.227160000  | -1.899797000 |
| 1                         | -6.329884000 | -1.808345000 | -0.822453000 | 1 | -1.732145000 | 2.462828000  | -2.491254000 |
| 1                         | -2.764390000 | -3.185374000 | -3.035057000 | 1 | -0.340498000 | 3.565472000  | -2.466986000 |
| 1                         | -2.015866000 | -3.050017000 | -1.427847000 | 1 | -1.897398000 | 4.079242000  | -1.780585000 |
| 1                         | -1.193800000 | -2.371282000 | -2.865835000 | 6 | 0.666552000  | -3.654235000 | -2.246704000 |
| 1                         | -2.127398000 | -0.365137000 | -4.026856000 | 1 | 1.449655000  | -2.899316000 | -2.361817000 |
| 1                         | -3.599317000 | 0.435109000  | -3.420804000 | 1 | 0.091190000  | -3.717760000 | -3.177442000 |
| 1                         | -3.713730000 | -1.163245000 | -4.192215000 | 1 | 1.147078000  | -4.624332000 | -2.084792000 |
| 6                         | -2.981298000 | 3.863673000  | 0.552387000  | 6 | -1.326489000 | -4.362575000 | -0.845094000 |
| 1                         | -2.924937000 | 4.153823000  | 1.594156000  | 1 | -1.939386000 | -4.107155000 | 0.026753000  |
| 1                         | -3.243482000 | 4.623703000  | -0.178567000 | 1 | -0.887474000 | -5.352021000 | -0.681010000 |
| NHO-TS <sub>18-19</sub> : |              |              |              | 1 | -1.978481000 | -4.417995000 | -1.724926000 |
| 1                         | 2.701362000  | 1.646181000  | 0.455177000  | 6 | -5.476331000 | -1.106515000 | 0.125882000  |
| 7                         | -1.720775000 | -0.060087000 | -0.700479000 | 1 | -5.536677000 | -0.591817000 | -0.839568000 |
| 7                         | -0.822947000 | -1.992055000 | -1.202562000 | 1 | -6.197692000 | -0.639094000 | 0.806187000  |
| 6                         | -2.434926000 | 0.864386000  | 0.138230000  | 1 | -5.782175000 | -2.148351000 | -0.022612000 |
|                           |              |              |              | 6 | -3.983734000 | -1.773637000 | 2.049186000  |
|                           |              |              |              | 1 | -2.965595000 | -1.758422000 | 2.453778000  |

|         |              |              |              |   |              |              |              |
|---------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| 1       | -4.290854000 | -2.819577000 | 1.934125000  | 8 | -1.377514000 | -1.814368000 | 1.856971000  |
| 1       | -4.651062000 | -1.306156000 | 2.782845000  | 6 | -2.840592000 | -0.360381000 | -0.829721000 |
| 6       | 0.007381000  | 3.756970000  | 0.230120000  | 8 | -3.088702000 | 0.465502000  | -1.671486000 |
| 1       | 0.272786000  | 3.419981000  | 1.238826000  | 6 | -1.034877000 | -2.554124000 | 0.761275000  |
| 1       | -0.554589000 | 4.694380000  | 0.316495000  | 6 | -2.099734000 | -2.710776000 | -0.321033000 |
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## **S5: Reference 16 details.**

16. M. J. Frisch, G. W. Trucks, H. B. Schlegel, G. E. Scuseria, M. A. Robb, J. R. Cheeseman, G. Scalmani, V. Barone, B. Mennucci, G. A. Petersson, H. Nakatsuji, M. Caricato, X. Li, H. P. Hratchian, A. F. Izmaylov, J. Bloino, G. Zheng, J. L. Sonnenberg, M. Hada, M. Ehara, K. Toyota, R. Fukuda, J. Hasegawa, M. Ishida, T. Nakajima, Y. Honda, O. Kitao, H. Nakai, T. Vreven, J. A. Montgomery, Jr., J. E. Peralta, F. Ogliaro, M. Bearpark, J. J. Heyd, E. Brothers, K. N. Kudin, V. N. Staroverov, R. Kobayashi, J. Normand, K. Raghavachari, A. Rendell, J. C. Burant, S. S. Iyengar, J. Tomasi, M. Cossi, N. Rega, J. M. Millam, M. Klene, J. E. Knox, J. B. Cross, V. Bakken, C. Adamo, J. Jaramillo, R. Gomperts, R. E. Stratmann, O. Yazyev, A. J. Austin, R. Cammi, C. Pomelli, J. W. Ochterski, R. L. Martin, K. Morokuma, V. G. Zakrzewski, G. A. Voth, P. Salvador, J. J. Dannenberg, S. Dapprich, A. D. Daniels, O. Farkas, J. B. Foresman, J. V. Ortiz, J. Cioslowski, and D. J. Fox, Gaussian, Inc., Wallingford CT, 2009.