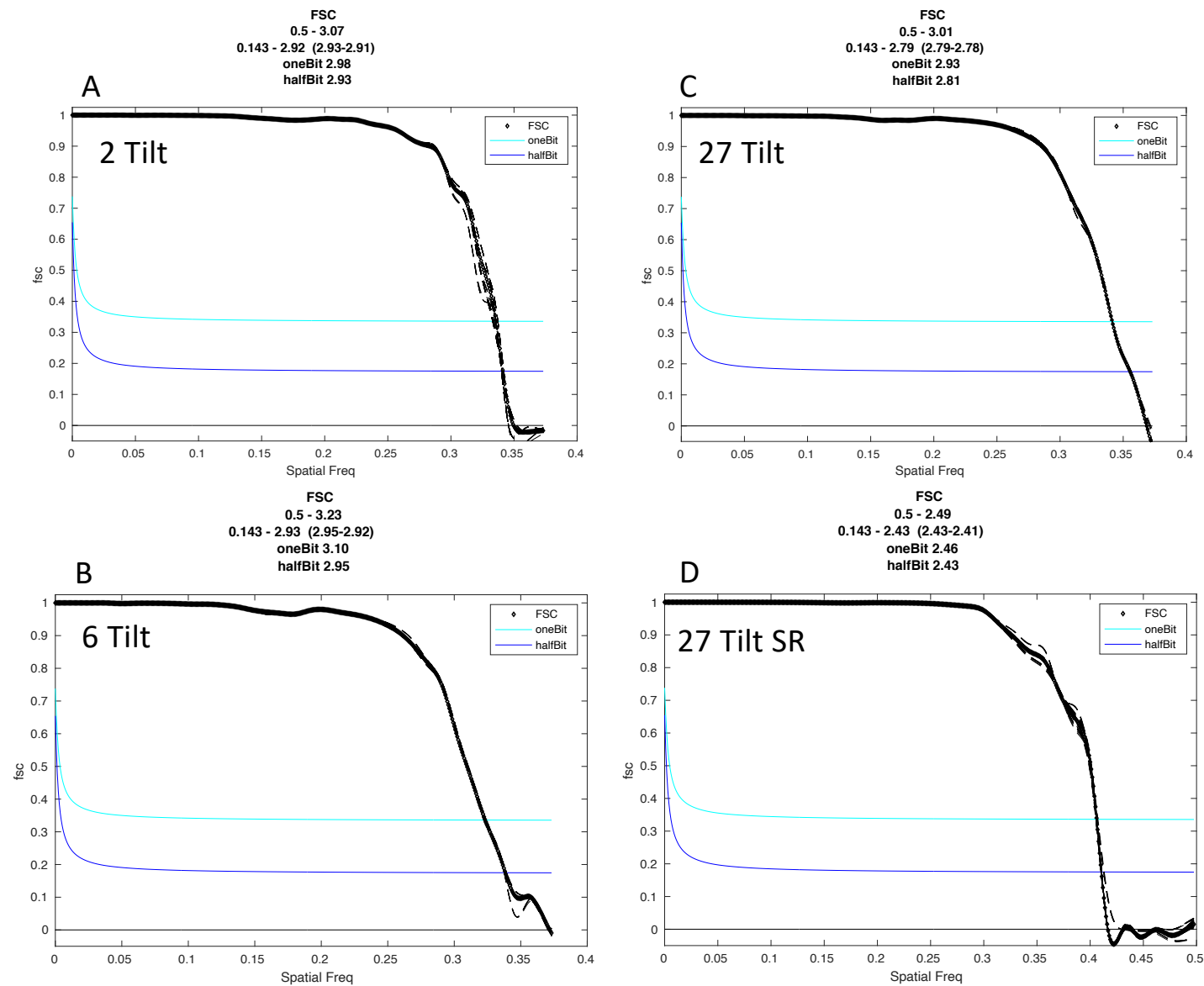


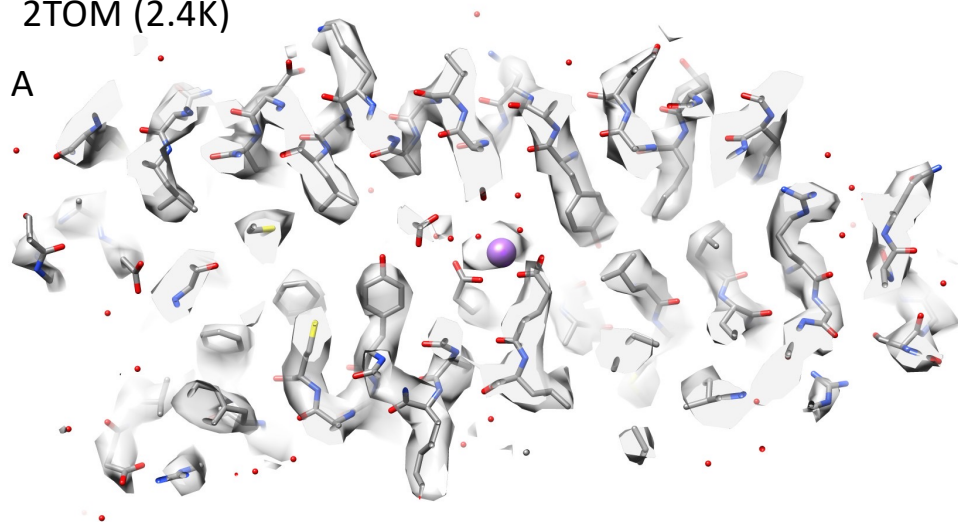
Sup Figure 1



Sup Figure 2

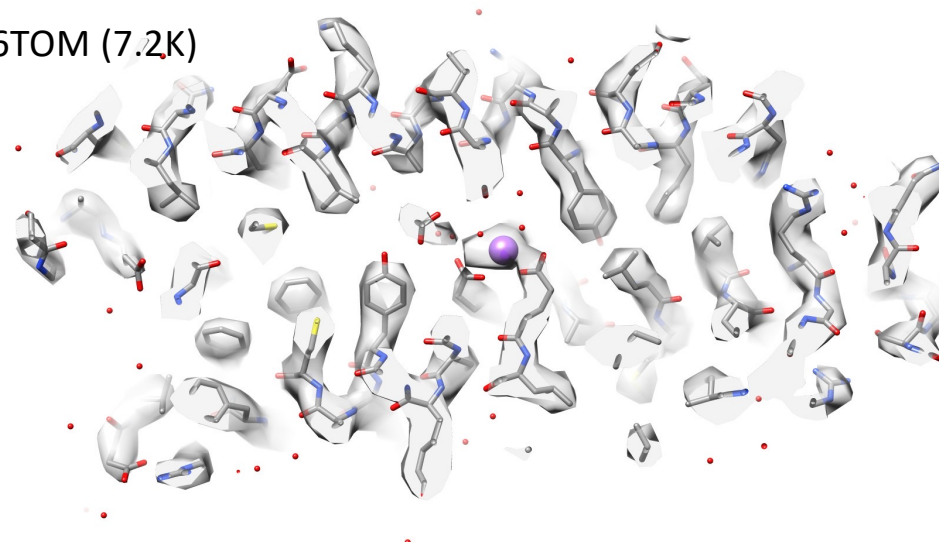
2TOM (2.4K)

A



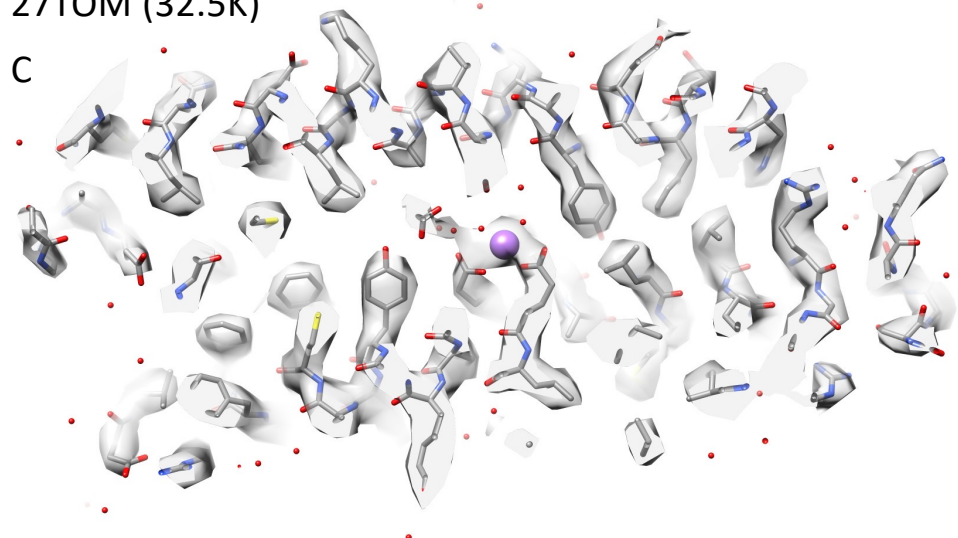
6TOM (7.2K)

B



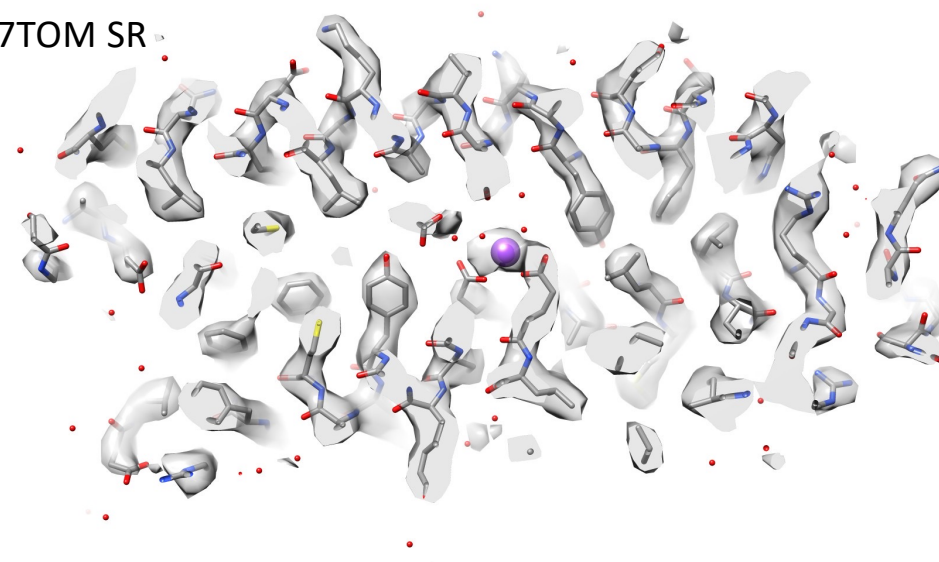
27TOM (32.5K)

C

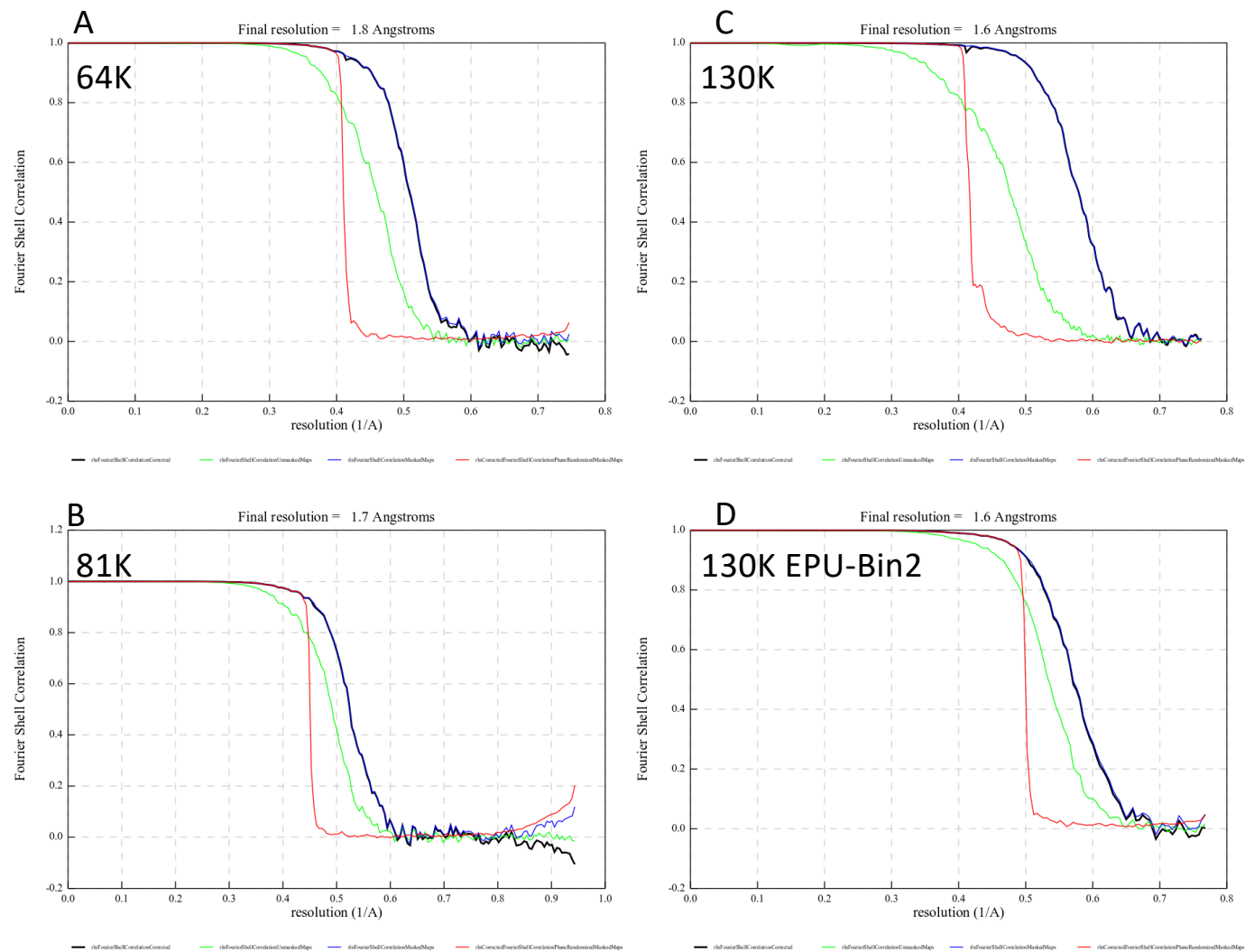


27TOM SR

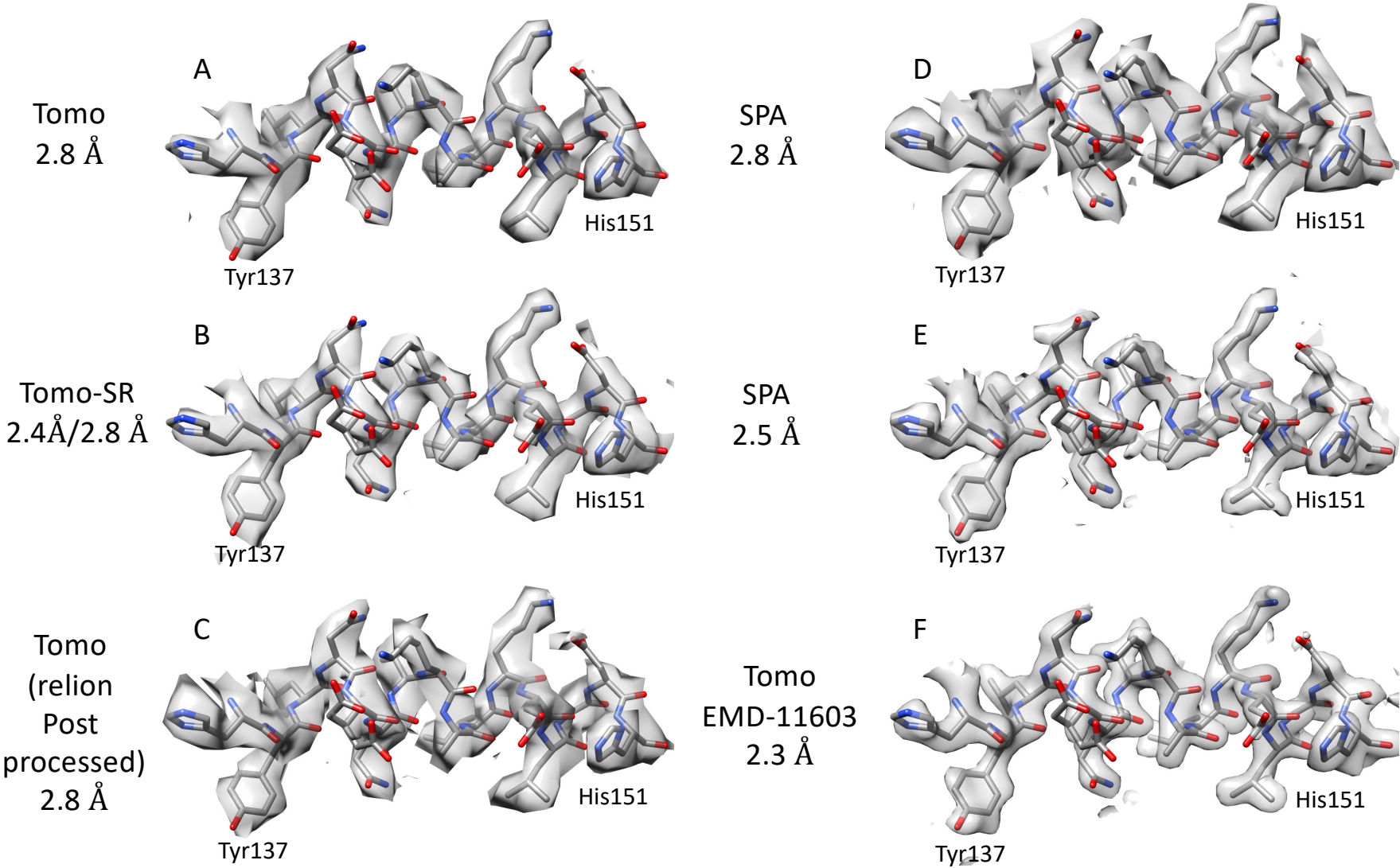
D



Sup Figure 3 FSC curves for SPA



Sup Fig 4 (equivalent resolution)



A

64K
2.7Å

Tyr137 His151 His13 Arg9 Glu62 Glu27 His65

B

81K
2.12Å

Tyr137 His151 His13 Arg9 Gln14 Glu62 Glu27 His65

A

B

Tyr137

His151

His13

Arg9

Glu62

Glu27

His65

Tyr137

His151

His13

Arg9

Gln14

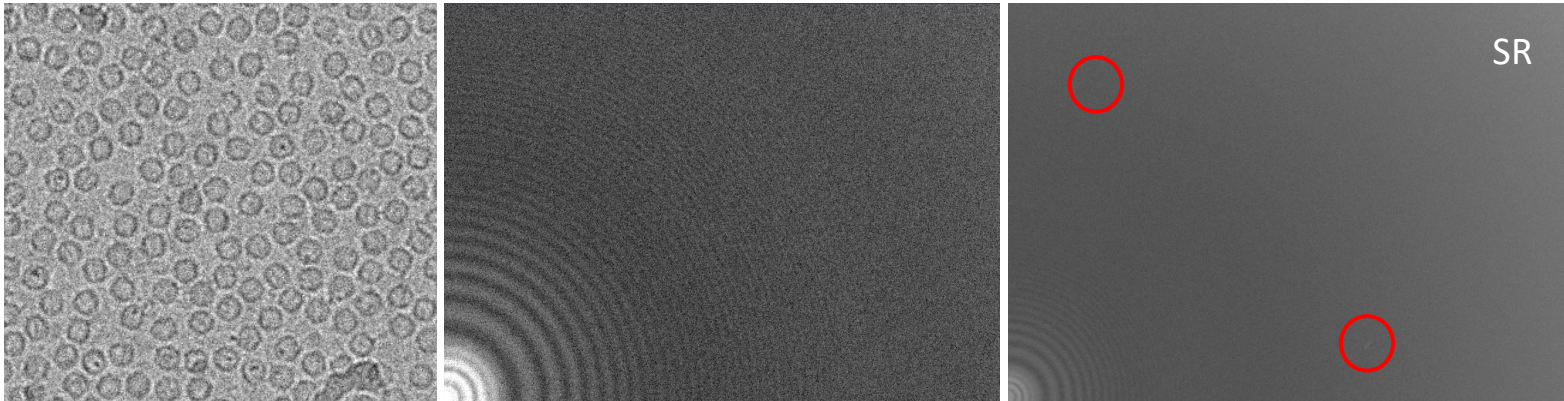
Glu62

Glu27

His65

Sup Figure 6

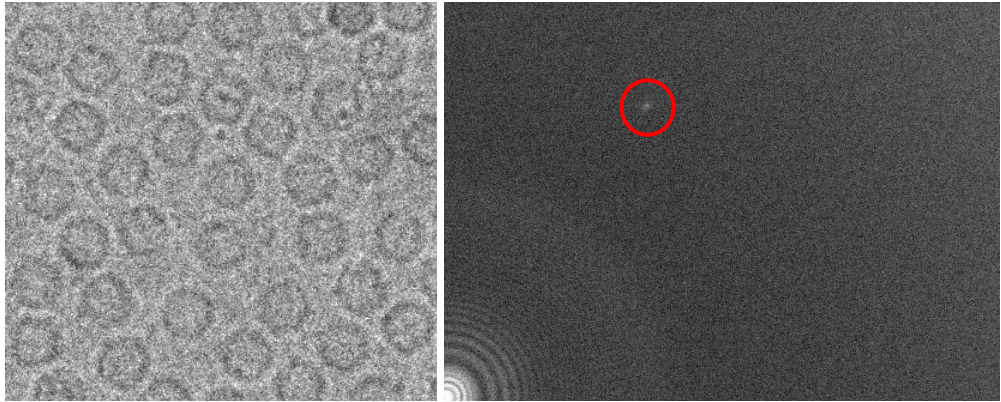
64K



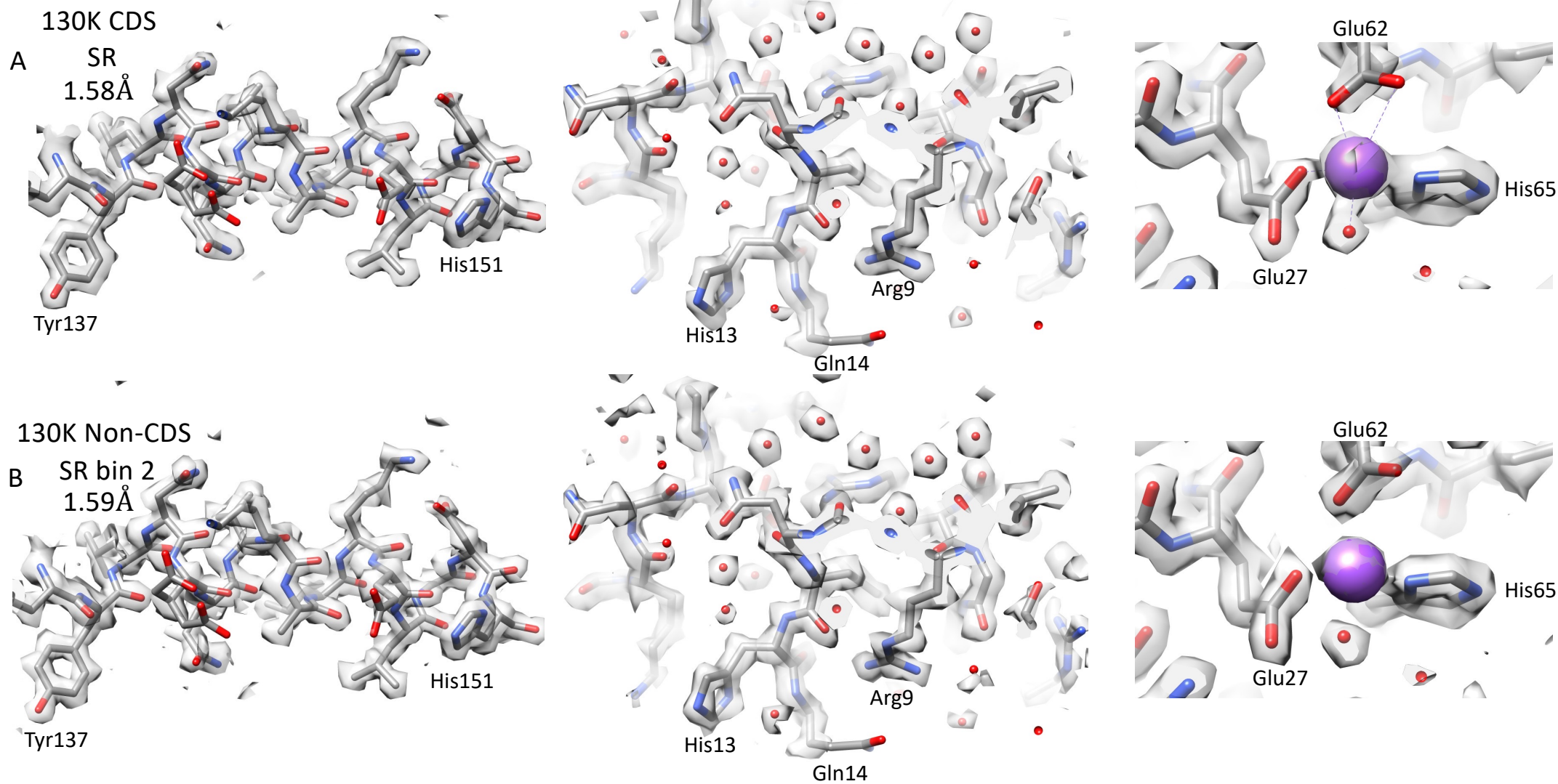
81K



130K

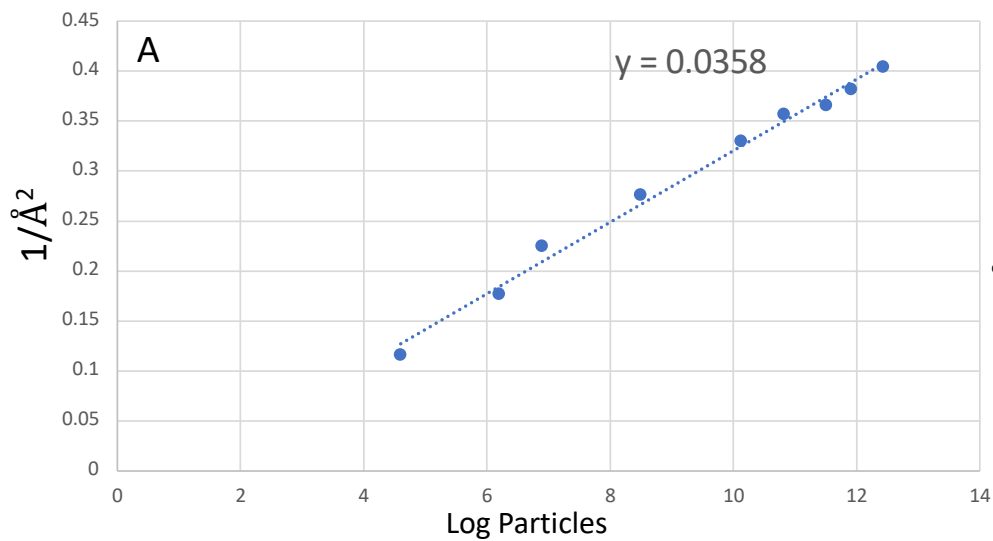


Sup Figure 7

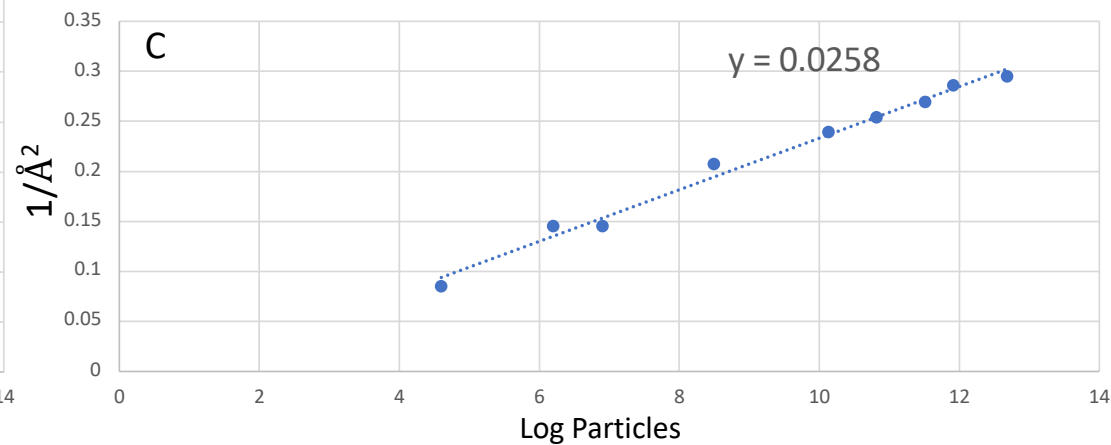


Sup Figure 8

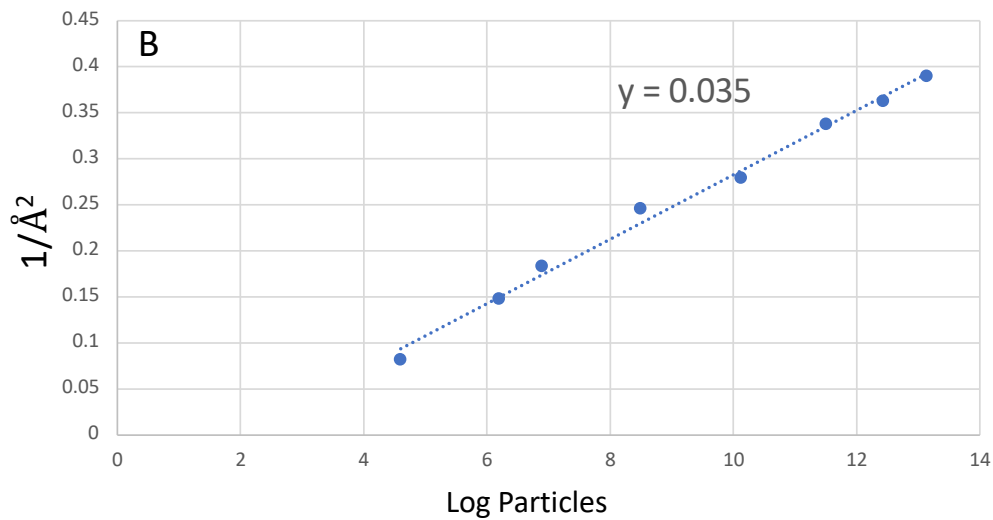
B-factor 130K data set



B-factor 64K SR data set



B-factor 130K EPU FFI SRbin2 data set



B-factor calculation

$2/\text{slope} = \text{B-factor in } \text{\AA}^2$

64K SR = $77.5 \text{\AA}^2$

130K = $55.9 \text{\AA}^2$

130k-EPU SR bin2 = $57.1 \text{\AA}^2$

Sup Figure 9

	<i>Outliers (refined_0)</i>	<i>Expected range</i>
<i>Ramachandran outliers</i>	0.00 %	< 0.05%
<i>Ramachandran favored</i>	98.81 %	> 98%
<i>Rotamer outliers</i>	0.62 %	< 0.3%
<i>C-beta deviations</i>	73	0
<i>Clashscore</i>	4.87	(percentile:43.4)
<i>Molprobity score</i>	1.25	(percentile:66.4)
<i>Cis-proline</i>	33.33	0%
<i>Cis-general</i>	0.00	0%