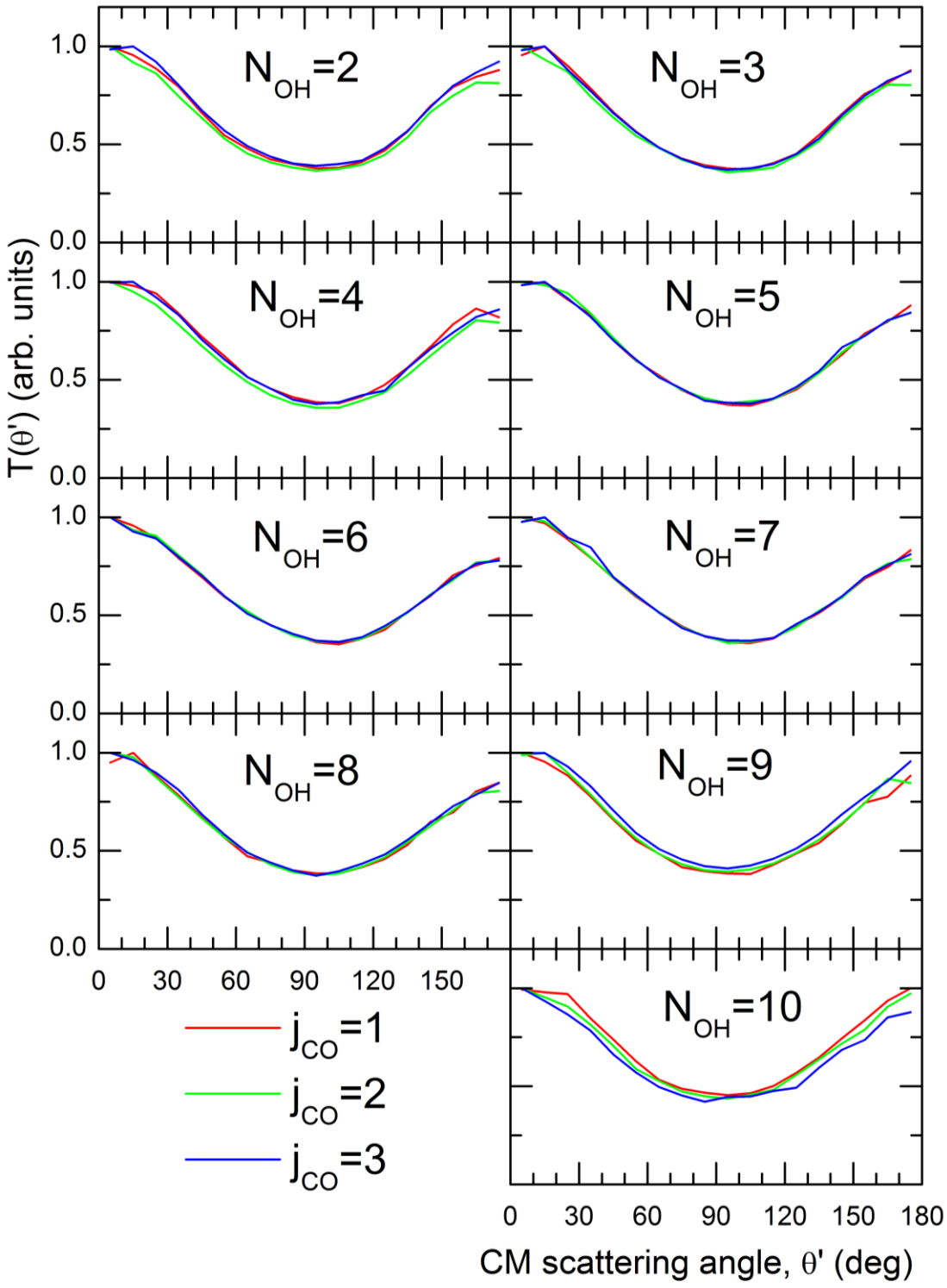

Fig. S1 PADs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 8.6 kcal mol^{-1} from QCT calculations on the YMS PES.

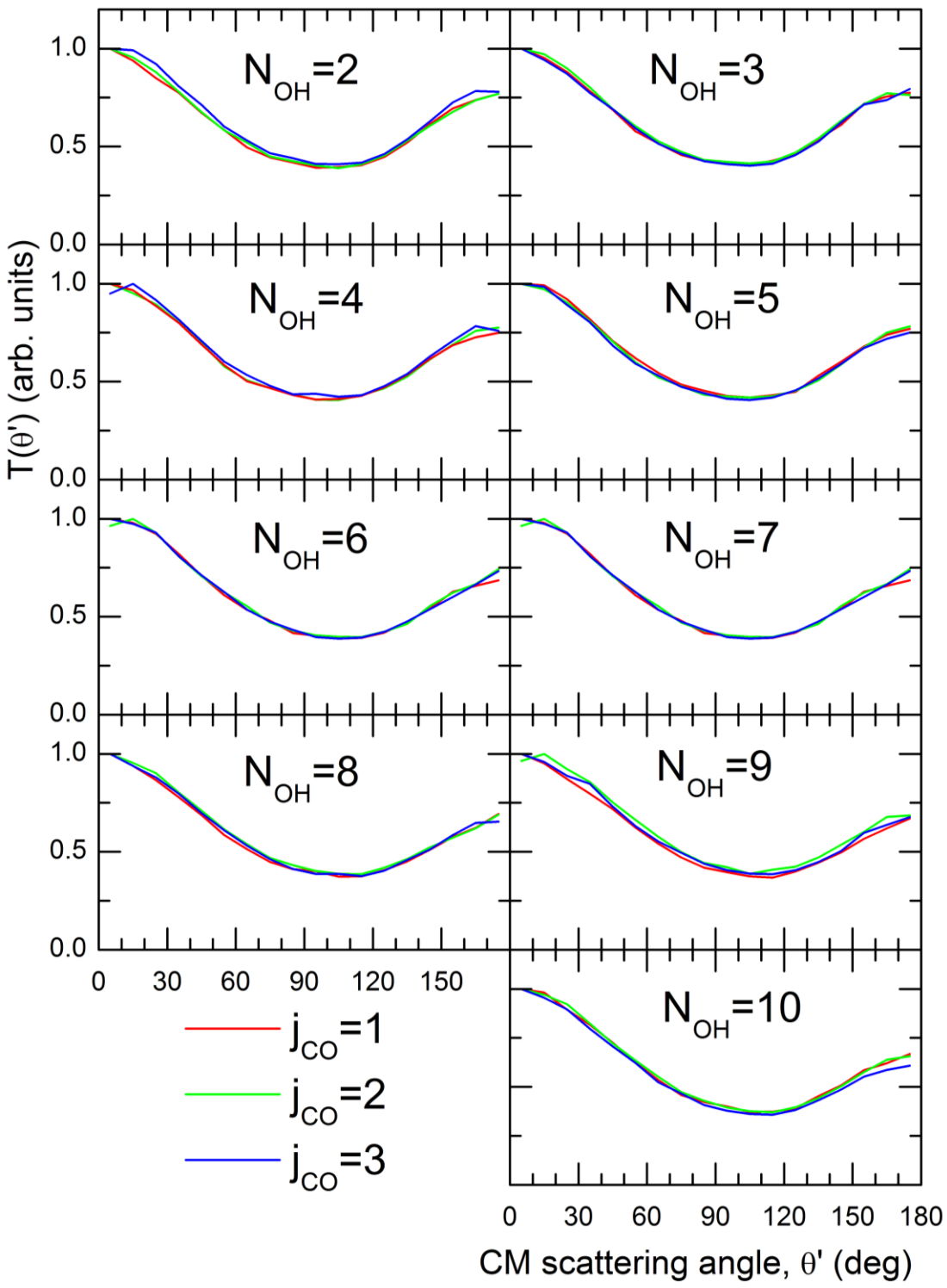

Fig. S2 PADs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 14.1 kcal mol^{-1} from QCT calculations on the YMS PES.

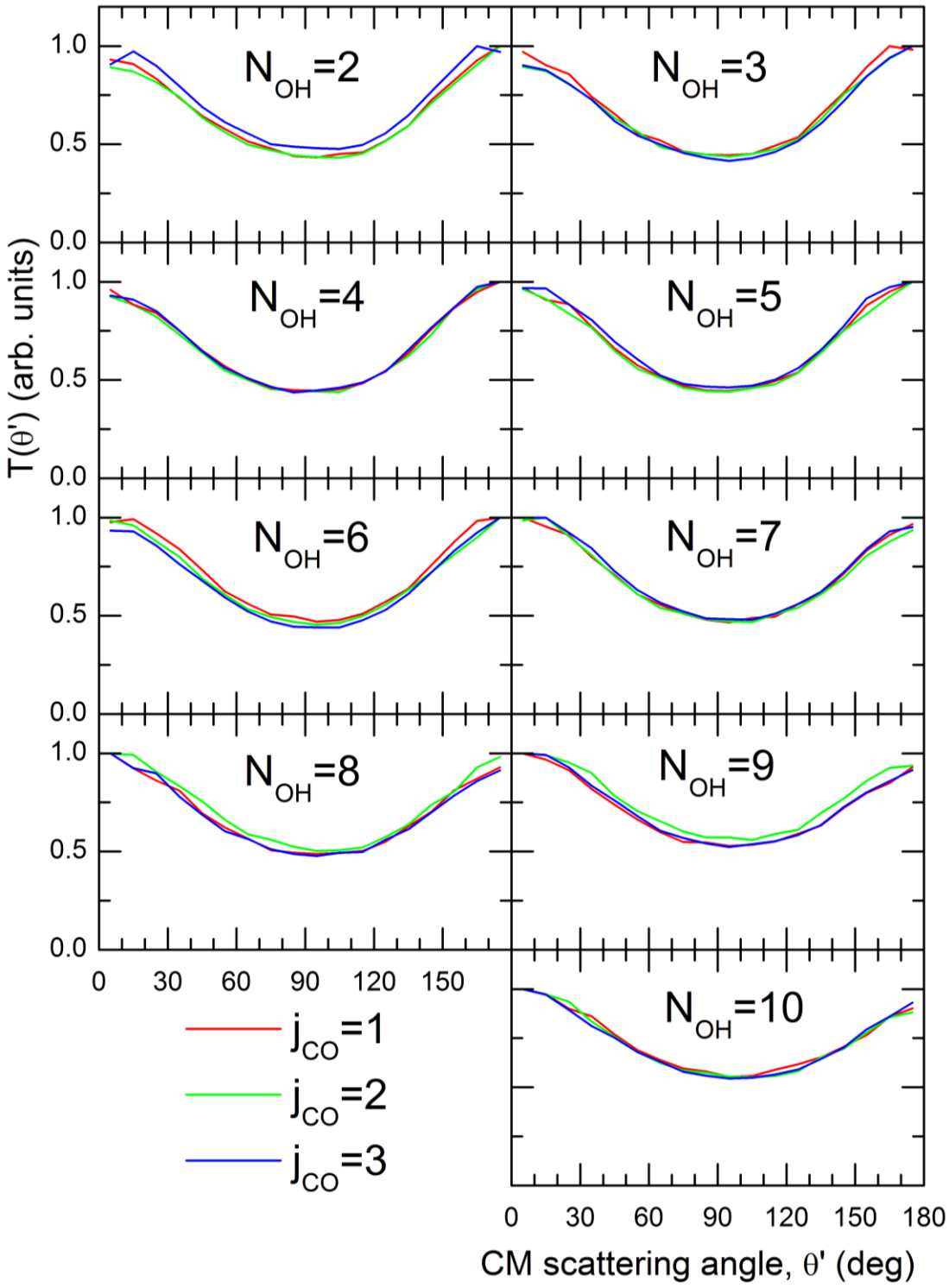

Fig. S3 PADs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 8.6 kcal mol^{-1} from QCT calculations on the LTSH PES.

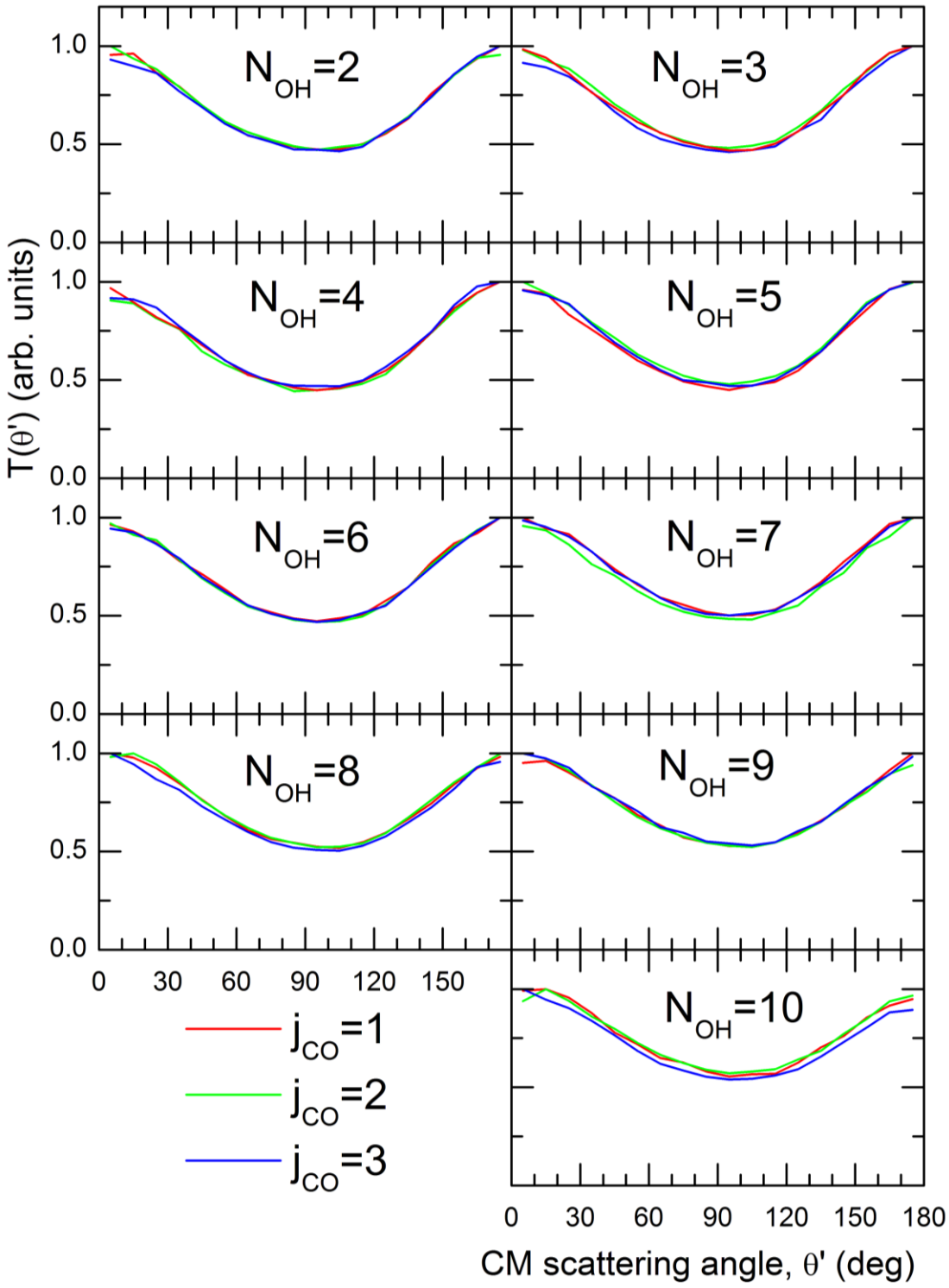

Fig. S4PADs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 14.1 kcal mol^{-1} from QCT calculations on the LTSH PES.

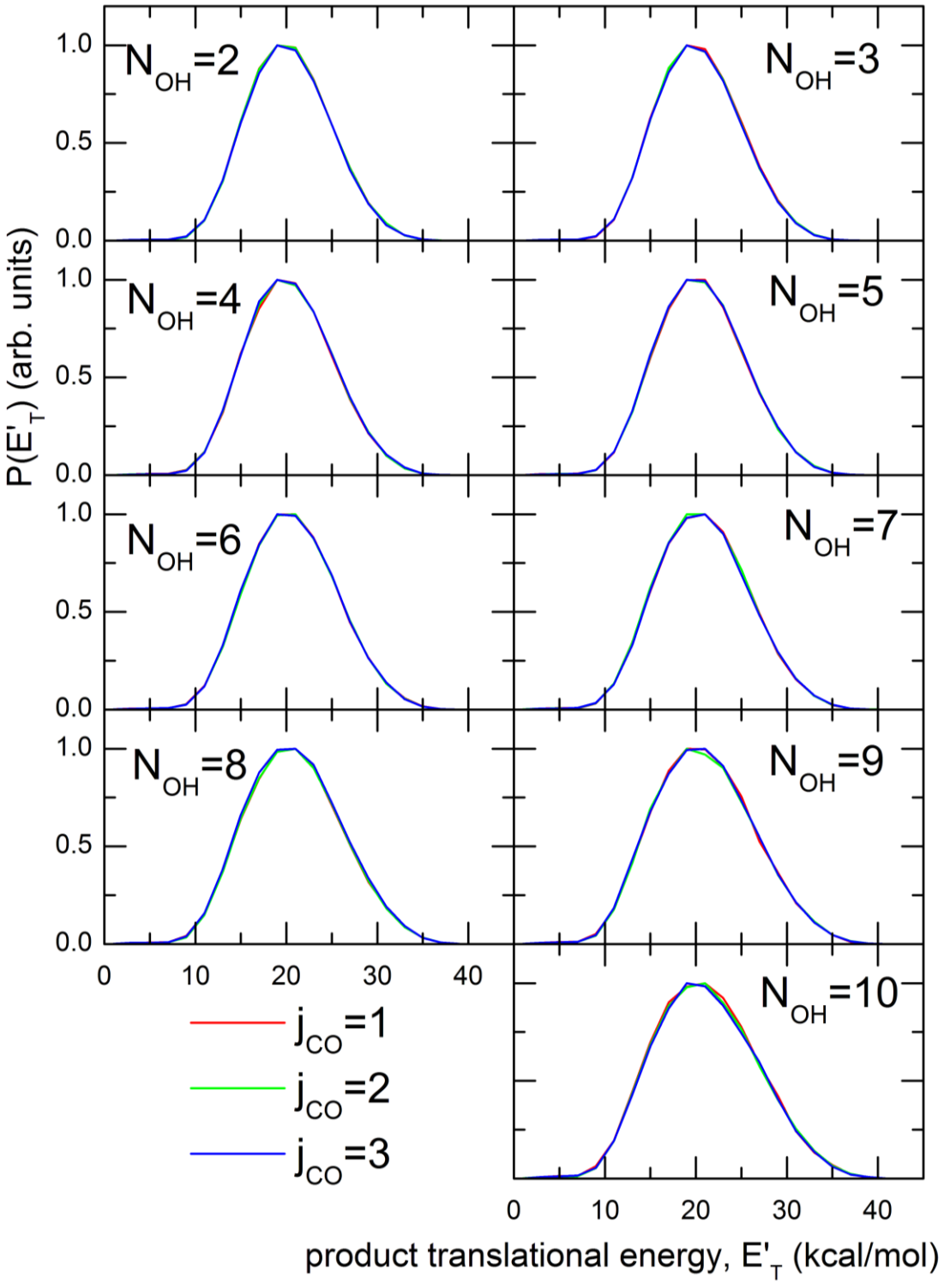

Fig. S5 PTDs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 8.6 kcal mol^{-1} from QCT calculations on the YMS PES.

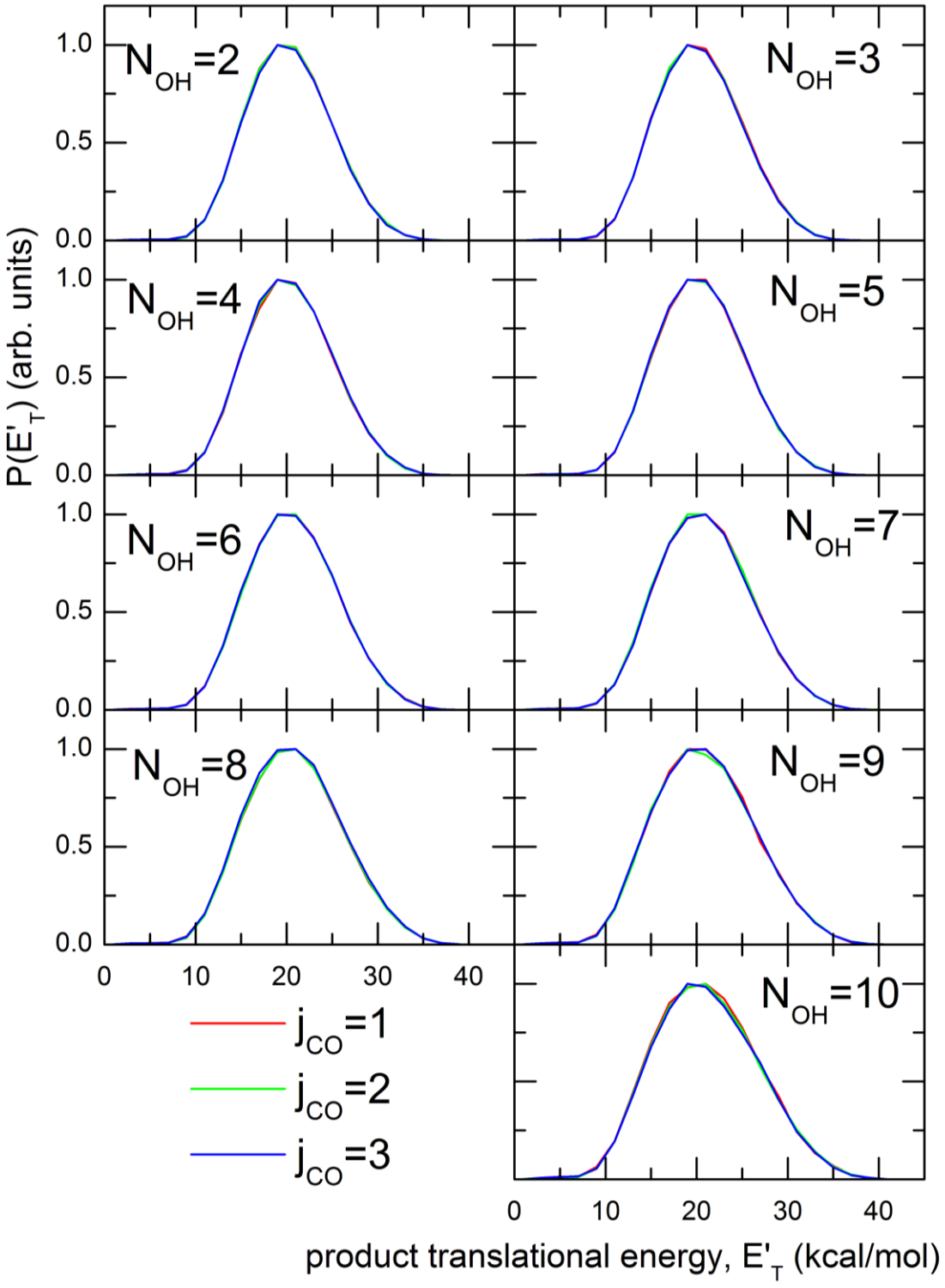

Fig. S6 PTDs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 14.1 kcal mol^{-1} from QCT calculations on the YMS PES.

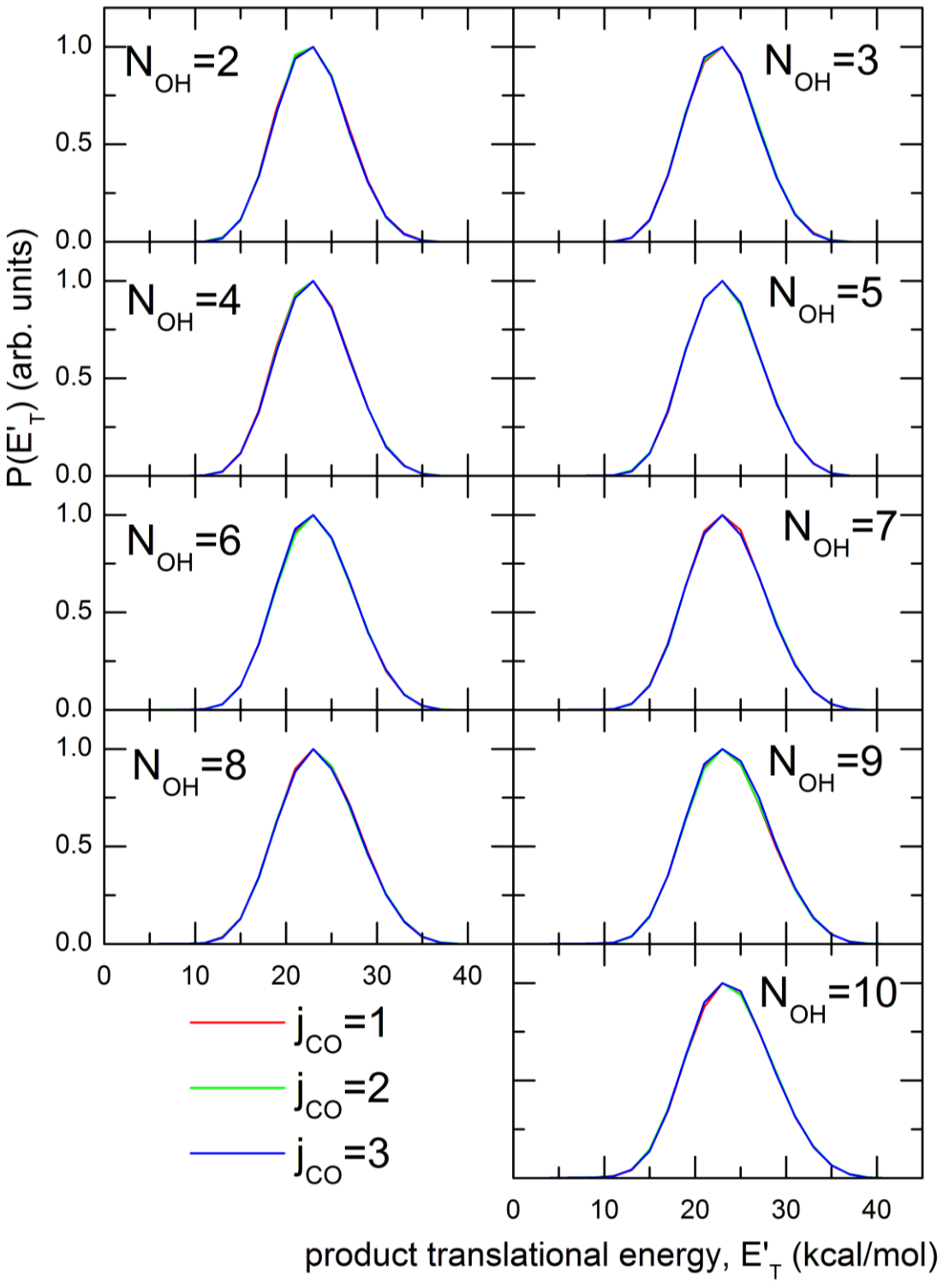

Fig. S7 PTDs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 8.6 kcal mol^{-1} from QCT calculations on the LTSH PES.

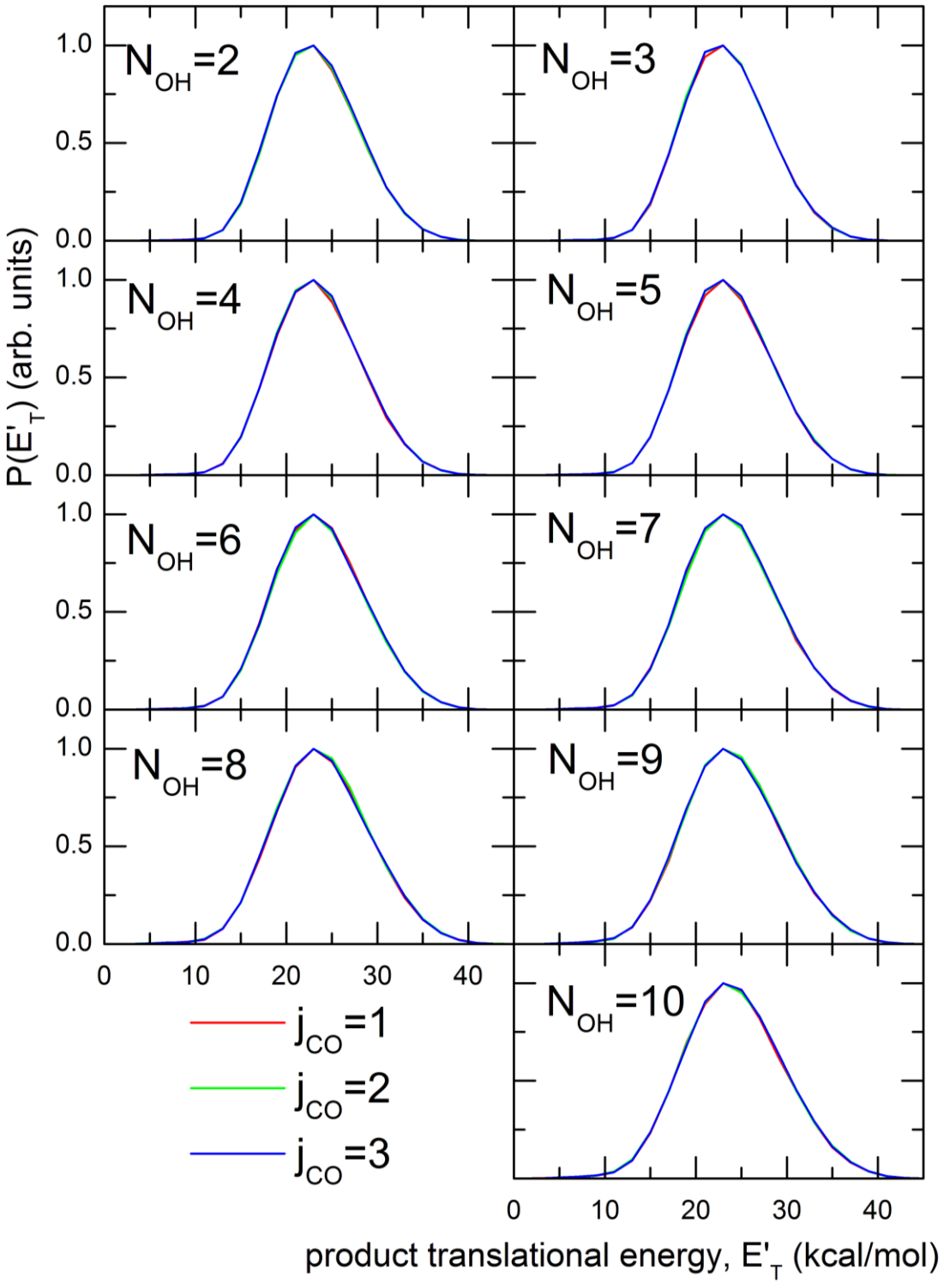

Fig. S8 PTDs for different OH rotational levels for the reactions OH(N)+CO(j=1,2,3)→CO_2+H at E_c of 14.1 kcal mol^{-1} from QCT calculations on the LTSH PES.