

## MAE (N=7450)

QS	71.50	71.50	68.23	63.84
QN	35.33	35.33	35.33	35.33
QН	35.73	35.73	34.51	35.14
QF	33.06	33.06	33.07	33.09
QE	16.76	16.76	18.46	14.30
Lup	7.84	7.84	7.84	7.84
Ldown	26.73	26.73	26.73	26.73
Kup	4.24	4.24	4.24	4.23

22.06

v2016a

22.06

v2018a

22.06

v2018b

22.06

ref

Kdown

## MBE (N=7450)

QS	25.63	25.63	25.62	33.47	
QN	7.87	7.87	7.87	7.89	
QН	-2.32	-2.32	-4.42	-6.44	
QF	-26.23	-26.23	-26.19	-26.23	
QE		9.05	11.20	5.34	
Lup	-5.18	-5.18	-5.18	-5.18	
Ldown	2.34	2.34	2.34	2.34	
Kup	-1.29	-1.29	-1.29	-1.31	

-0.94

v2016a

-0.94

v2018a

-0.94

v2018b

-0.94

ref

Kdown

## RMSE (N=7450)

QS	88.06	88.06	83.76	78.48
QN	45.38	45.38	45.38	45.37
QН	45.16	45.16	43.31	45.09
QF	47.49	47.49	47.47	47.51
QE	24.05	24.05	27.72	20.29
Lup	9.31	9.31	9.31	9.31
Ldown	30.02	30.02	30.02	30.02
Kup	6.71	6.71	6.71	6.69
Kdown	41.06	41.06	41.06	41.06
	ref	v2016a	v2018a	v2018b