Validation of

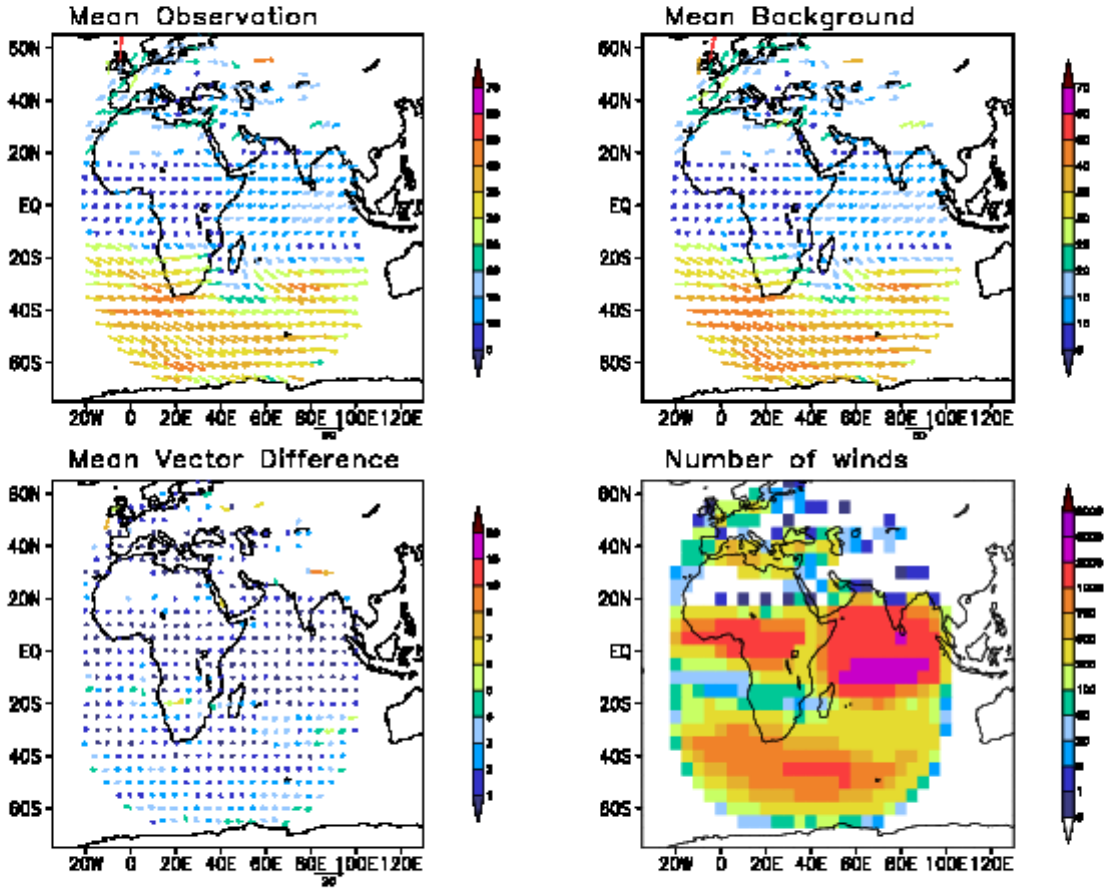
METEOSAT-8

Atmospheric Motion Vectors

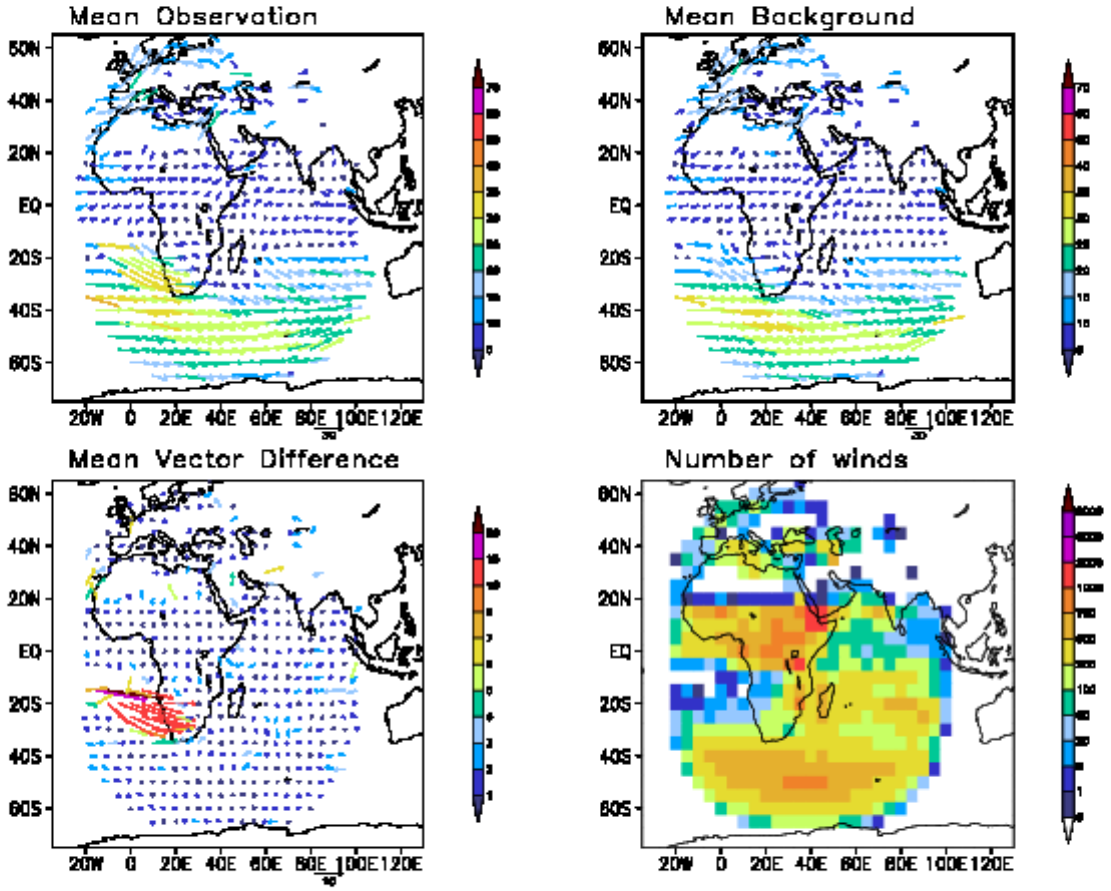
June 2019

Validation Against NCMRWF NGFS First Guess

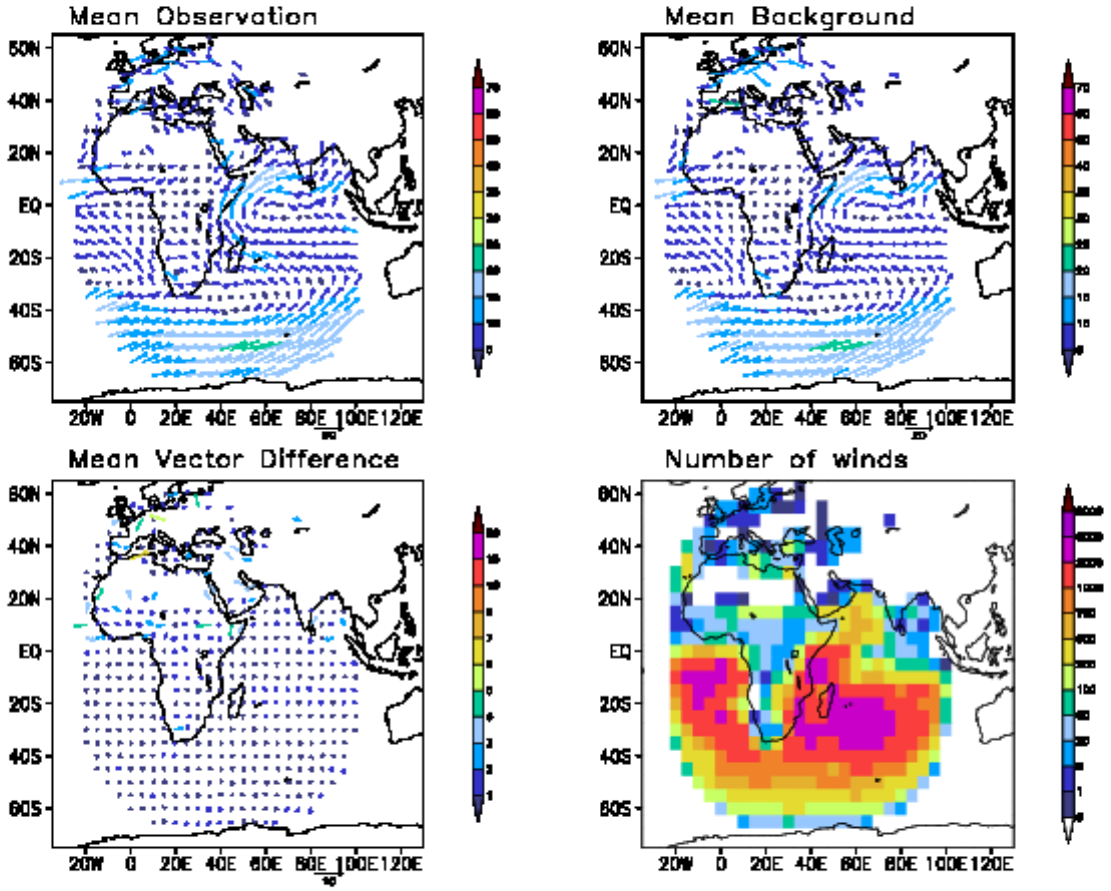
METEOSAT-8 IR, High Level, Above 400 hPa, June 2019



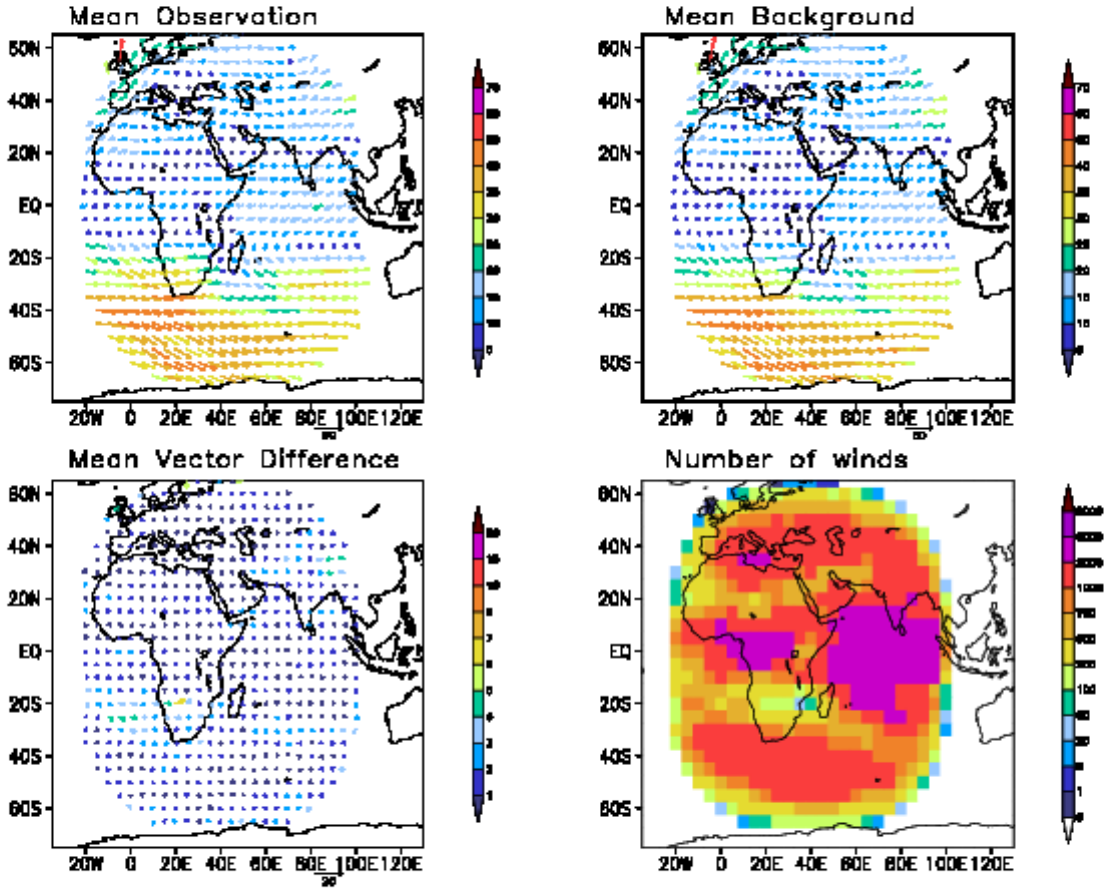
METEOSAT-8 IR, Mid Level, 700 - 401 hPa, June 2019



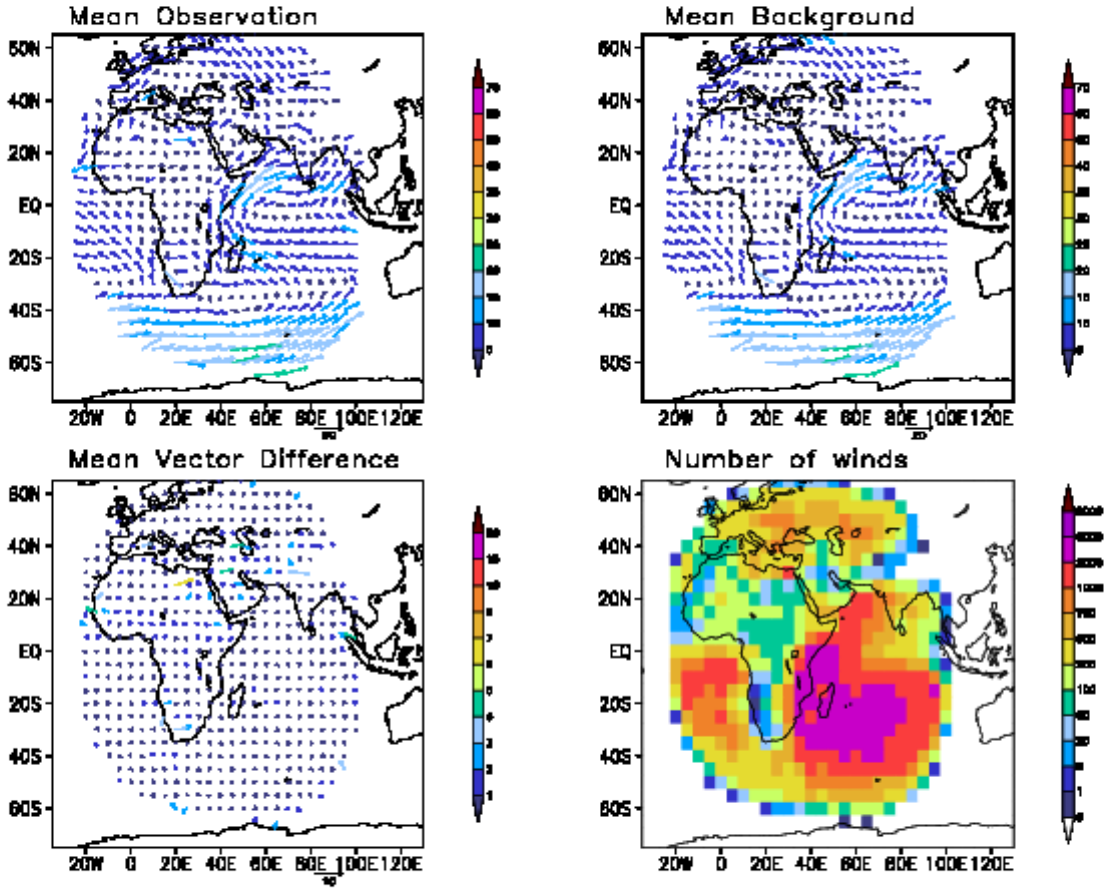
METEOSAT-8 IR, Low Level, Below 700 hPa, June 2019



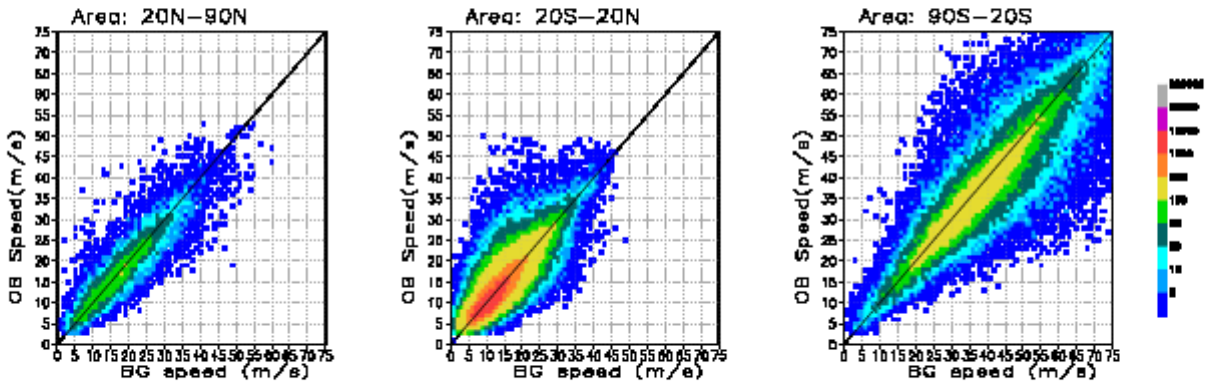
METEOSAT-8 WV, High Level, Above 400 hPa, June 2019



METEOSAT-8 VIS, Low Level, Below 700 hPa, June 2019



METEOSAT-8 IR, June 2019, High Level, Above 400 hPa

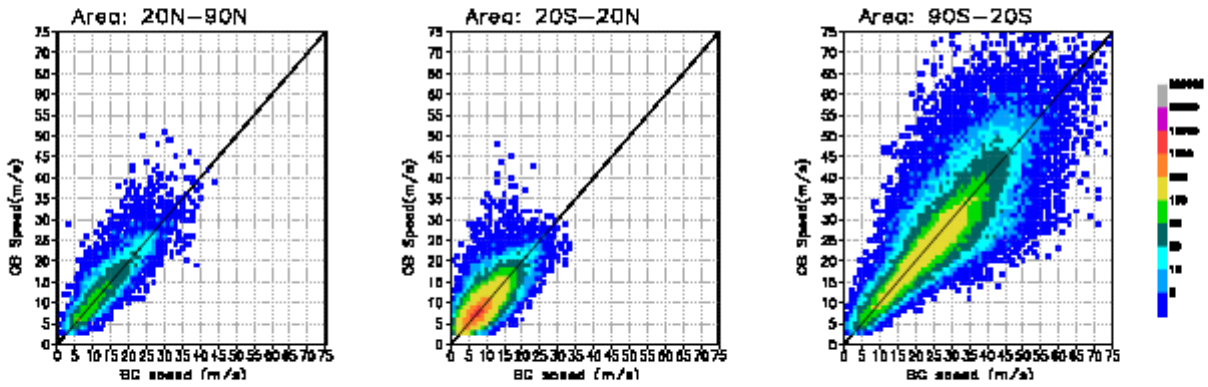


No.of OBS: 14481
Bias : -0.17
STD : 3.82

No. of OBS: 174853
Bias : 0.24
STD : 3.92

No. of OBS: 92433
Bias : -1.17
STD : 6.40

METEOSAT-8 IR, Mid Level, 700 - 401 hPa, June 2019

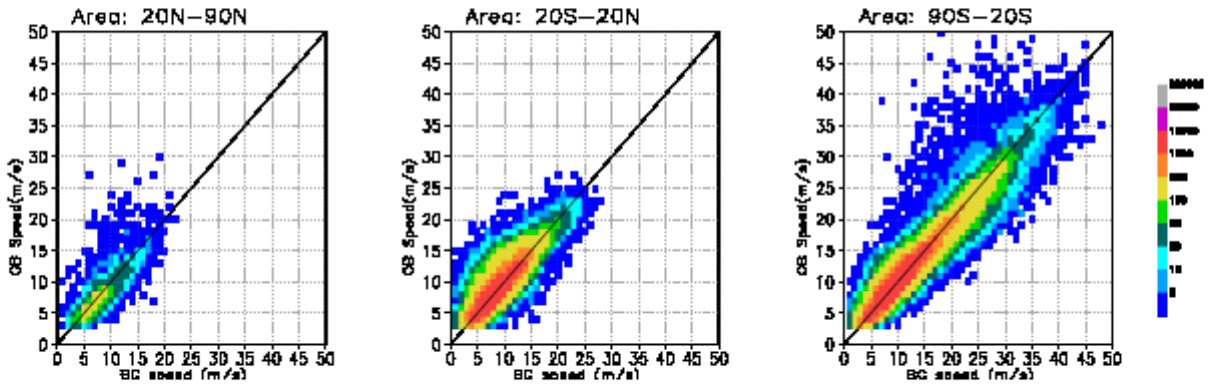


No.of OBS: 3938
Bias : -0.04
STD : 2.25

No. of OBS: 125016
Bias : 0.28
STD : 1.91

No. of OBS: 167581
Bias : 0.07
STD : 2.00

METEOSAT-8 IR, June 2019, Low Level, Below 700 hPa

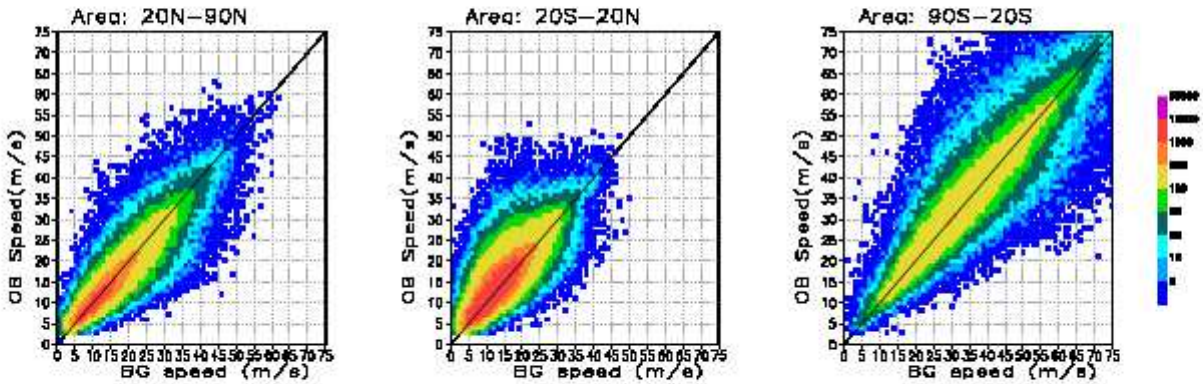


No.of OBS: 3938
Bias : -0.04
STD : 2.25

No. of OBS: 125016
Bias : 0.26
STD : 1.91

No. of OBS: 167581
Bias : 0.07
STD : 2.00

METEOSAT-8 WV, June 2019, High Level, Above 400 hPa

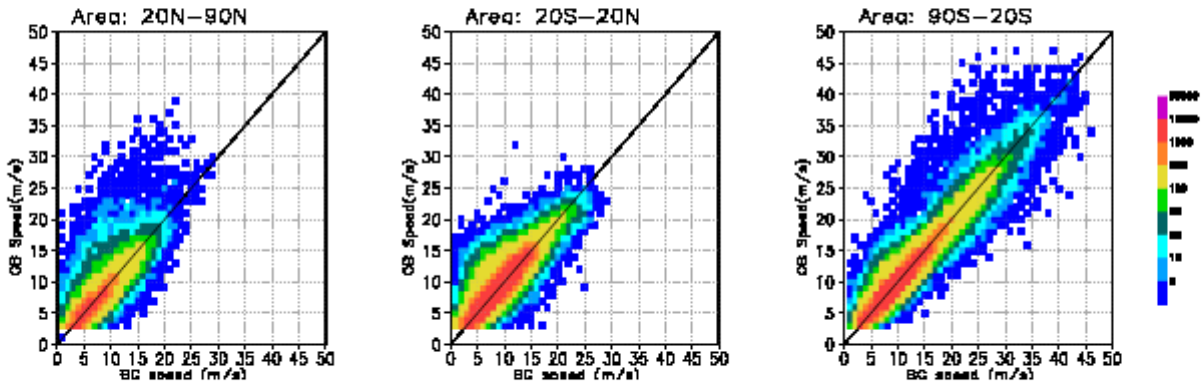


No.of OBS: 176408
Bias : -0.33
STD : 4.07

No. of OBS: 333589
Bias : 1.07
STD : 4.18

No. of OBS: 159543
Bias : 0.54
STD : 5.42

METEOSAT-8 VIS, June 2019, Low Level, Below 700 hPa

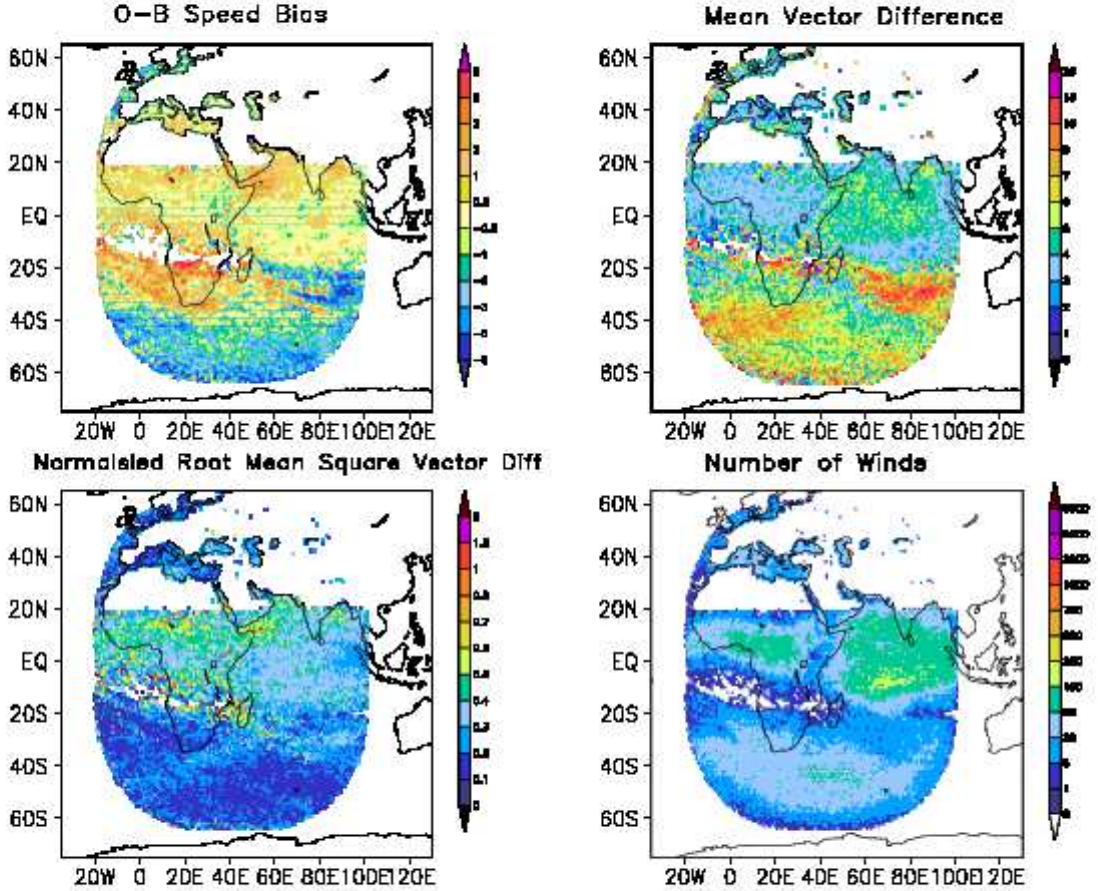


No.of OBS: 55307
Bias : 0.19
STD : 2.45

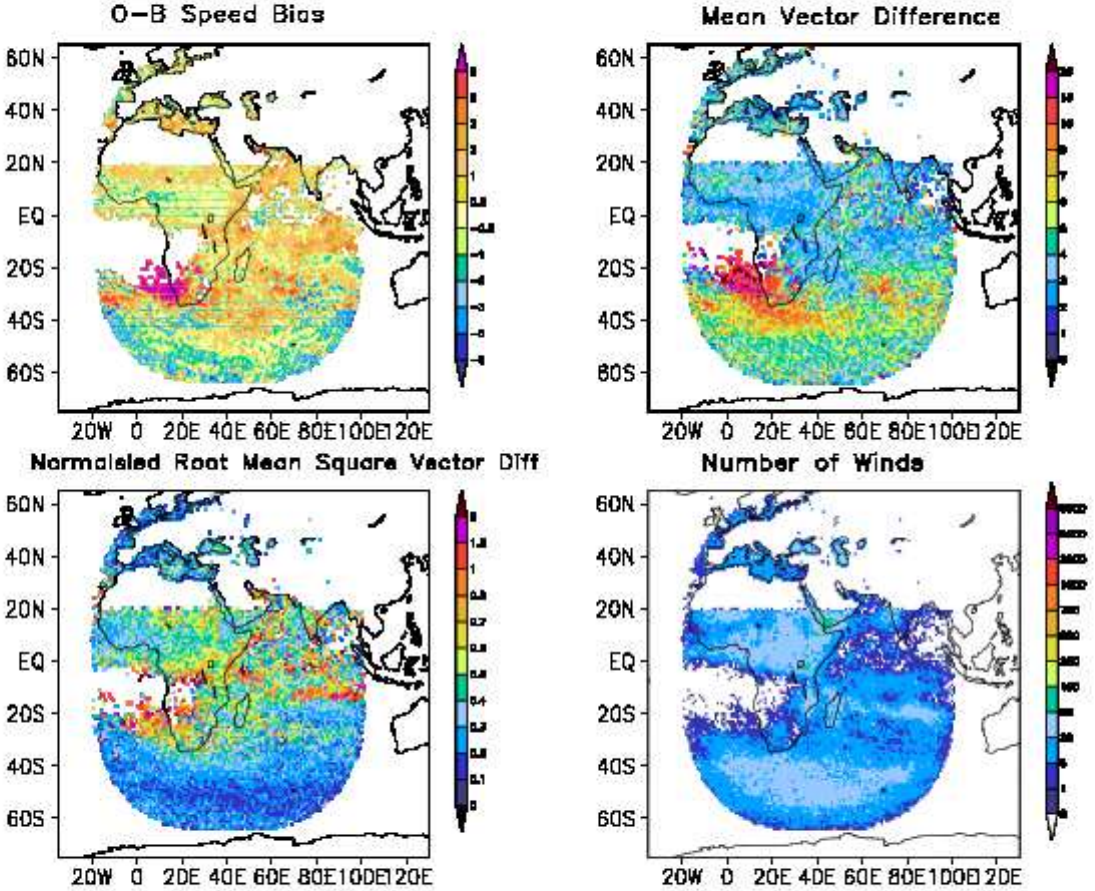
No. of OBS: 178180
Bias : 0.27
STD : 2.00

No. of OBS: 157703
Bias : 0.09
STD : 1.92

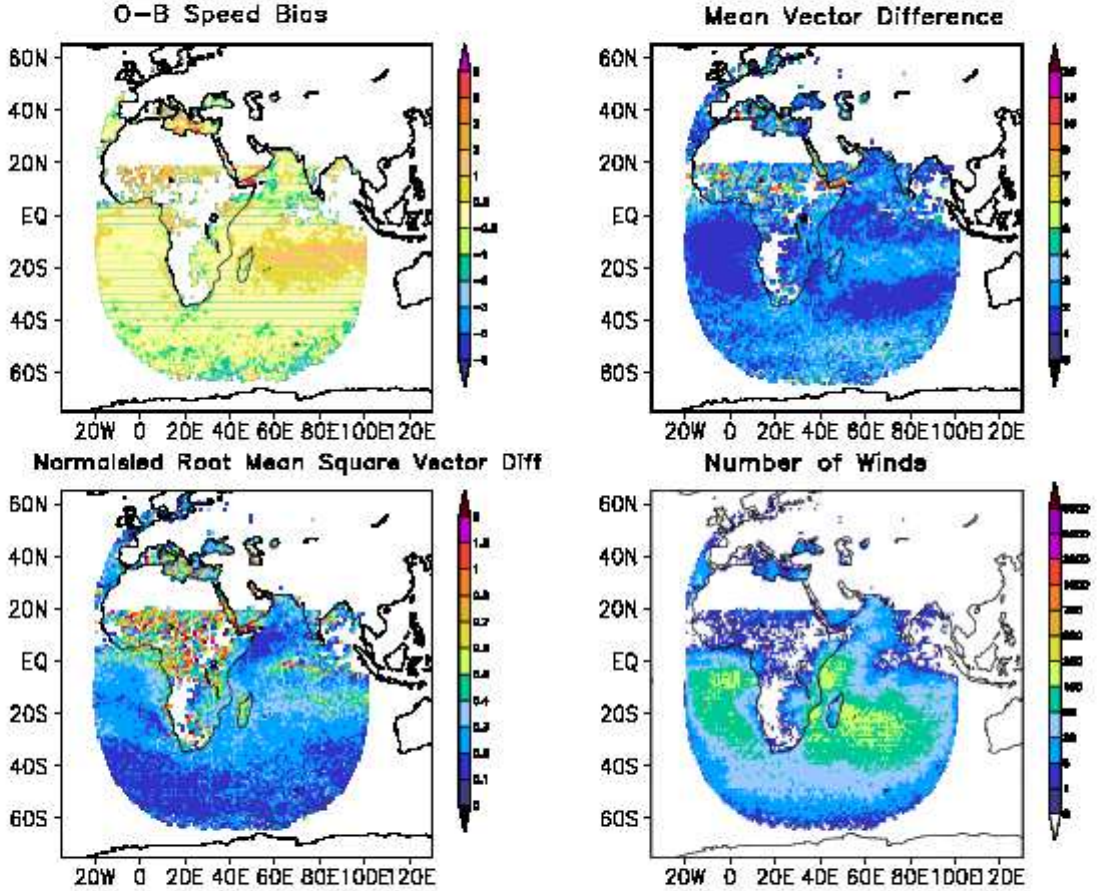
METEOSAT-8 IR, High Level, Above 400 hPa, June 2019



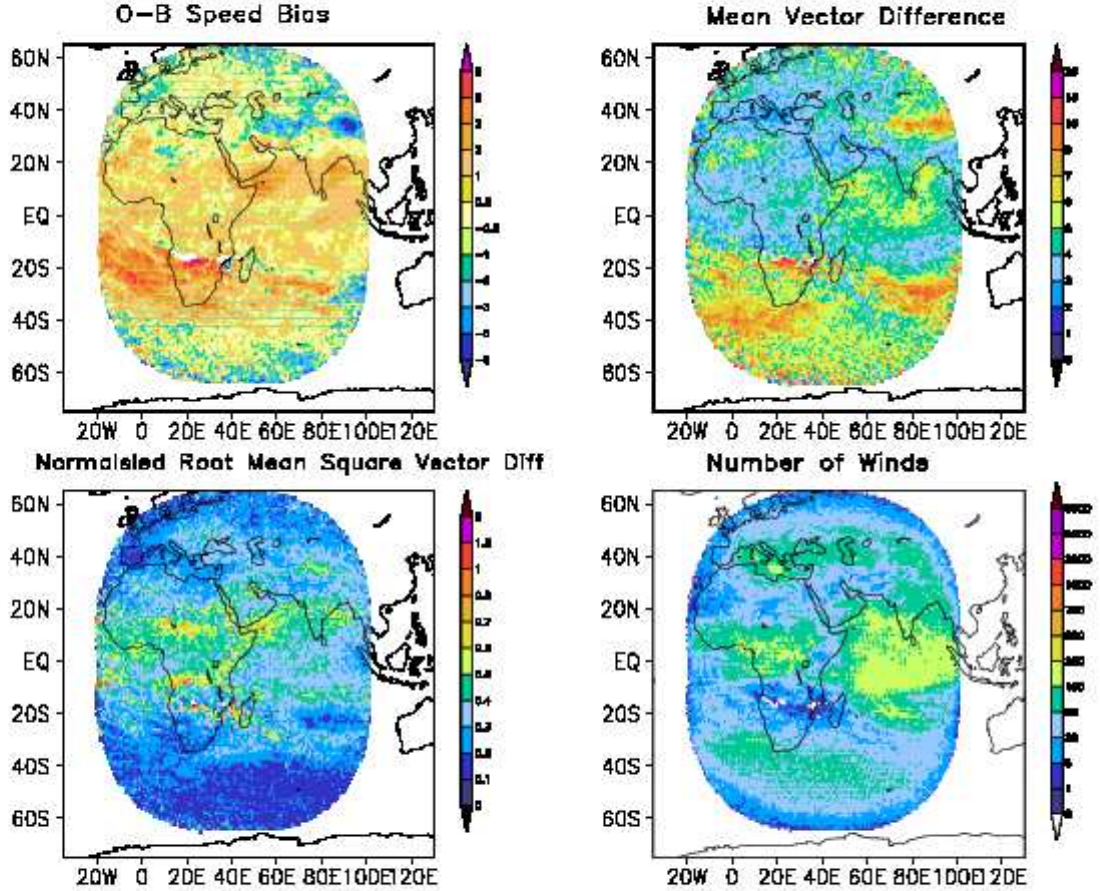
METEOSAT-8 IR, Mid Level, 700 - 401 hPa, June 2019



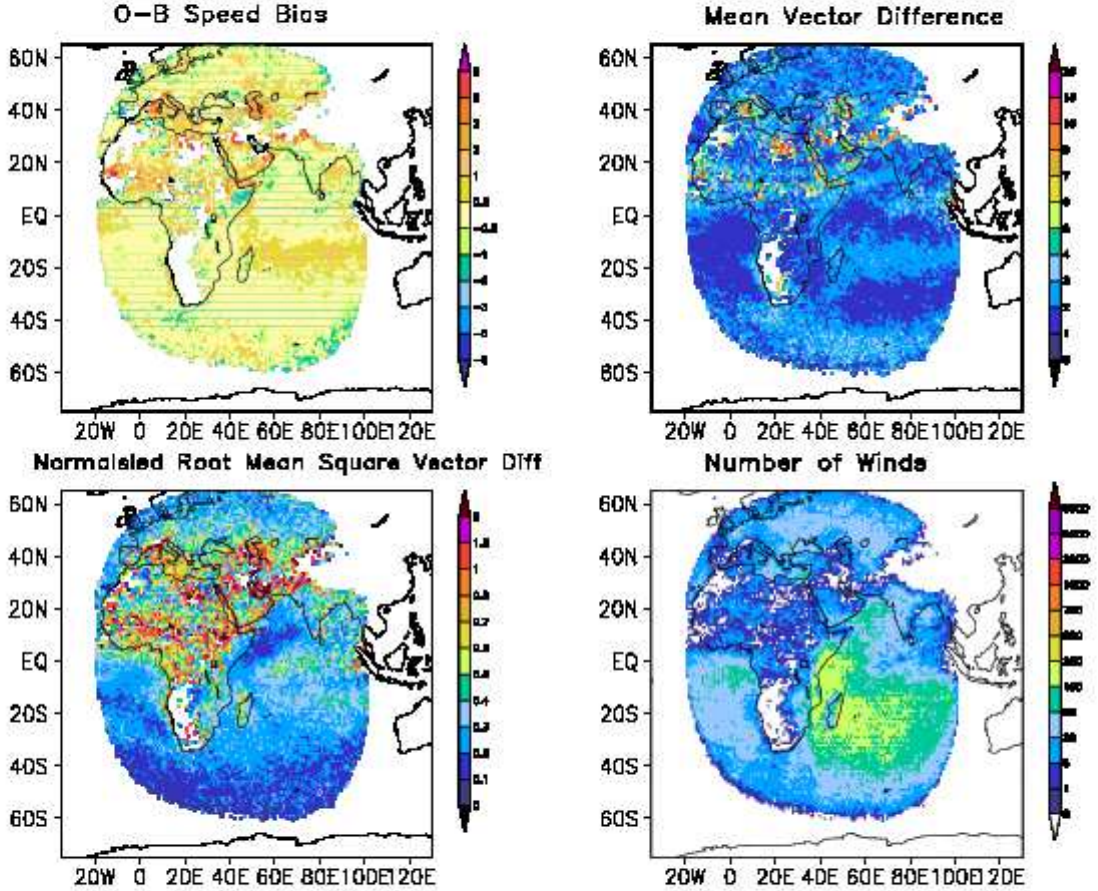
METEOSAT-8 IR, Low Level, Below 700 hPa, June 2019



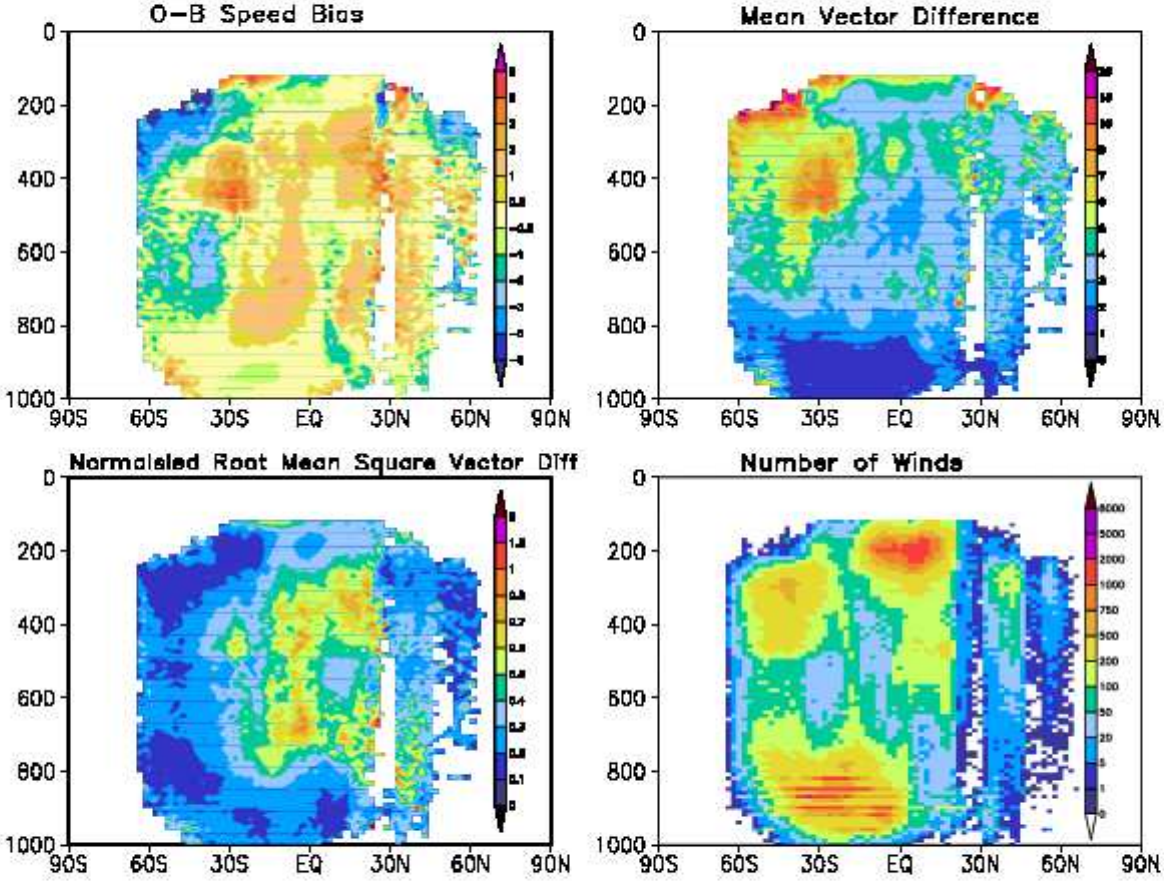
METEOSAT-8 WV, Above 400 hPa, June 2019



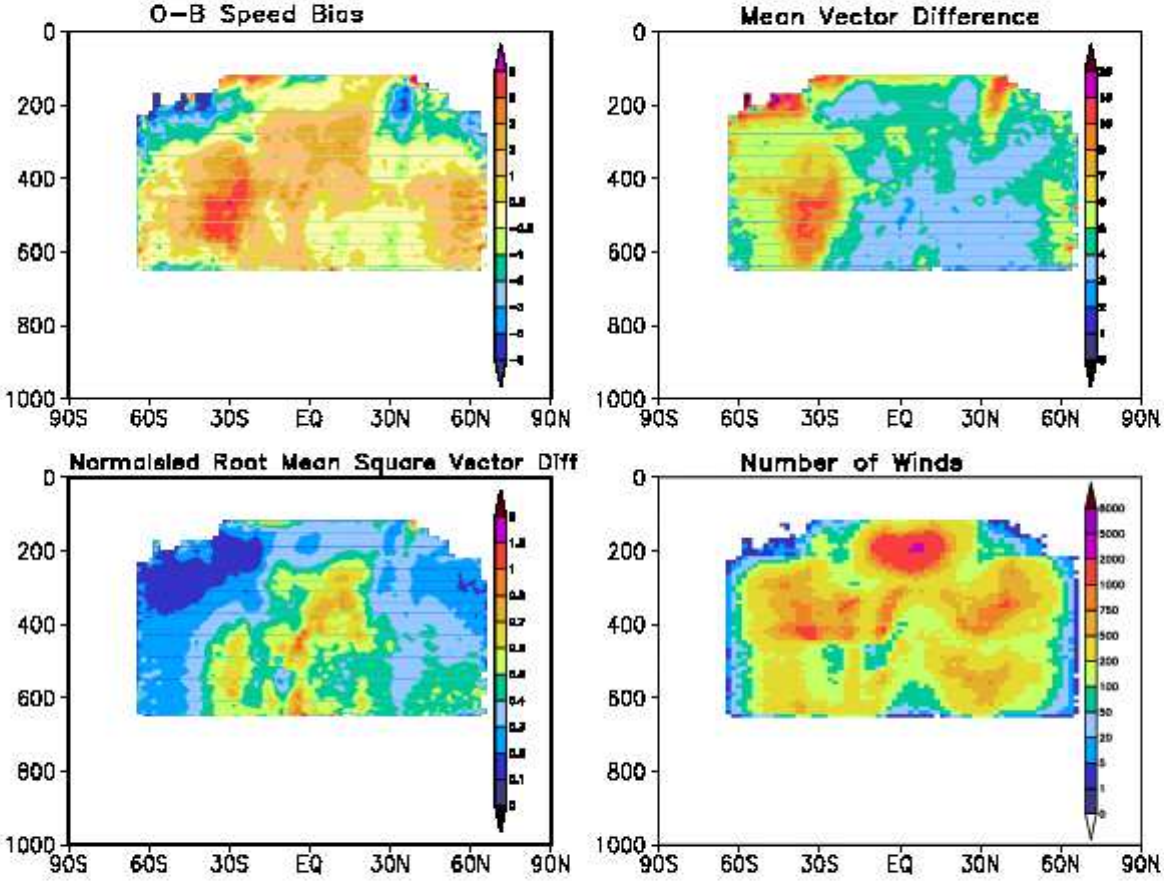
METEOSAT-8 VIS, Low Level, Below 700 hPa, June 2019



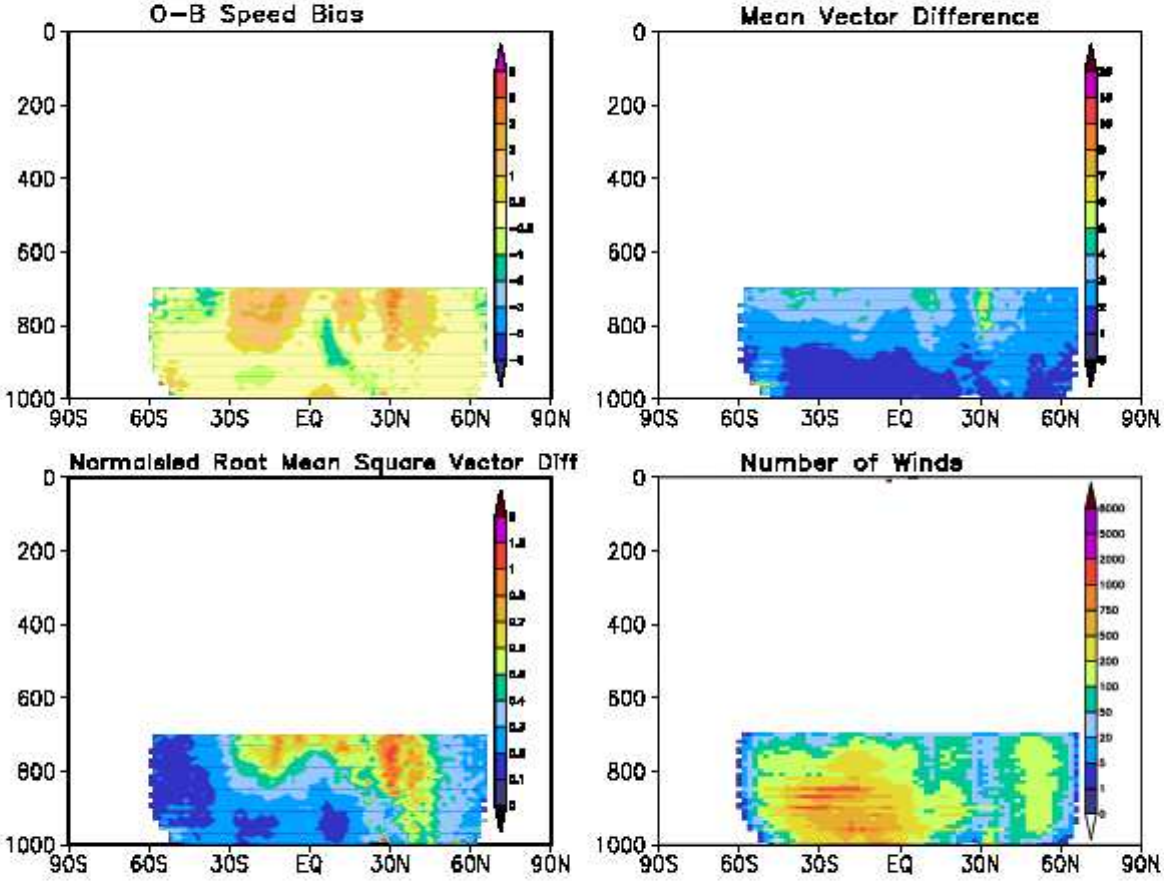
METEOSAT-8 IR, June 2019



METEOSAT-8 WV, June 2019



METEOSAT-8 VIS, June 2019



Validation against Insitu Observations

METEOSAT-8 SATELLITE AMVS
(Comparison against Insitu Observations)
Reporting Period: 01 06 2019 - 30 06 2019

NORTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	14.36	15.62	-1.26	7.71	1468
Mid Lev IR:	10.61	11.03	-0.42	6.07	801
Low Lev IR:	7.72	6.99	0.73	6.24	405
Hig Lev WV:	11.41	13.77	-2.36	8.26	48231
Low Lev VIS:	6.51	6.41	0.10	4.53	14061

TROPICS

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	10.78	12.97	-2.19	8.25	14264
Mid Lev IR:	7.64	7.16	0.48	6.24	2042
Low Lev IR:	6.86	7.80	-0.94	4.92	627
Hig Lev WV:	12.24	13.24	-0.99	8.78	27105
Low Lev VIS:	7.24	7.26	-0.02	4.52	3940

SOUTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	35.27	35.86	-0.59	10.22	451
Mid Lev IR:	16.67	17.70	-1.03	10.61	339
Low Lev IR:	8.72	10.53	-1.81	7.00	469
Hig Lev WV:	29.53	29.61	-0.08	11.19	961
Low Lev VIS:	9.53	10.42	-0.89	6.01	1296

Hig Lev = Above 400 hPa
Mid Lev = 700 - 401 hPa
Low Lev = Below 700 hPa