

Validation of

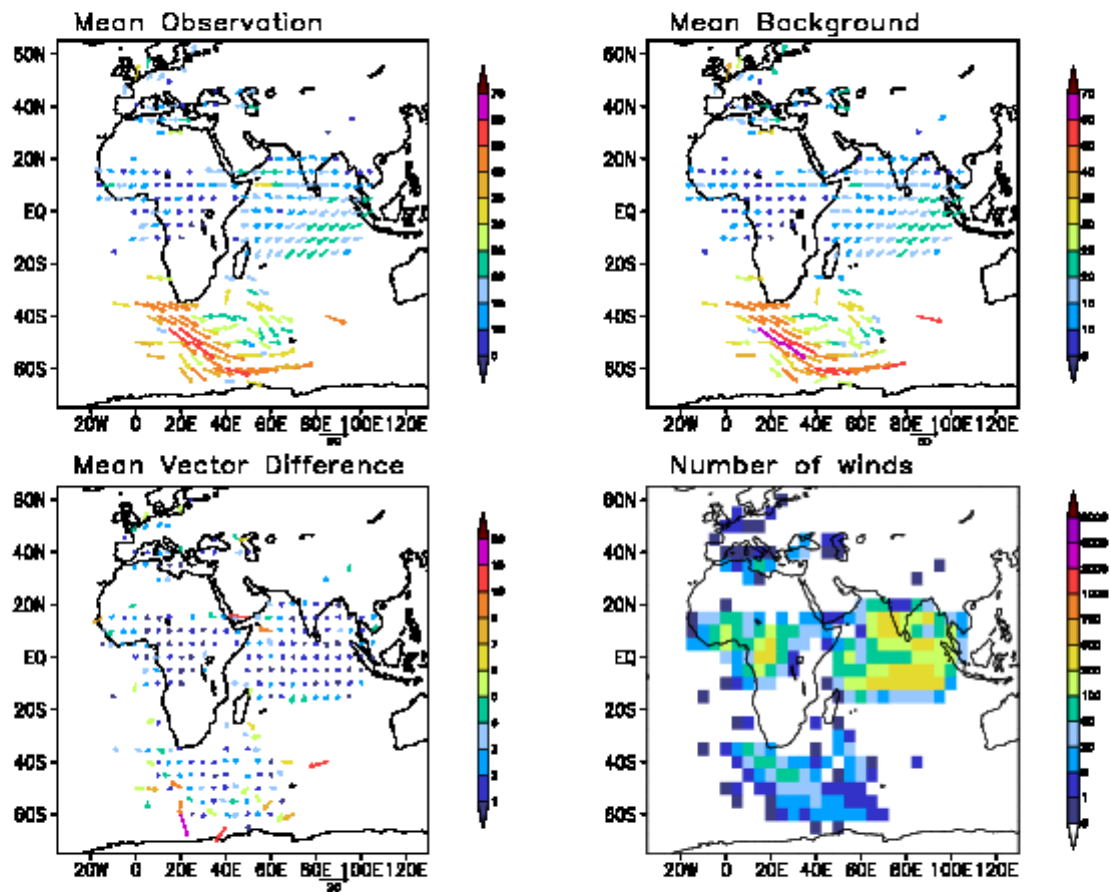
METEOSAT-9

Atmospheric Motion Vectors

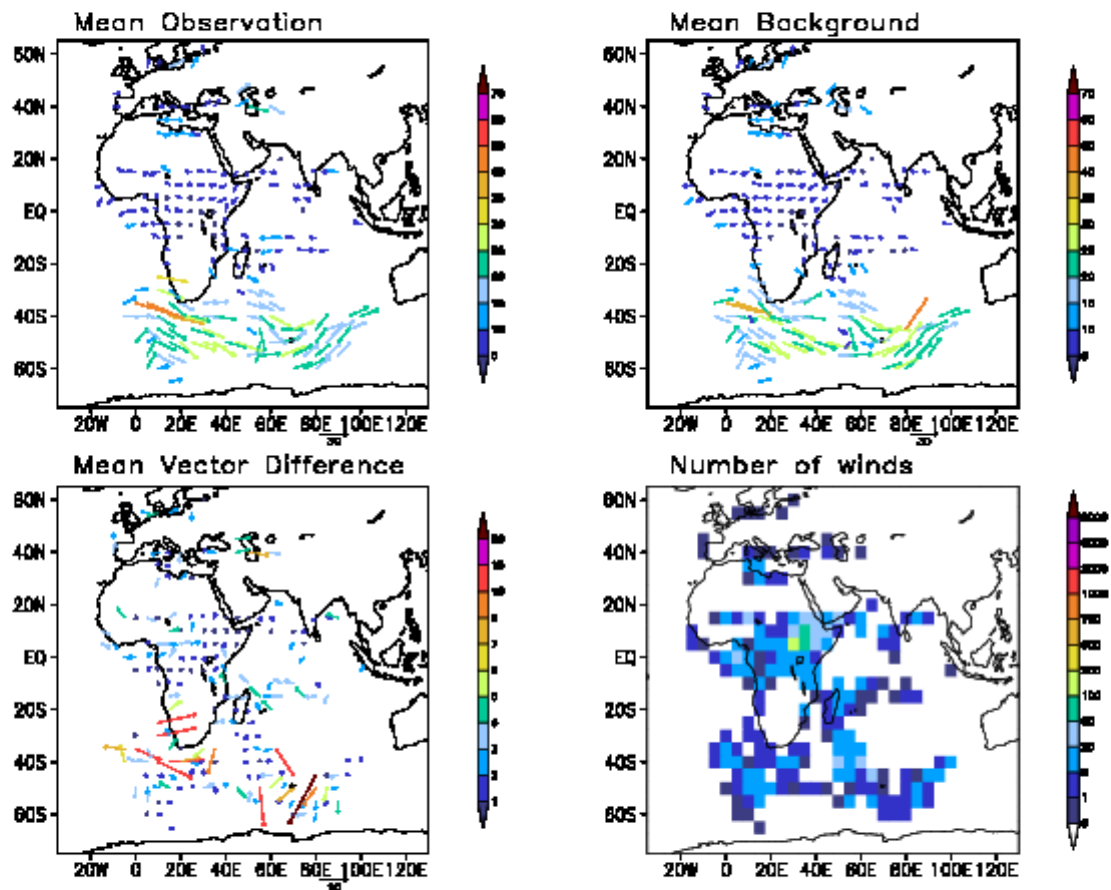
September 2024

Validation Against
NCMRWF NGFS First Guess

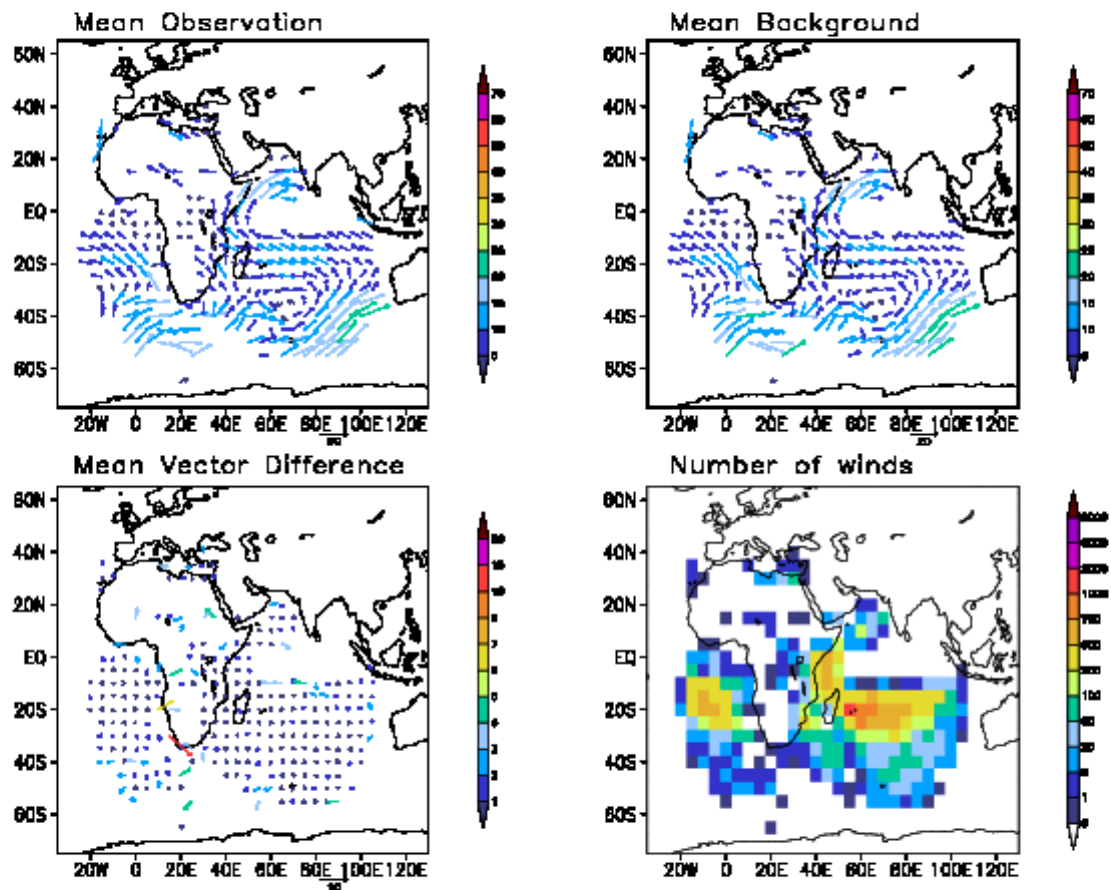
METEOSAT-9 IR, High Level, Above 400 hPa, September 2024



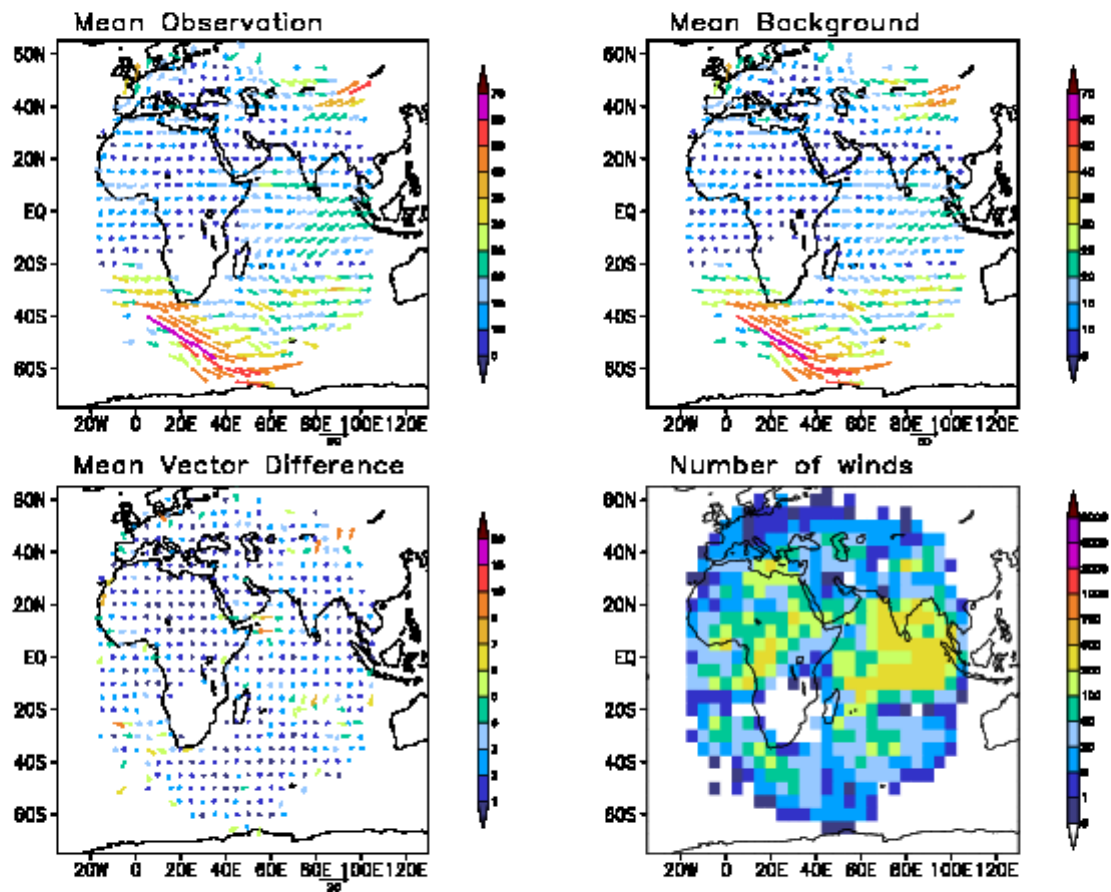
METEOSAT-9 IR, Mid Level, 700 – 401 hPa, September 2024



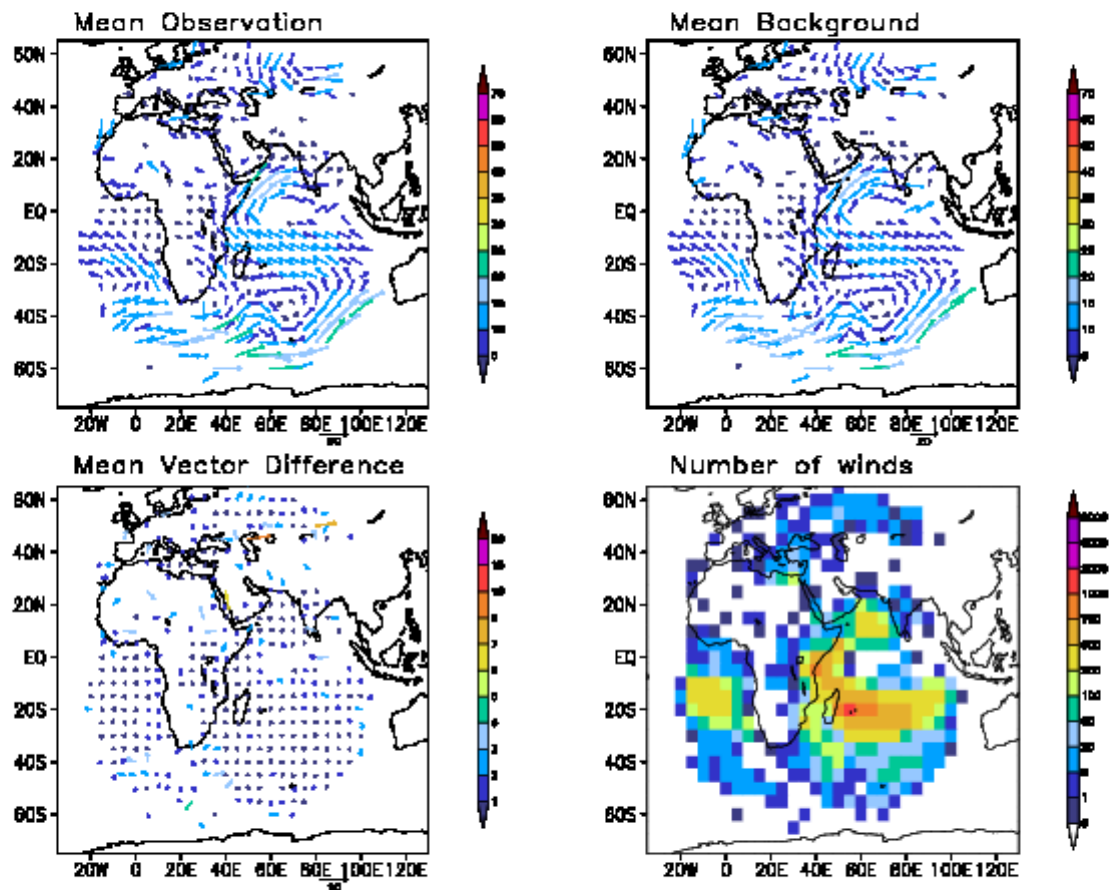
METEOSAT-9 IR, Low Level, Below 700 hPa, September 2024



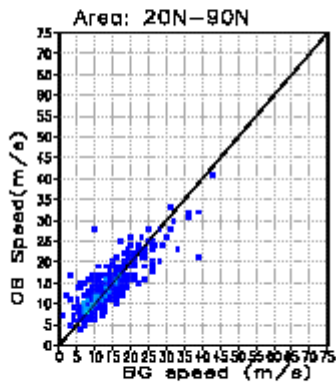
METEOSAT-9 WV, High Level, Above 400 hPa, September 2024



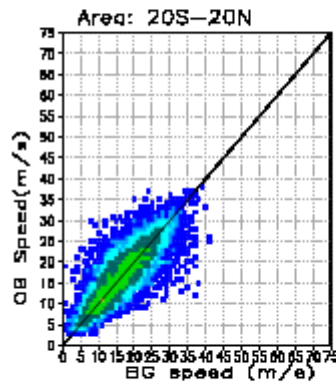
METEOSAT-9 VIS, Low Level, Below 700 hPa, September 2024



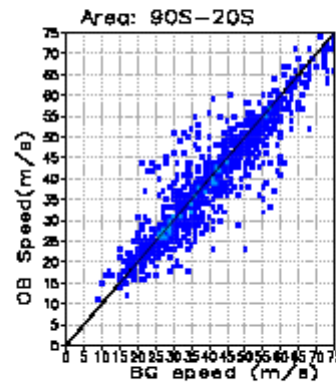
METEOSAT-9 IR, September 2024, High Level, Above 400 hPa



No. of OBS: 450
Bias : 0.24
STD : 3.26



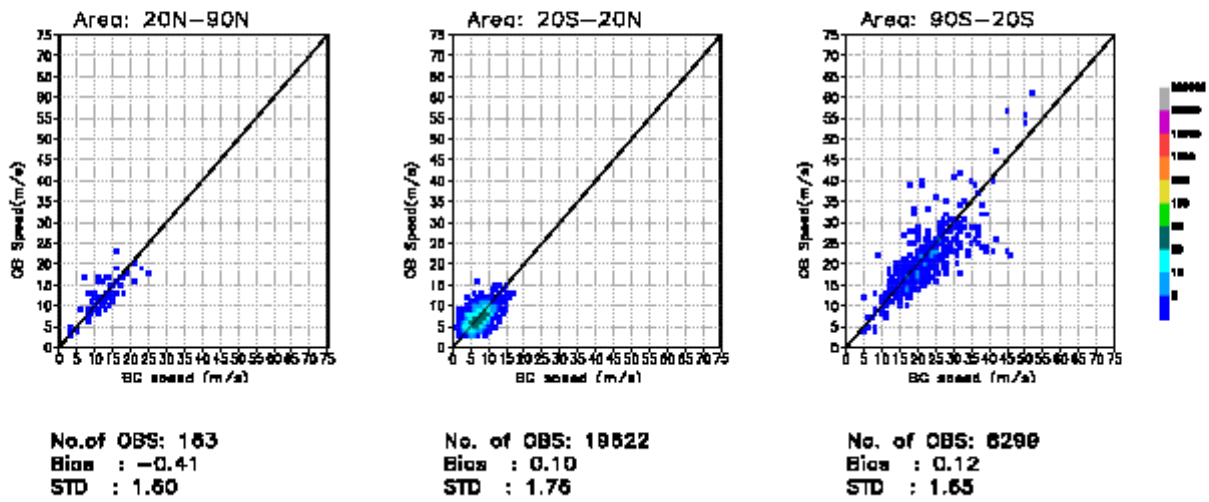
No. of OBS: 12512
Bias : 0.42
STD : 3.77



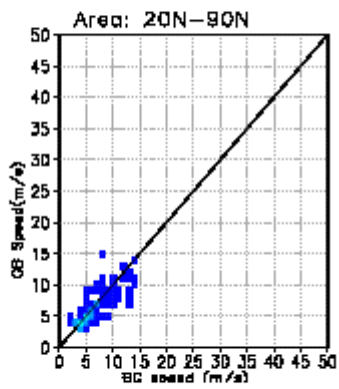
No. of OBS: 1175
Bias : -0.90
STD : 5.12



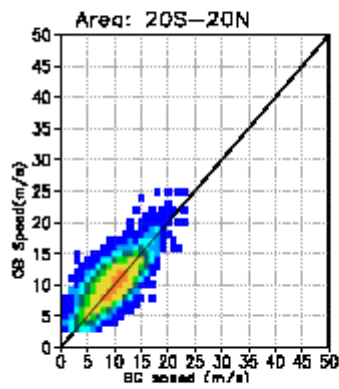
METEOSAT-9 IR, Mid Level, 700 – 401 hPa, September 2024



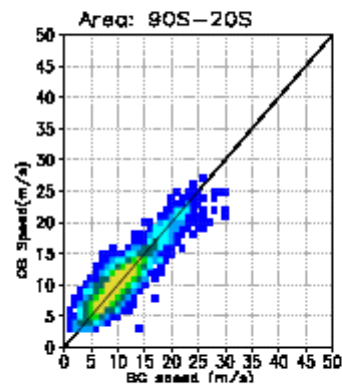
METEOSAT-9 IR, September 2024, Low Level, Below 700 hPa



No. of OBS: 163
Bias : -0.41
STD : 1.60

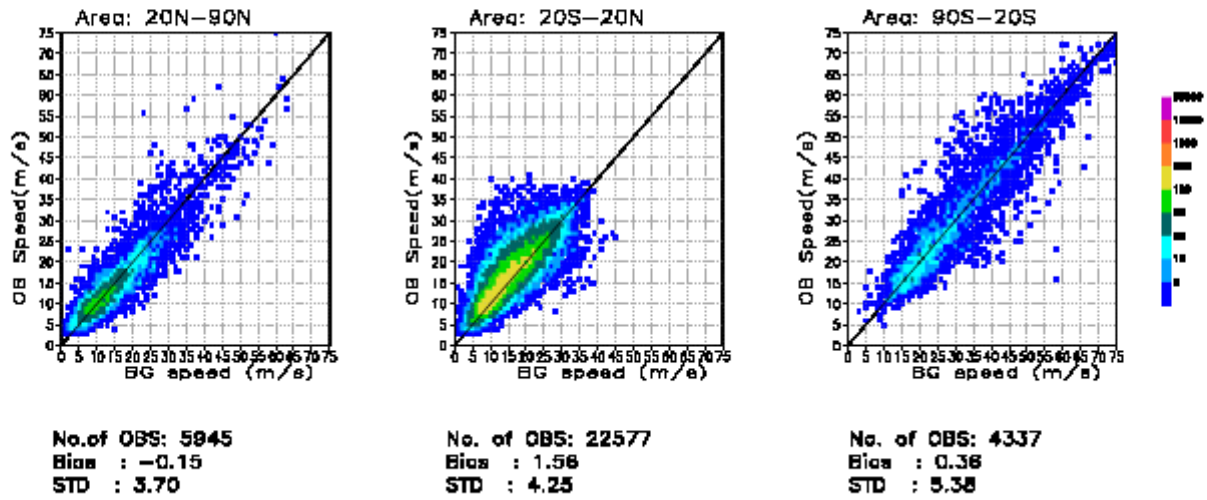


No. of OBS: 19522
Bias : 0.10
STD : 1.76

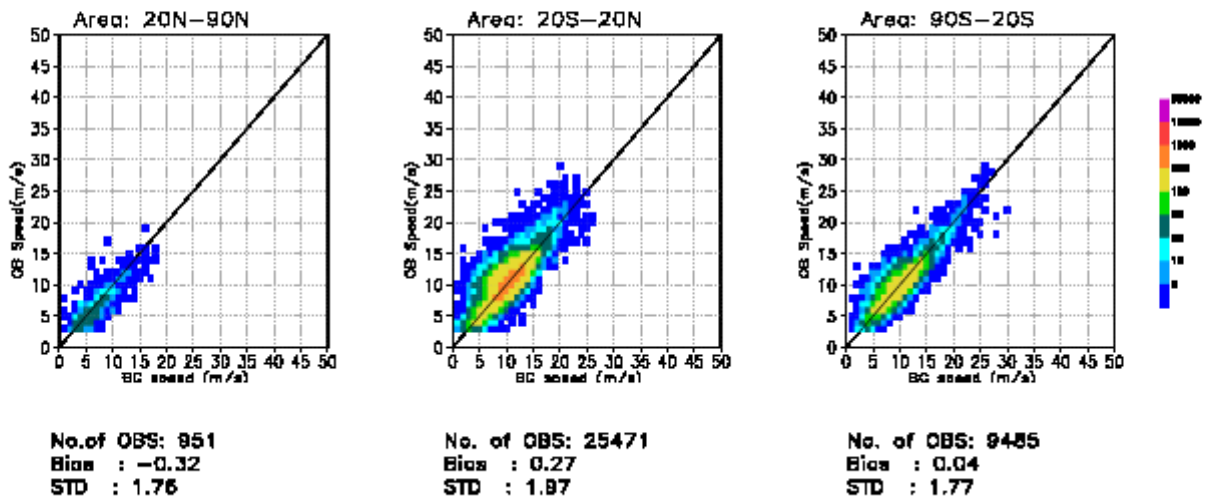


No. of OBS: 6299
Bias : 0.12
STD : 1.65

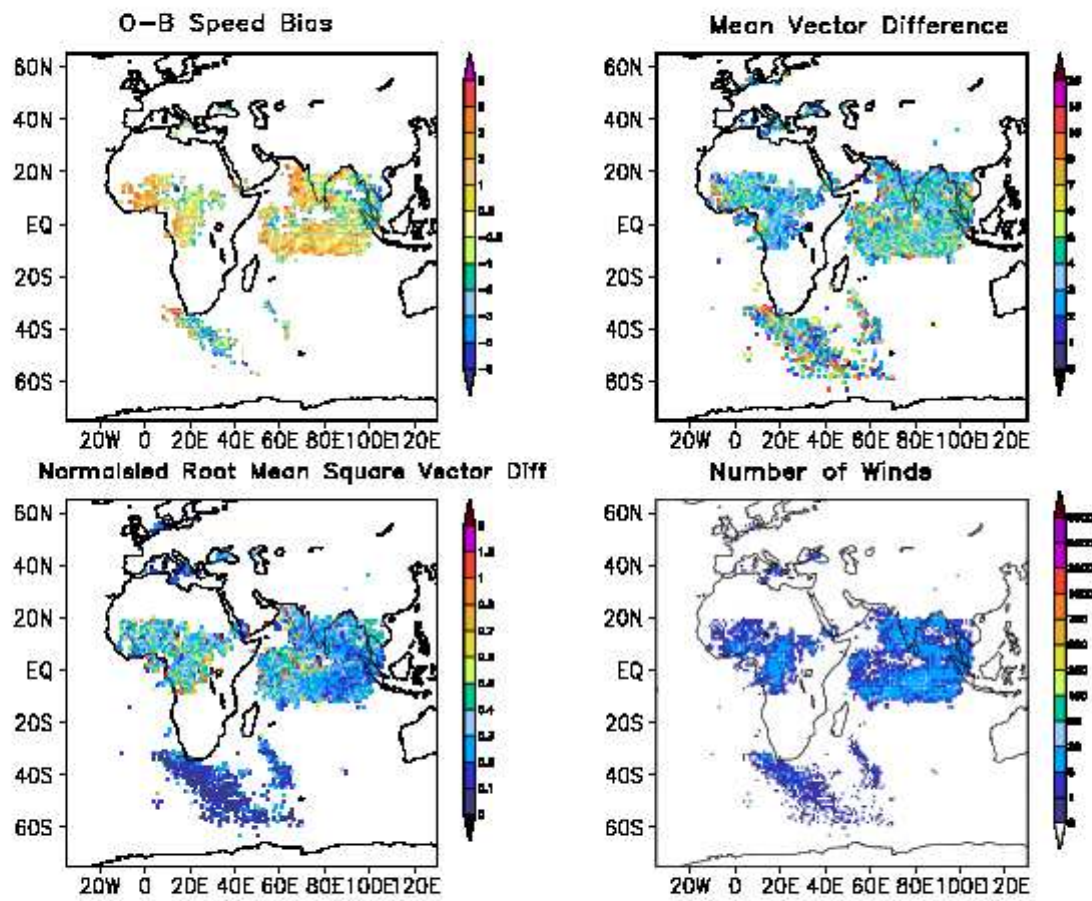
METEOSAT-9 WV, September 2024, High Level, Above 400 hPa



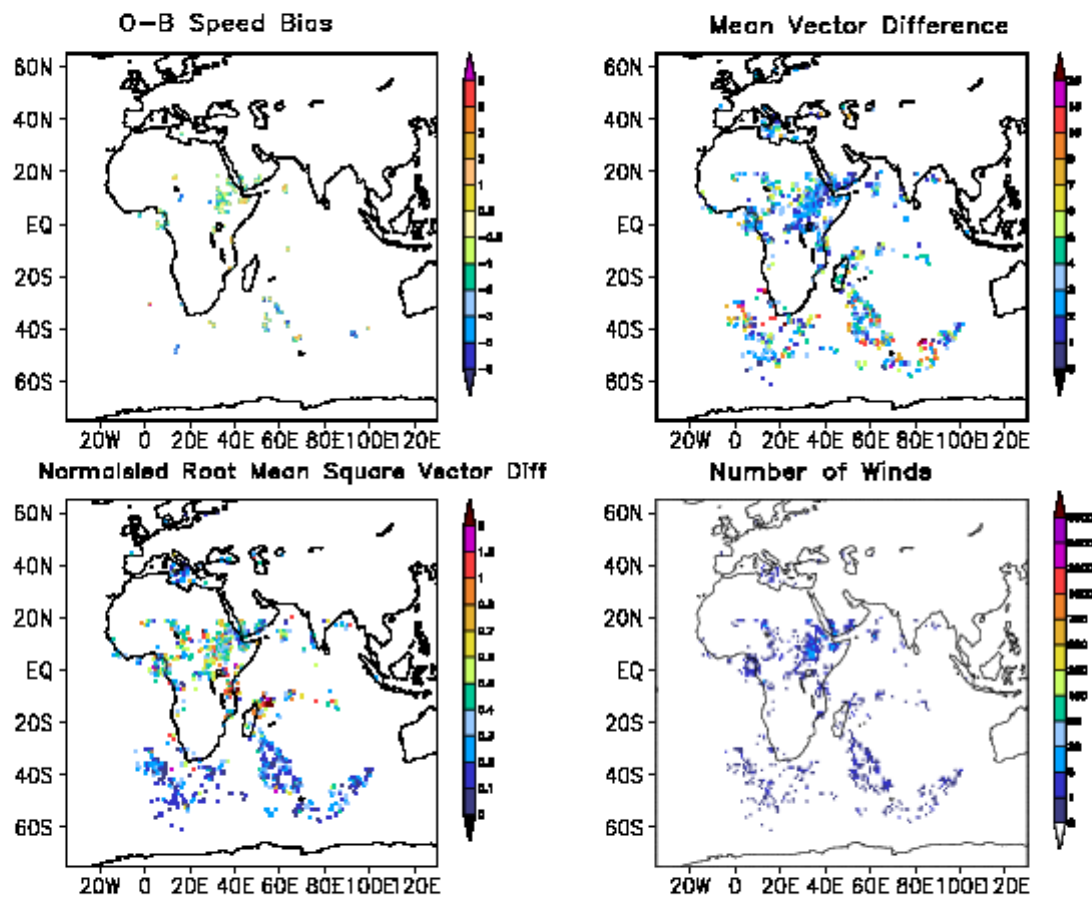
METEOSAT-9 VIS, September 2024, Low Level, Below 700 hPa



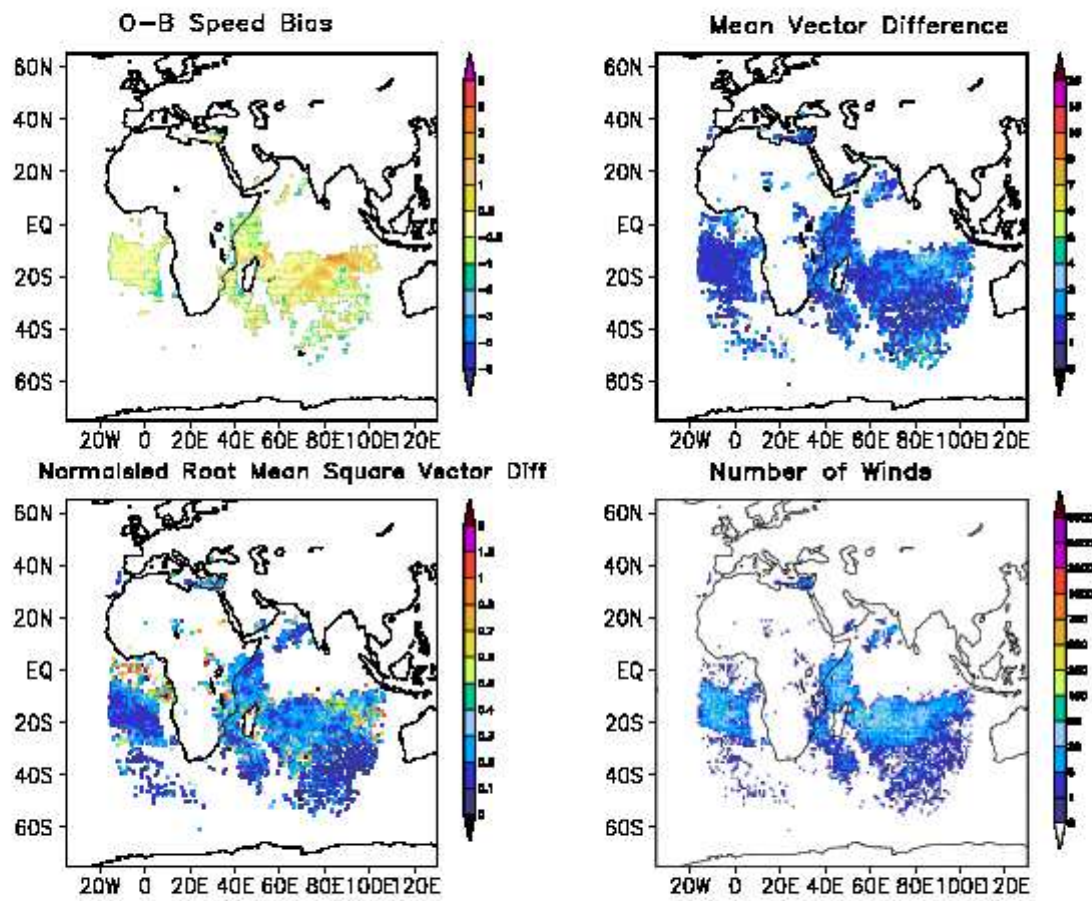
METEOSAT-9 IR, High Level, Above 400 hPa, September 2024



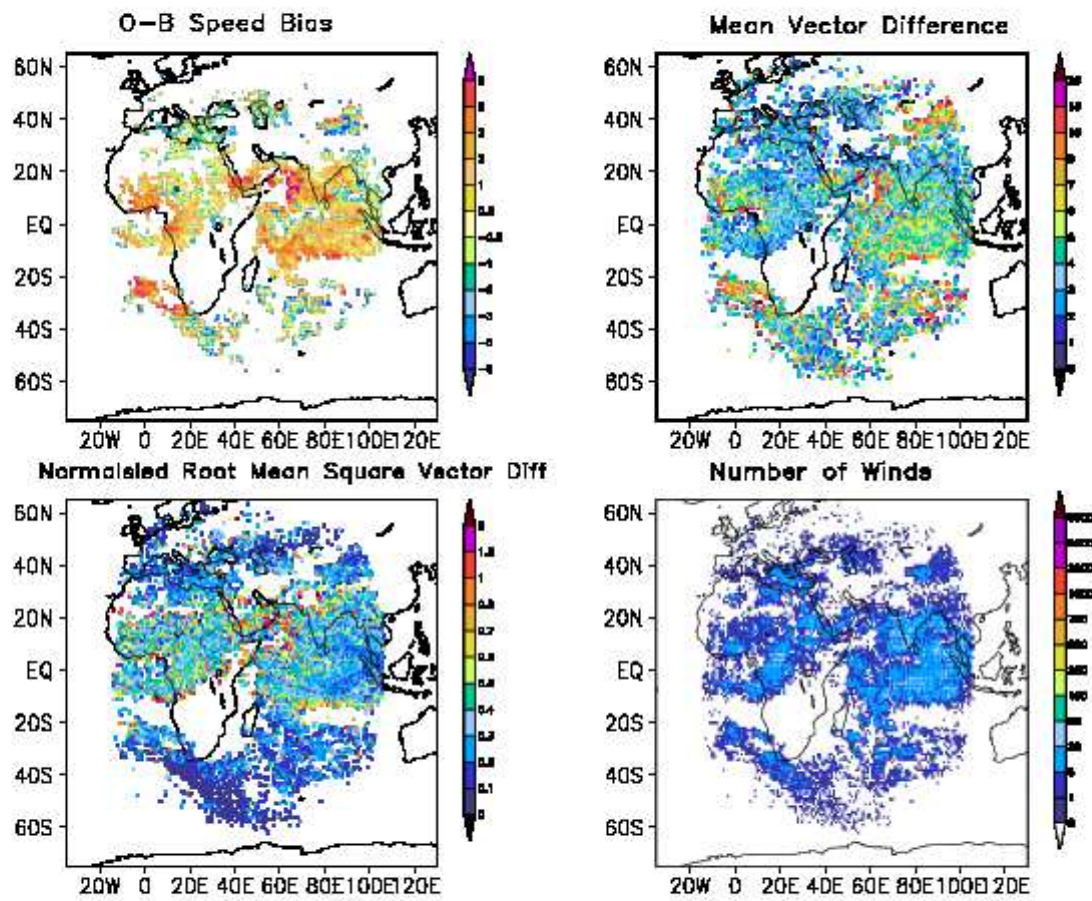
METEOSAT-9 IR, Mid Level, 700 – 401 hPa, September 2024



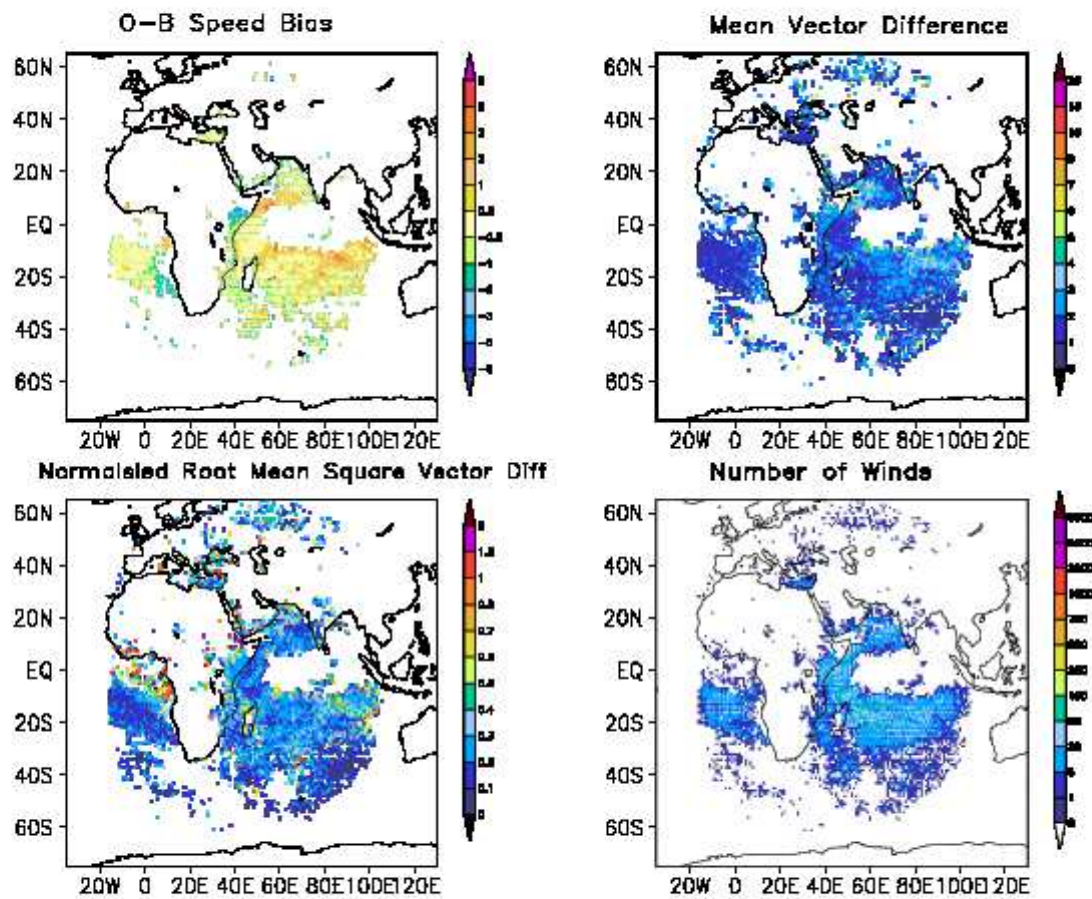
METEOSAT-9 IR, Low Level, Below 700 hPa, September 2024



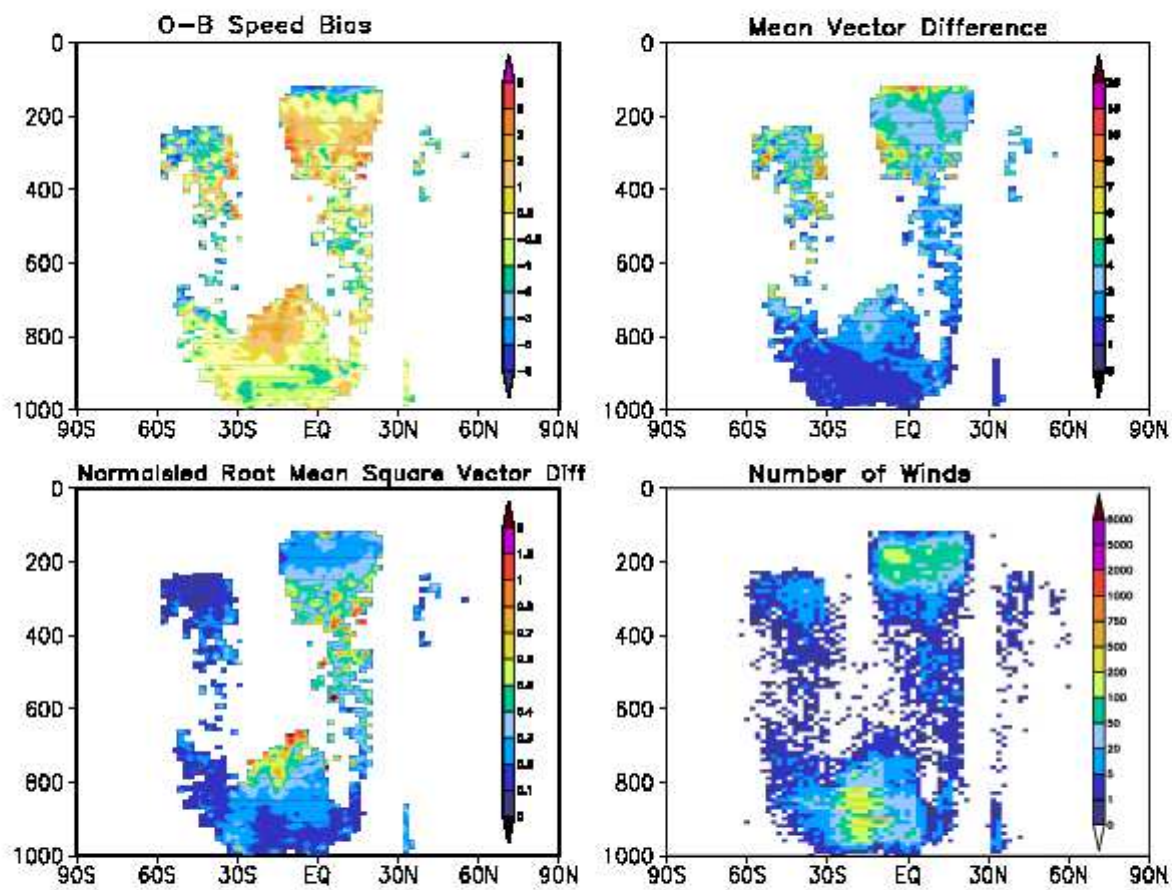
METEOSAT-9 WV, Above 400 hPa, September 2024



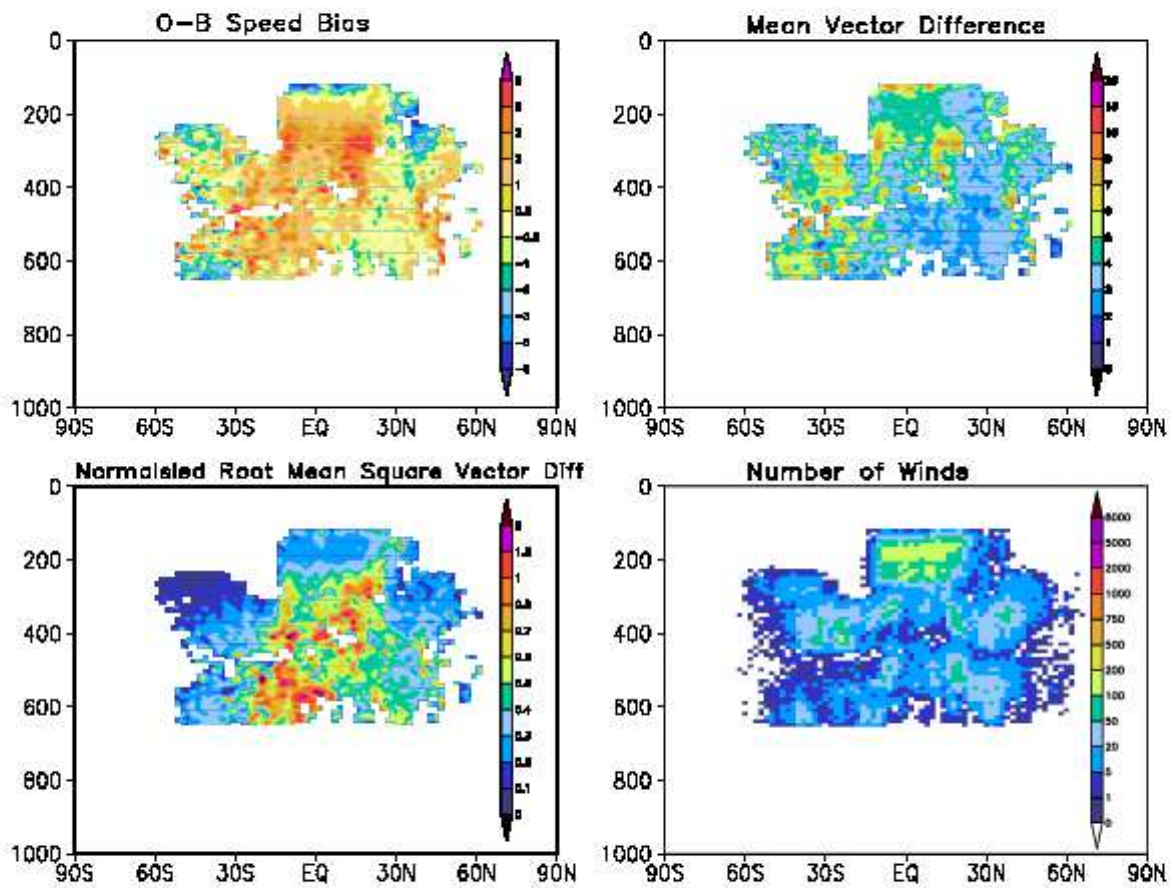
METEOSAT-9 VIS, Low Level, Below 700 hPa, September 2024



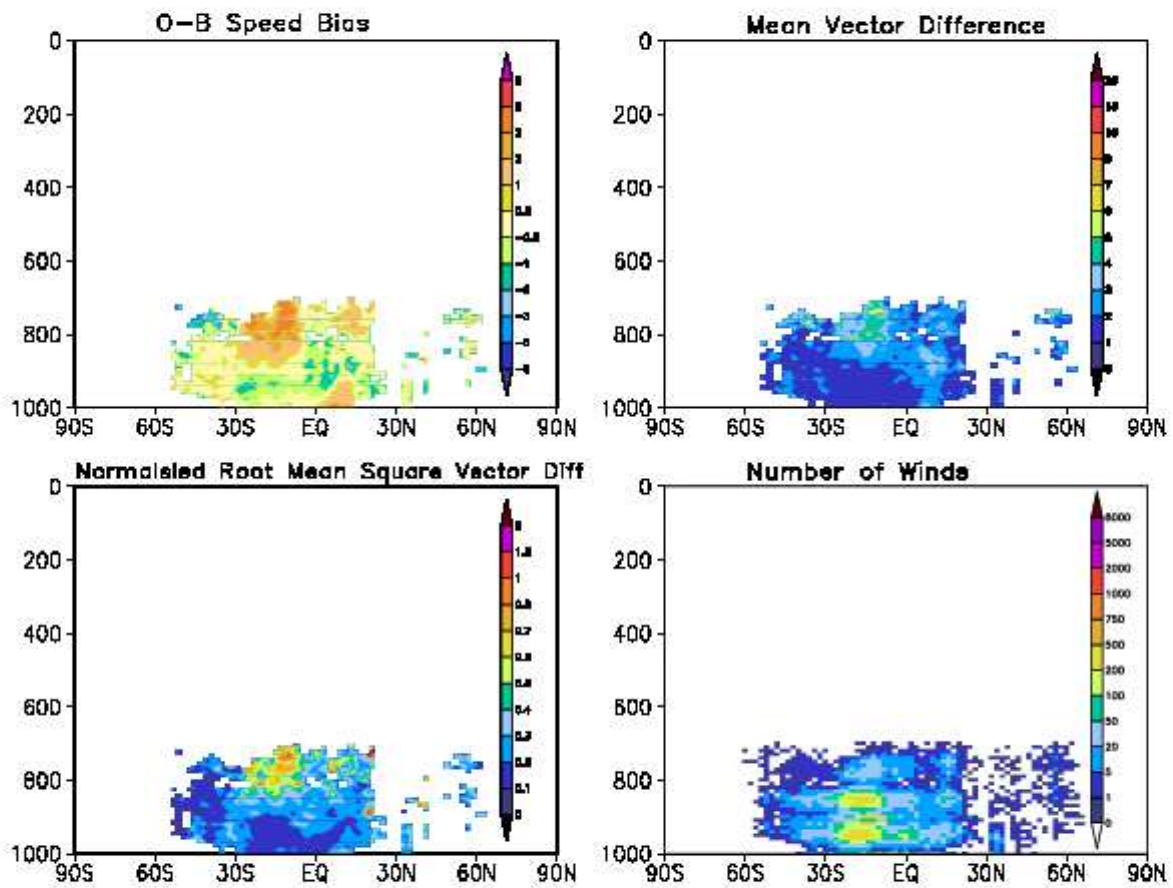
METEOSAT-9 IR, September 2024



METEOSAT-9 WV, September 2024



METEOSAT-9 VIS, September 2024



Validation against
Insitu Observations

METEOSAT-9 SATELLITE AMVS
(Comparison against Insitu Observations)
Reporting Period: 01 09 2024 - 30 09 2024

NORTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	18.62	22.47	-3.85	10.01	574
Mid Lev IR:	11.76	10.86	0.90	6.86	187
Low Lev IR:	8.82	8.14	0.67	7.95	174
Hig Lev WV:	13.46	14.27	-0.82	8.27	11803
Low Lev VIS:	7.20	7.80	-0.60	5.05	450

TROPICS

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	11.83	11.93	-0.11	7.38	657
Mid Lev IR:	8.72	8.35	0.37	6.63	243
Low Lev IR:	6.79	6.46	0.33	4.41	139
Hig Lev WV:	15.45	14.19	1.26	9.37	9937
Low Lev VIS:	5.51	4.80	0.71	3.89	79

SOUTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	37.17	38.96	-1.79	12.18	96
Mid Lev IR:	26.09	24.76	1.32	10.06	50
Low Lev IR:	9.46	10.15	-0.69	6.69	117
Hig Lev WV:	26.57	31.71	-5.14	15.04	570
Low Lev VIS:	9.72	8.79	0.93	5.60	47

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