Validation of METEOSAT-8
Atmospheric Motion Vectors
May 2020
Validation Against
NCMRWF NGFS First Guess
METEOSAT-8 IR, High Level, Above 400 hPa, May 2020
METEOSAT-8 IR, Mid Level, 700 – 401 hPa, May 2020

Mean Observation

Mean Background

Mean Vector Difference

Number of winds
METEOSAT-8 IR, Low Level, Below 700 hPa, May 2020

Mean Observation

Mean Background

Mean Vector Difference

Number of winds
METEOSAT-8 WV, High Level, Above 400 hPa, May 2020
METEOSAT-8 VIS, Low Level, Below 700 hPa, May 2020
METEOSAT-8 IR, May 2020, High Level, Above 400 hPa

Area: 20N-50N
No. of OBS: 9404
Bias : -0.80
STD : 4.15

Area: 20S-20N
No. of OBS: 55918
Bias : 0.35
STD : 3.35

Area: 80S-20S
No. of OBS: 55226
Bias : -1.69
STD : 5.55
METEOSAT-8 IR, Mid Level, 700 – 401 hPa, May 2020

Area: 20N–50N

No. of OBS: 2542
Bias : -0.39
STD : 2.25

Area: 20S–20N

No. of OBS: 71914
Bias : 0.27
STD : 1.54

Area: 80S–20S

No. of OBS: 100535
Bias : 0.02
STD : 2.01
METEOSAT-8 IR, May 2020, Low Level, Below 700 hPa

Area: 20N-50N

No. of OBS: 2542
Bias : -0.39
STD : 2.25

Area: 20S-20N

No. of OBS: 71914
Bias : 0.27
STD : 1.54

Area: 80S-20S

No. of OBS: 100635
Bias : 0.02
STD : 2.01
METEOSAT-8 WV, May 2020, High Level, Above 400 hPa

Area: 20N–50N

No. of OBS: 111614
Bias : -0.27
STD : 4.62

Area: 20S–20N

No. of OBS: 184603
Bias : 0.92
STD : 3.52

Area: 50S–20S

No. of OBS: 105420
Bias : 0.14
STD : 5.70
METEOSAT-8 VIS, May 2020, Low Level, Below 700 hPa

No. of OBS: 34785
Bias : 0.21
STD : 2.66

No. of OBS: 114642
Bias : 0.27
STD : 1.55

No. of OBS: 107685
Bias : 0.09
STD : 2.11
METEOSAT-8 IR, High Level, Above 400 hPa, May 2020
METEOSAT-8 IR, Mid Level, 700 - 401 hPa, May 2020

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT-8 IR, Low Level, Below 700 hPa, May 2020

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT-8 WV, Above 400 hPa, May 2020

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT-8 VIS, Low Level, Below 700 hPa, May 2020

- O-B Speed Bias
- Mean Vector Difference
- Normalised Root Mean Square Vector Diff
- Number of Winds
METEOSAT-8 IR, May 2020
Validation against
Insitu Observations
### NORTHERN HEMISPHERE

<table>
<thead>
<tr>
<th>Level</th>
<th>AMV WS</th>
<th>INSITU WS</th>
<th>Bias</th>
<th>RMSVD</th>
<th>Collocations</th>
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### TROPICS

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### SOUTHERN HEMISPHERE

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