INSAT-3D AMVs: MARCH2016
AMVs vs Radiosonde (0000 & 1200 UTC)

Northern hemisphere	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level IRW	3136	3.7	4.2	1.9	2.5	19.0	-0.2	7.7	7.9
Mid level IRW	4700	4.4	5.1	2.5	3.0	10.5	-0.5	16.6	17.1
High level IRW	6316	5.5	6.4	3.2	3.7	9.3	0.0	24.9	24.9
High level WVW	24337	5.5	6.4	3.3	3.8	9.1	0.3	25.6	25.3

Tropics	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level IRW	1038	3.2	3.6	1.5	2.1	23.6	0.0	5.4	5.4
Mid level IRW	453	3.9	4.1	1.1	2.4	18.5	-0.8	8.2	9.0
High level IRW	4608	3.9	4.5	2.1	2.5	17.9	-0.1	9.6	9.7
High level WVW	10163	4.1	4.7	2.2	2.6	16.6	0.4	11.4	11.0

Southern hemisphere	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level IRW	334	4.6	4.8	1.5	3.1	21.4	0.2	8.8	8.6
Mid level IRW	198	4.6	4.7	1.0	3.3	13.7	-0.9	13.0	13.9
High level IRW	505	5.3	5.8	2.1	3.7	10.2	-0.1	23.5	23.5
High level WVW	1921	5.2	5.9	2.7	3.6	11.5	-0.3	19.2	19.4

Global	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level IRW	4508	3.6	4.1	1.9	2.4	20.1	-0.1	7.1	7.2
Mid level IRW	5351	4.3	5.0	2.5	2.9	10.9	-0.6	15.8	16.4
High level IRW	11429	4.8	5.6	2.9	3.2	12.9	0.0	18.3	18.4
High level WVW	36421	5.0	5.9	3.1	3.4	11.3	0.2	21.0	20.7

MVD: Mean vector difference

RMSVD: Root mean square vector difference

SD: Standard Deviation

Mean Speed Dif (ABS): Absolute mean wind speed difference

Mean Dir Dif (ABS): Absolute mean wind direction difference

High level: 100-400hPa

Mid level: 401-700hPa

Low level: 701-975hPa

MVD, RMSVD, SD, Mean Speed Dif, Mean Speed AMV, Mean Speed RS are in ms^{-1}, Mean Dir Dif is in degree.

Collocation Criteria:

- **All AMVs within 150km of each radiosonde location and pressure difference ±20hPa are considered for validation.**
- **Collocation pairs with speed difference greater than 30ms^{-1} and direction difference greater than 60º are screened out.**
- **Quality indicator is not used as a criteria for collocation.**