INSAT-3D AMVs: JANUARY2016
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	3589	3.9	4.4	2.1	2.7	18.7	0.0	8.5	8.5
Mid level IRW	4656	4.6	5.3	2.6	3.0	11.1	-1.1	17.1	18.2
High level IRW	3761	5.0	5.7	2.7	3.4	7.8	-0.1	25.7	25.8
High level WVW	18554	5.0	5.9	3.0	3.4	11.7	0.3	19.9	19.5

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	1196	3.3	3.6	1.4	2.1	22.8	-0.5	6.0	6.5
Mid level IRW	657	3.7	3.9	1.1	2.2	19.1	-0.1	8.4	8.5
High level IRW	3937	4.0	4.5	2.1	2.6	16.3	-0.3	10.8	11.2
High level WVW	7319	4.5	5.1	2.4	3.0	16.4	0.2	12.0	11.8

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	56	3.6	3.8	0.6	2.3	22.0	-1.7	5.8	7.5
Mid level IRW	28	4.8	4.9	0.9	4.0	11.7	1.5	11.0	9.5
High level IRW	236	5.7	6.1	2.1	4.0	12.6	0.5	19.1	18.7
High level WVW	533	5.3	5.7	1.9	4.1	8.6	2.3	19.9	17.6

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	4841	3.7	4.2	2.0	2.5	19.5	-0.1	7.8	7.9
Mid level IRW	5341	4.5	5.2	2.5	2.9	11.8	-1.0	16.3	17.3
High level IRW	7934	4.7	5.4	2.7	3.1	11.9	-0.2	18.6	18.8
High level WVW	18554	5.0	5.9	3.0	3.4	11.7	0.3	19.9	19.5

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 60° are screened out.
- Quality indicator is not used as a criteria for collocation.