INSAT-3D AMVs: May 2017
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	1371	3.6	4.1	1.9	2.4	20.8	0.3	6.9	6.6
Mid level IRW	2409	4.1	4.7	2.2	2.8	14.6	-0.7	11.6	12.3
High level IRW	6174	5.2	6.0	3.0	3.5	13.0	-0.2	18.0	18.2
High level WVW	11473	5.2	6.0	3.1	3.5	11.5	0.4	20.8	20.5

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	462	3.5	3.7	1.2	2.4	23.0	0.7	6.3	5.5
Mid level IRW	701	3.2	3.5	1.1	2.1	20.7	-0.2	6.7	6.9
High level IRW	11778	3.6	4.2	2.1	2.4	16.2	0.0	9.2	9.2
High level WVW	18384	4.2	4.8	2.3	2.8	16.1	0.5	11.8	11.3

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	112	3.0	3.2	1.0	1.9	16.1	0.8	8.1	7.3
Mid level IRW	13	5.4	5.5	0.5	3.7	9.6	1.0	24.2	23.2
High level IRW	12	6.5	6.5	0.5	4.8	11.3	-1.7	24.4	26.0
High level WVW	79	5.7	6.1	1.7	2.9	12.1	0.1	26.6	26.6

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	1945	3.5	4.0	1.9	2.3	21.1	0.4	6.8	6.4
Mid level IRW	3123	3.9	4.5	2.2	2.6	15.4	-0.6	10.7	11.3
High level IRW	17964	4.1	4.9	2.6	2.8	15.0	0.0	12.2	12.3
High level WVW	29936	4.6	5.3	2.7	3.0	14.4	0.5	15.2	14.8

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.