INSAT-3D AMVs: March 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	2253	3.9	4.5	2.2	2.6	19.7	-0.5	7.6	8.1
Mid level IRW	2840	4.6	5.2	2.5	3.1	15.0	-0.8	13.8	14.7
High level IRW	2857	4.9	5.7	2.8	3.3	10.4	-0.7	21.4	22.2
High level WVW	6070	5.3	6.2	3.1	3.5	11.7	0.3	20.7	20.4

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	809	3.4	3.8	1.4	2.3	24.0	0.2	5.5	5.3
Mid level IRW	455	3.6	3.8	1.1	2.4	20.4	-0.6	7.1	7.8
High level IRW	8724	4.3	4.9	2.4	3.0	15.1	0.0	11.5	11.5
High level WVW	11885	4.8	5.5	2.7	3.4	14.2	0.8	15.4	14.6

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	80	4.0	4.2	1.0	2.3	19.5	0.5	9.7	9.1
Mid level IRW	37	2.7	2.8	0.4	2.1	8.9	0.8	16.5	15.7
High level IRW	58	4.3	4.4	0.8	2.9	10.4	-1.0	20.8	21.7
High level WVW	106	5.9	6.2	1.4	3.0	11.7	0.5	25.0	24.5

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	3142	3.8	4.4	2.1	2.6	20.6	-0.3	7.2	7.4
Mid level IRW	3332	4.4	5.1	2.5	3.0	15.2	-0.9	13.1	14.0
High level IRW	11639	4.4	5.1	2.6	3.1	14.0	-0.2	13.9	14.1
High level WVW	18061	5.0	5.8	2.9	3.4	13.4	0.6	17.1	16.5

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.