TORUS Deployment Summaries

Required software: Integrated Data Viewer (IDV; https://www.unidata.ucar.edu/software/idv/)[1]

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Summary

Deployment summaries of key TORUS deployments have been developed. Each zipped folder has the xidv file to be opened in IDV and the supporting files that it reads. Each visualization includes the positions of all assets operating on a particular day updated at a 1 minute time interval, the radar reflectivity from the nearest WSR-88D, and scanning symbols for remote-sensing instruments. Flight altitudes are visualized for the P3.

Acronyms

CoMeT	Combined Mesonet and Tracker
LIDAR	Light Detection and Ranging
NOAA	National Oceanic and Atmospheric Administration
NSSL	National Severe Storms Laboratory
PPI	Plan Position Indicator
PRF	Pulse Repetition Frequency
RAAVEN	Robust Autonomous Aerial Vehicle-Endurant Nimble
RHI	Range Height Indicator
TTU	Texas Tech University
UAS	Unmanned Aircraft System
UCB	University of Colorado, Boulder
UNL	University of Nebraska – Lincoln
VWP	Vertical Wind Profile

Key for asset names

Platform	Description	Code in Graphical Summ	Icon
CoMeT-1	UNL mobile mesonet	C1	
CoMeT-2	UNL mobile mesonet	C2	
CoMeT-3	UNL mobile mesonet	C3	
Probe-1	NSSL mobile mesonet	Prb1	
Probe-2	NSSL mobile mesonet	Prb2	
LIDAR MM	NSSL mobile LIDAR, mobile mesonet, and mobile sounding system	LI-MM	

[1] Tested with IDV version 6.1u2.

Far Field MM	Far-field sounding system, NSSL mobile mesonet and mobile sounding system	FF	
Windsond 1 MM	NSSL mobile mesonet and windsond release vehicle	WS1-MM	
Windsond 2 MM	NSSL mobile mesonet and windsond release vehicle	WS2-MM	
Hail MM	NSSL mobile mesonet and hail camera	Hail-MM	
Windsonds Left-flank (UCB/UNL) Right-flank (UCB/UNL) Near-inflow (UCB/UNL) Windsond 1 (NSSL) Windsond 2 (NSSL) Probe 1 (NSSL) Probe 2 (NSSL)	Windsonds	LF_[sondeID] RF_[sondeID] NI_[sondeID] WS1_[sondeID] WS2_[sondeID] Prb1_[sondeID] Prb2_[sondeID]	
Soundings	Radiosondes	[sondeSN]	
LIDAR Scan	Appears when LIDAR is scanning (no distinction is made between a VWP and a vertical stare)	LI_scn	
P3	NOAA P3 manned aircraft • Range is based on the R_{max} for a typical P3 PRF • Sectors indicate the approximate location of pseudo-dual-Doppler lobes	P3	
TTU Ka-1	Appears when a TTU Ka-band mobile radar is scanning • Range is based on the R_{max} for a typical TTU-Ka PRF • Sector includes a (360°) surveillance sweep corresponding to low-level PPIs and a sector within which RHIs were collected	TTUKa1	
TTU Ka-2	Appears when a TTU Ka-band mobile radar is scanning • Range is based on the R_{max} for a typical TTU-Ka PRF • Sector includes a (360°) surveillance sweep corresponding to low-level PPIs and a sector within which RHIs were collected	TTUKa2	
NOXP	Appears when NOAA x-band dual-polarimetric radar is scanning	NOXP	

	• Range is based the R_{max} for a typical NOXP PRF		