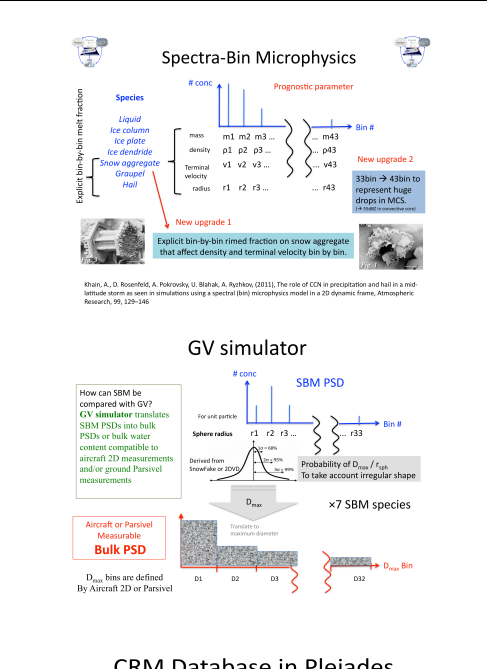
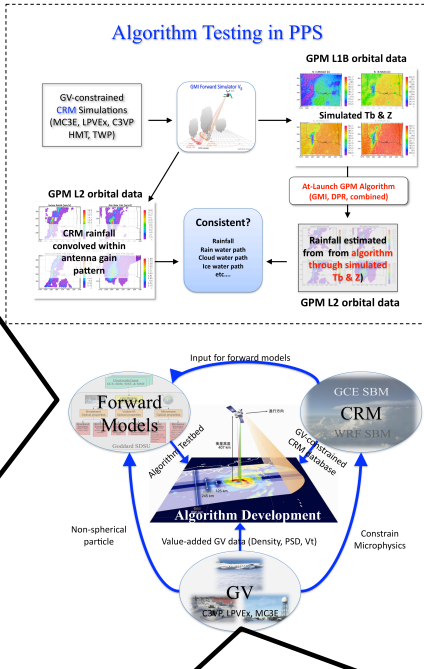
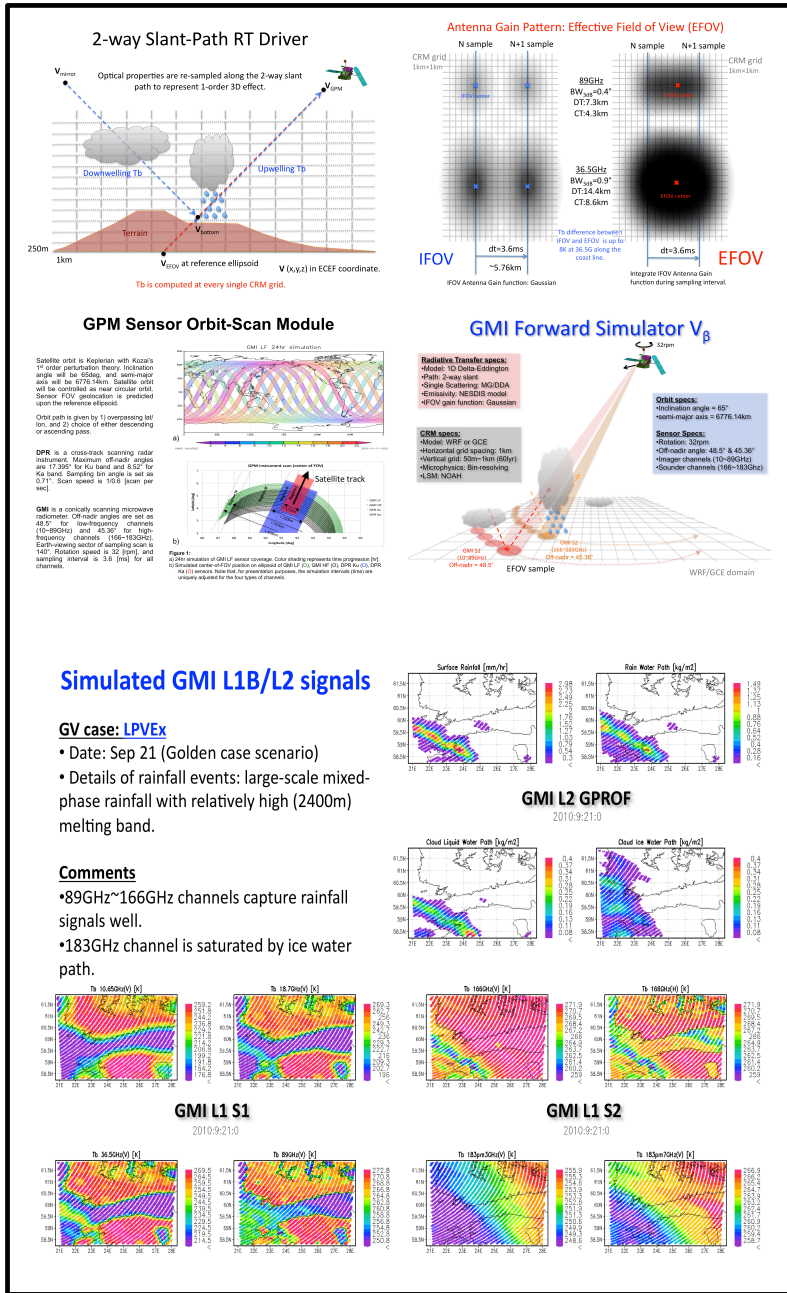




Current Status of the Synthetic GPM Simulator

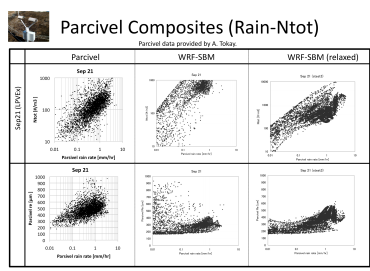
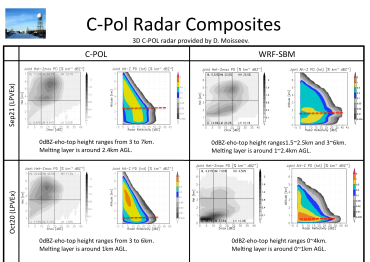
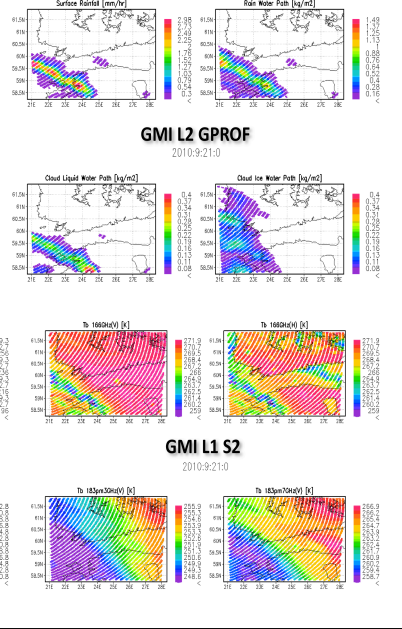
T. Matsui^{1&2}, T. Iguchi^{1&2}, X. Li^{1&3}, and W.-K. Tao²

¹Earth System Science Interdisciplinary Center, University of Maryland College Park, ²Laboratory for Atmospheres, NASA/Goddard Space Flight Center, ³Morgan State University



Simulated GMI L1B/L2 signals

- GV case: LPVEX**
- Date: Sep 21 (Golden case scenario)
 - Details of rainfall events: large-scale mixed-phase rainfall with relatively high (2400m) melting band.
- Comments**
- 89GHz~166GHz channels capture rainfall signals well.
 - 183GHz channel is saturated by ice water path.



CRM Database in Pleiades

Model	Case & Date	Details	Stage
CWP (Canada)	Lake effect 1/19/2007	Lake effect snow breeze extended from Great Lakes. Narrow and shallow, but robust snow band.	Val2
WRF (Finland)	Synoptic 1/21/2007	Large-scale relatively spatially homogeneous snow fall event.	Val2
	High Mts 9/21/2010	Large-scale mixed-phase stratiform rain with relatively high (~2400m) altitude of melting band.	Val1
MCSE (Oklahoma)	Low Mts 10/20/2010	Large-scale mixed-phase stratiform rain with low (~1000m) altitude of melting band.	Rein
	Squall Line 4/25/2011	Multi-cell MCS and stratiform rain.	Rein
HMT (California)	Winter Cyclone 5/20/2011	Severe convection, severe 4-storms avail. stratiform rain.	Rein
GCE (Iceland)	TWP MC 12/23/2005	Snow storms over California, orographic snowfall.	Rein
	Tropical MCS 5/20/2011	Tropical MCS	Val1

Beta - no validation. **Val1** - first validation. **Val2** - second validation.

Each CRM case can generate x24 (for all CRM hourly output) x2 (ascending/descending paths). Thus, 8 cases of CRM simulations will generate total 384 orbital testbed data.

