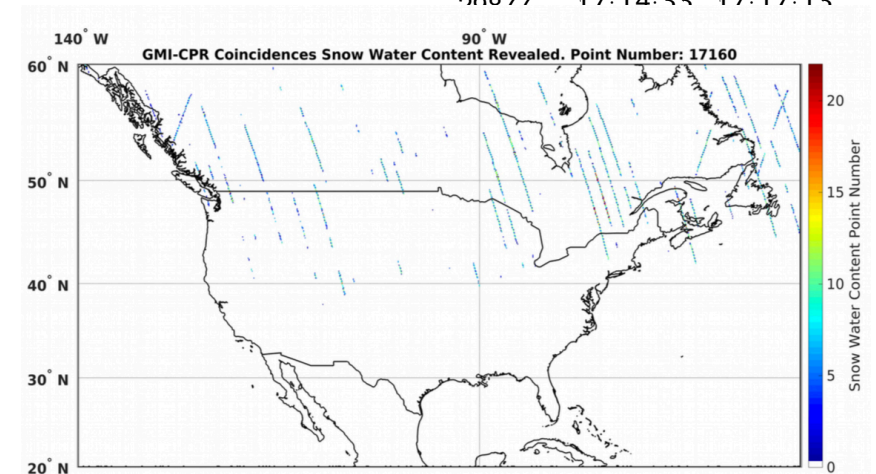


Task 2: analysis of GMI, ATMS, and MHS multi-channel response to the cloud and precipitation structure inferred from from CloudSat/Calipso products;

- Snowfall case studies of GPM (GMI and DPR)/CloudSat (and ATMS or MHS) have been selected over the globe: *current focus on US/Canada (13 cases) and Finland (5 cases)*

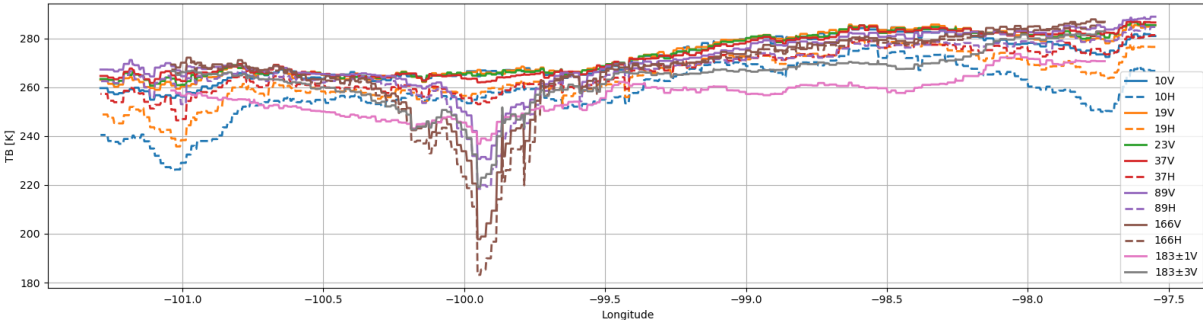
Event Date	Type of Coincidence	Location	CPR			GMI			ATMS			MHS		
			Orbit Num	Start	End	Orbit Num	Start	End	Orbit Num	Start	End	Orbit Num	Start	End
18/03/14	CPR-DPR-GMI-ATMS-MHS	USA	41966	'19:55:17'	19:58:35	298	19:59:43	20:03:01	12377	19:51:11	19:54:29	26323	19:53:55	19:57:13
19/03/14	CPR-DPR-GMI	USA	41980	19:00:55	19:04:03	313	19:07:43	19:10:51						
20/03/14	CPR-DPR-GMI-MHS	USA-Quebec	41994	18:06:23	18:09:22	328	18:16:05	18:19:04				26350	17:52:10	17:55:09
20/03/14	CPR-DPR-GMI-MHS	USA-Canada	41995	19:45:00	19:48:01	329	19:48:15	19:51:16				26351	19:33:55	19:36:56
22/03/14	CPR-DPR-GMI	Quebec	42023	17:55:34	17:58:19	359	18:04:23	18:07:08						
22/03/14	CPR-DPR-GMI	USA	42025	21:12:54	21:15:44	361	21:08:48	21:11:38						
23/11/14	CPR-DPR-GMI	Quebec	45606	18:55:56	18:58:50	4187	18:50:29	18:53:23						
24/11/14	CPR-DPR-GMI-ATMS	Quebec	45620	18:01:12	18:03:58	4202	18:00:03	18:02:49	15937	18:11:46	18:14:32			
25/11/14	CPR-DPR-GMI-MHS	Quebec	45634	17:06:19	17:08:59	4217	17:09:26	17:12:06				20077	17:14:33	17:17:13
11/02/15	CPR-DPR-GMI	USA	46771	18:55:39	18:58:43	5432	19:03:44	19:06:48						
27/12/16	CPR-DPR-GMI	Quebec	56745	16:43:35	16:49:45	16087	16:33:16	16:39:26						
21/02/17	CPR-DPR-GMI	Quebec	57563	20:53:46	20:56:38	16961	20:45:54	20:48:46						
24/04/17	CPR-DPR-GMI	USA	58457	06:36:50	06:39:40	17916	06:28:37	06:31:27						

List of 13 cases over U.S./Canada

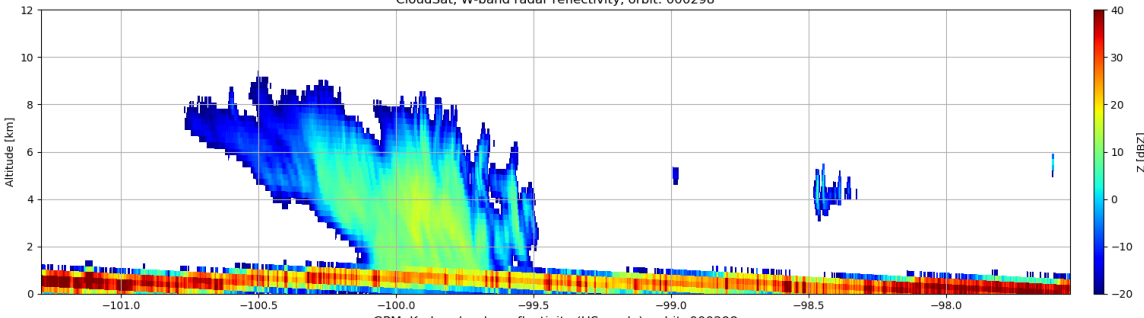


Orbit: 298

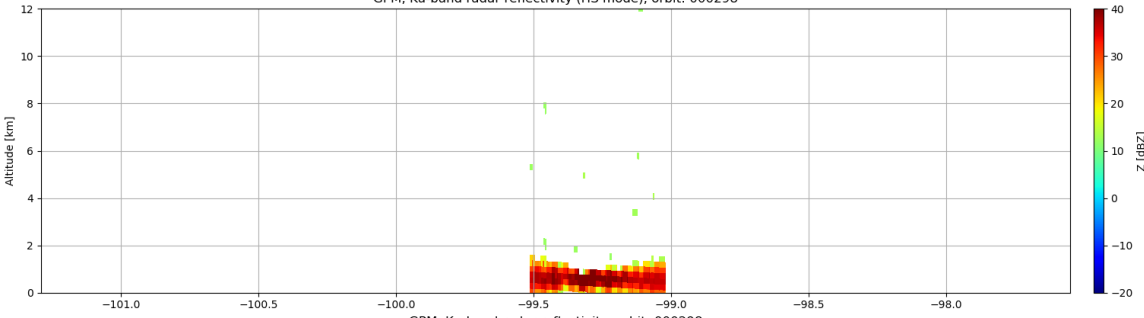
Brightness temperature along the CS track as measured by the GMI, orbit: 000298



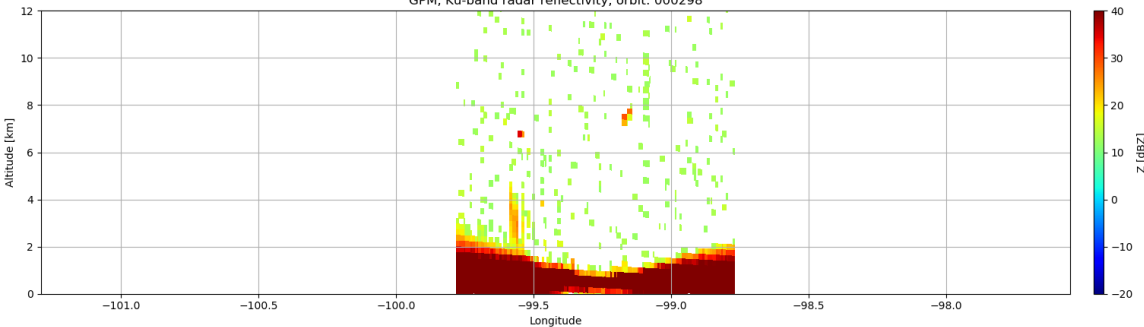
CloudSat, W-band radar reflectivity, orbit: 000298



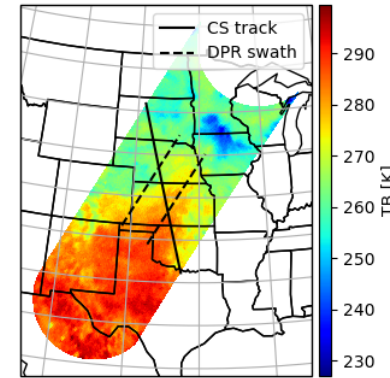
GPM, Ka-band radar reflectivity (HS mode), orbit: 000298



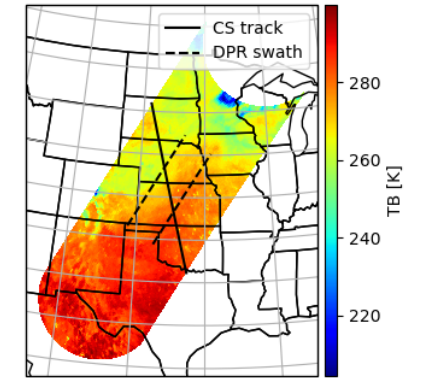
GPM, Ku-band radar reflectivity, orbit: 000298



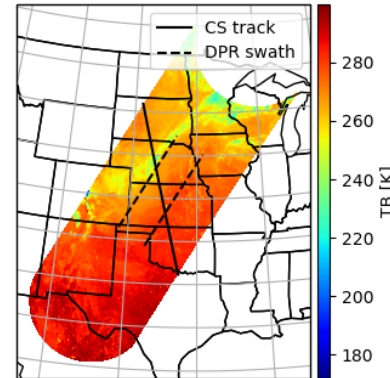
Brightness temperature at 10V GHz, orbit: 000298



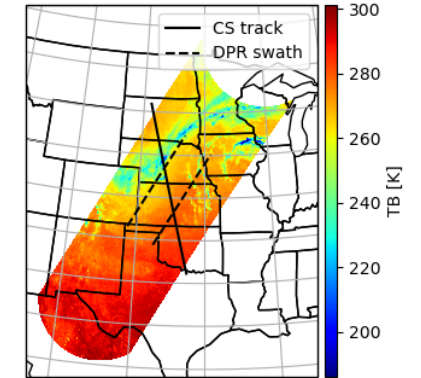
Brightness temperature at 37V GHz, orbit: 000298



Brightness temperature at 89V GHz, orbit: 000298

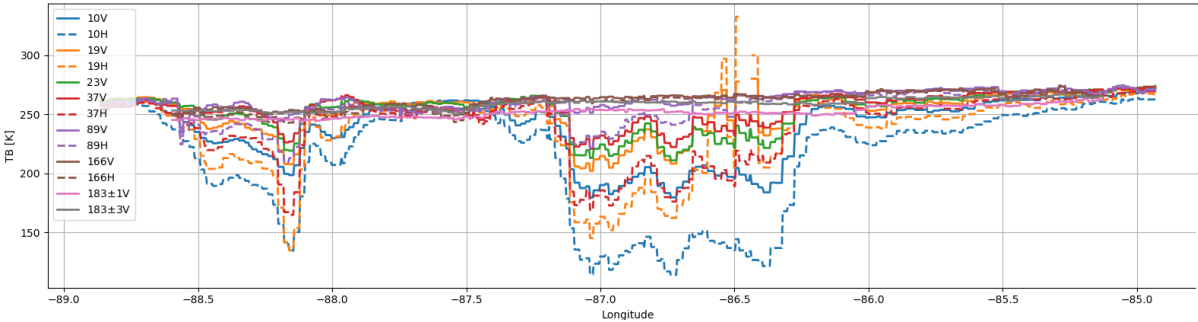


Brightness temperature at 166V GHz, orbit: 000298

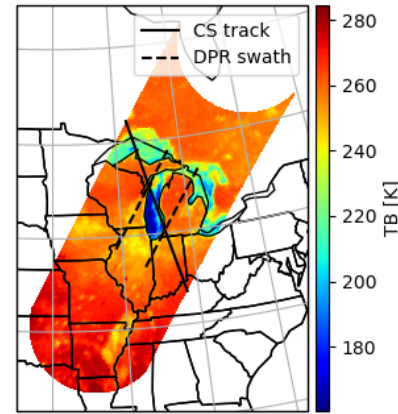


Orbit: 313

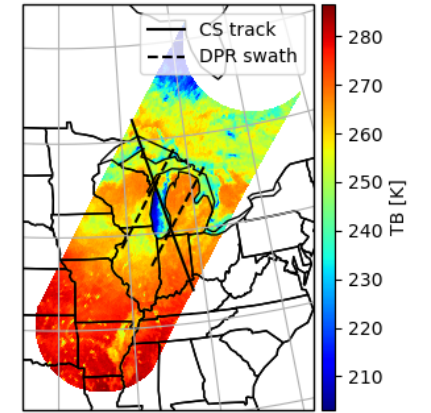
Brightness temperature along the CS track as measured by the GMI, orbit: 000313



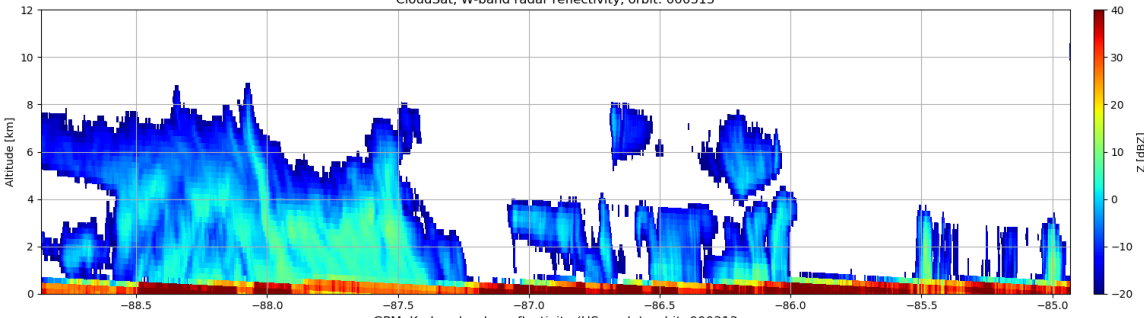
Brightness temperature at 10V GHz, orbit: 000313



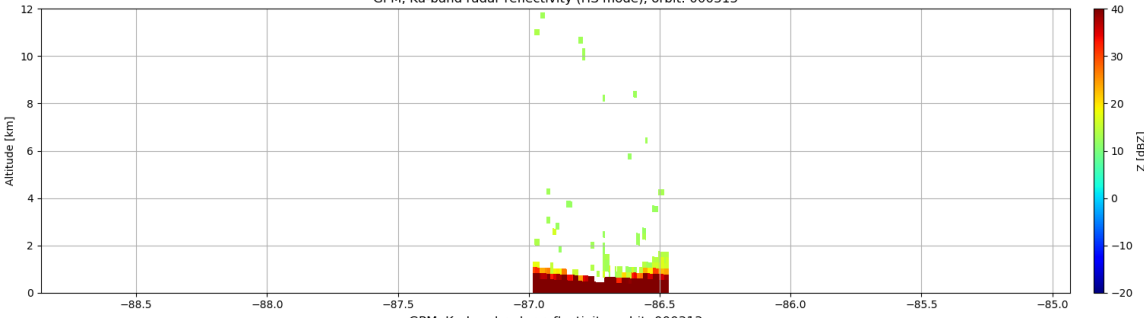
Brightness temperature at 37V GHz, orbit: 000313



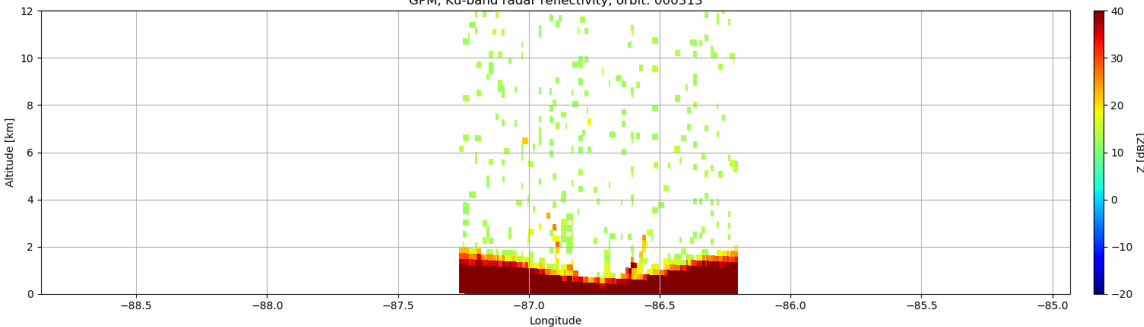
CloudSat, W-band radar reflectivity, orbit: 000313



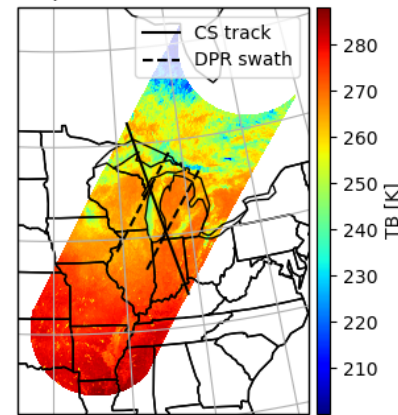
GPM, Ka-band radar reflectivity (HS mode), orbit: 000313



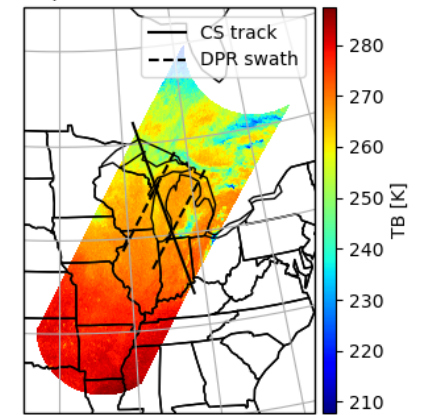
GPM, Ku-band radar reflectivity, orbit: 000313



Brightness temperature at 89V GHz, orbit: 000313

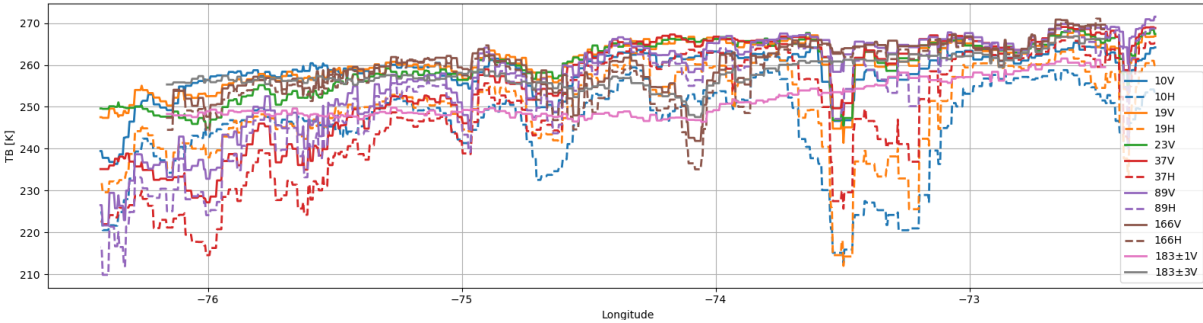


Brightness temperature at 166V GHz, orbit: 000313

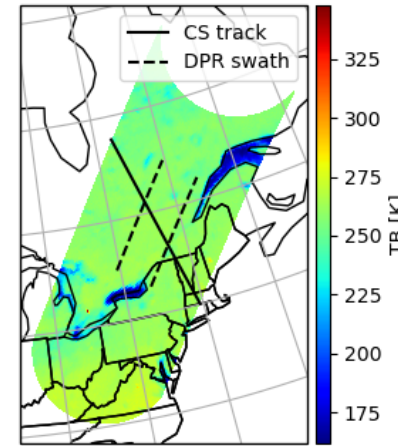


Orbit: 328

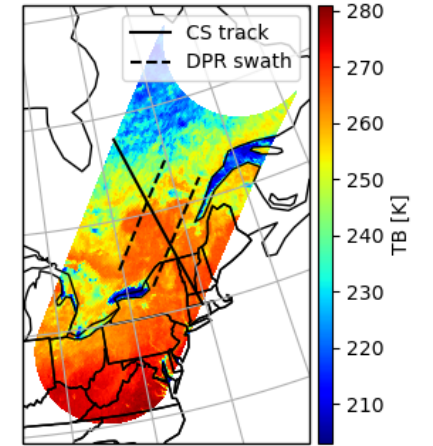
Brightness temperature along the CS track as measured by the GMI, orbit: 000328



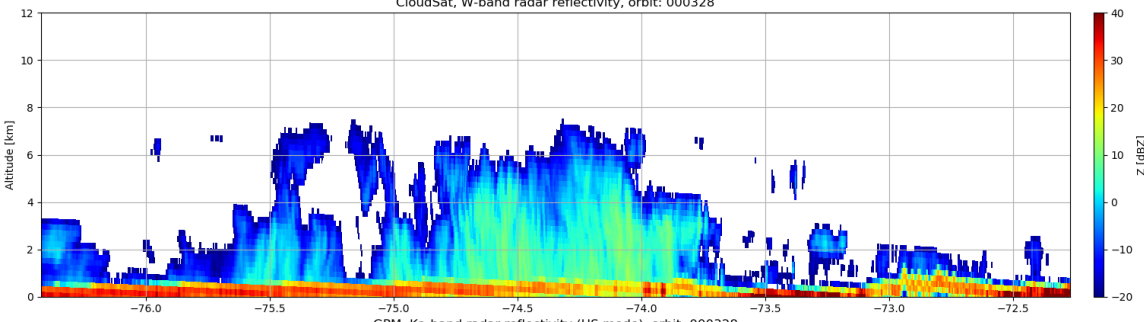
Brightness temperature at 10V GHz, orbit: 000328



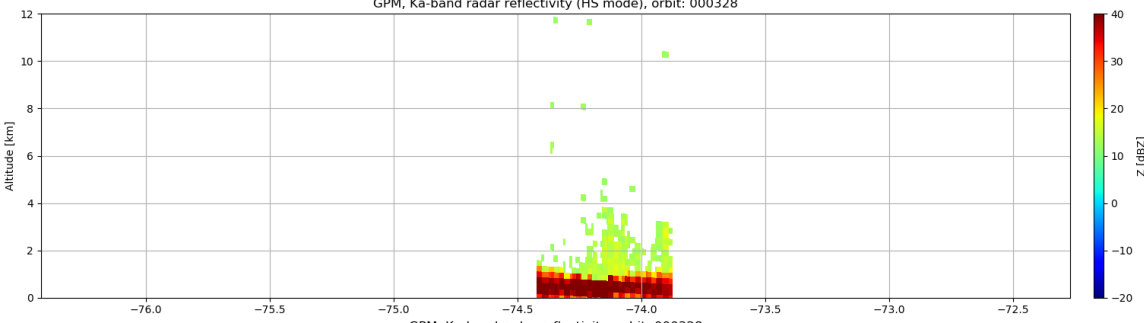
Brightness temperature at 37V GHz, orbit: 000328



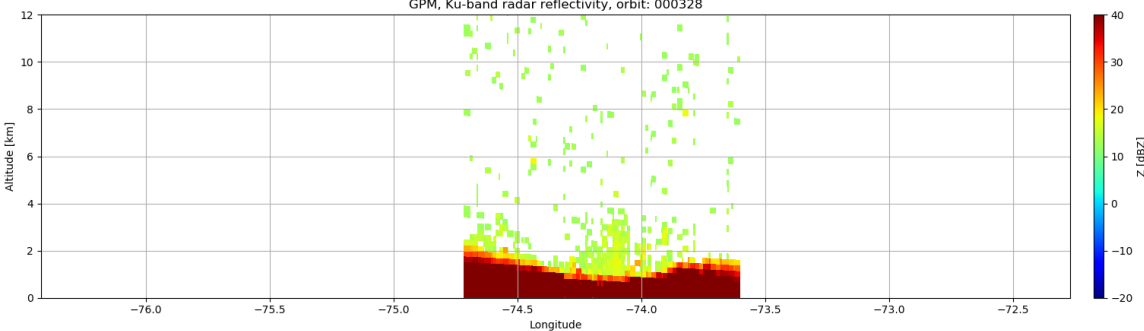
CloudSat, W-band radar reflectivity, orbit: 000328



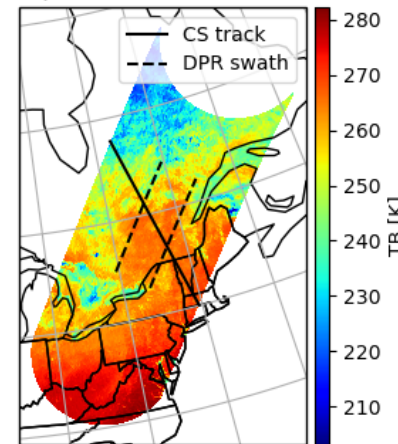
GPM, Ka-band radar reflectivity (HS mode), orbit: 000328



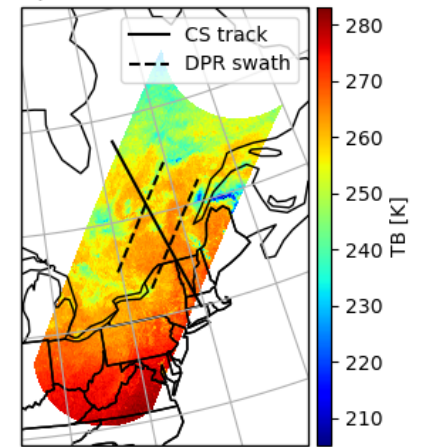
GPM, Ku-band radar reflectivity, orbit: 000328



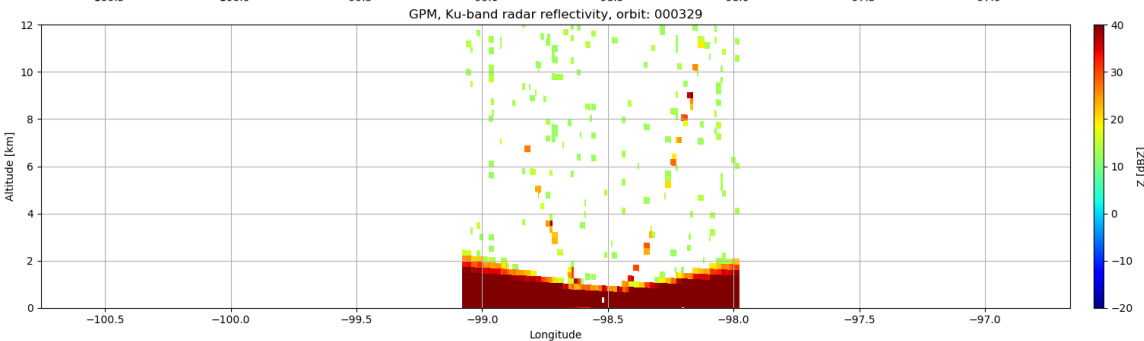
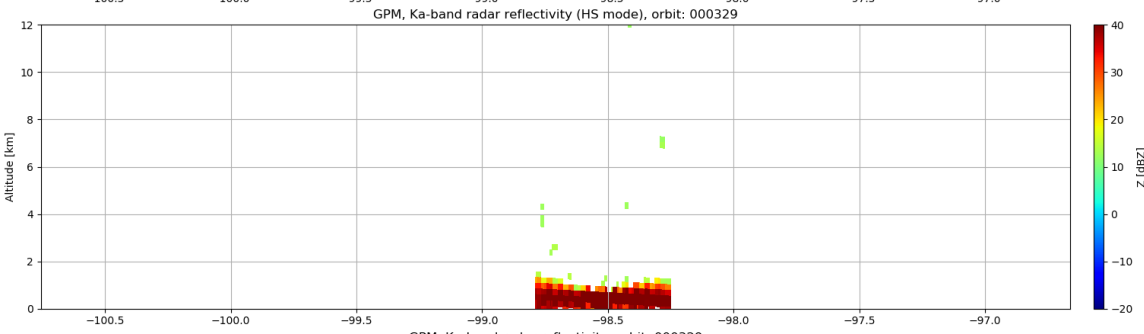
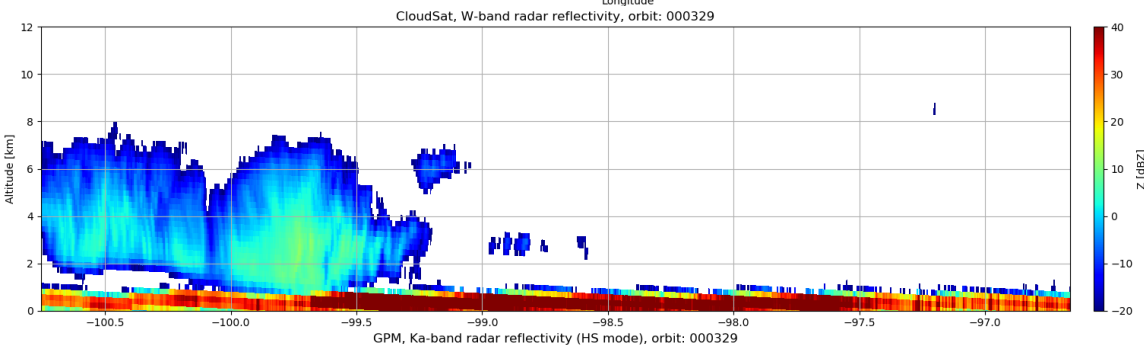
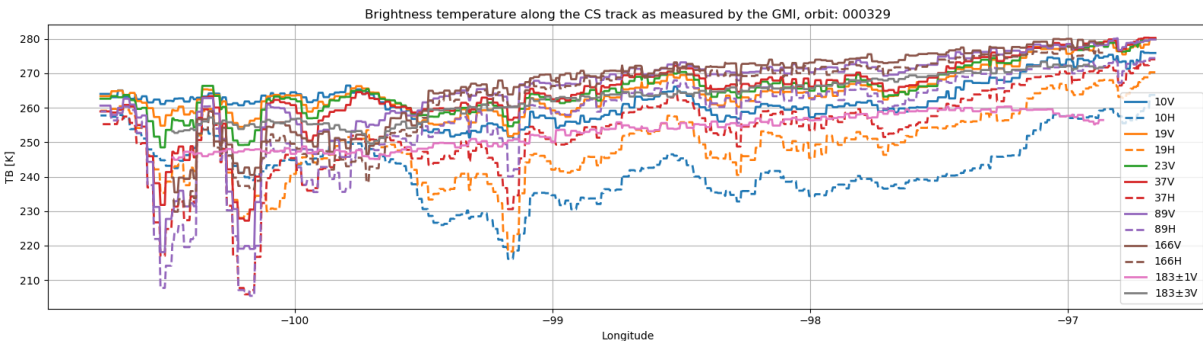
Brightness temperature at 89V GHz, orbit: 000328



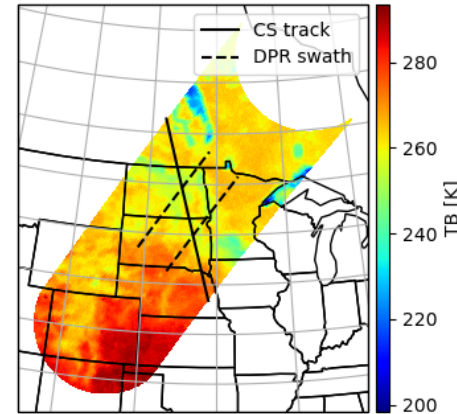
Brightness temperature at 166V GHz, orbit: 000328



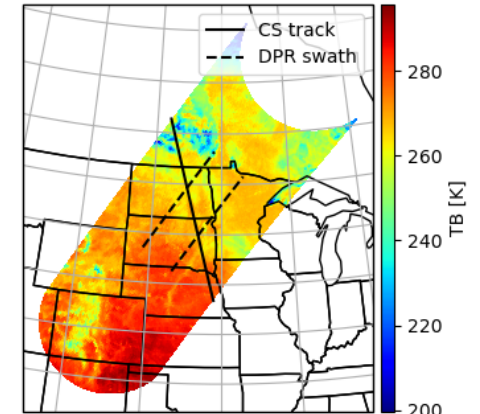
Orbit: 329



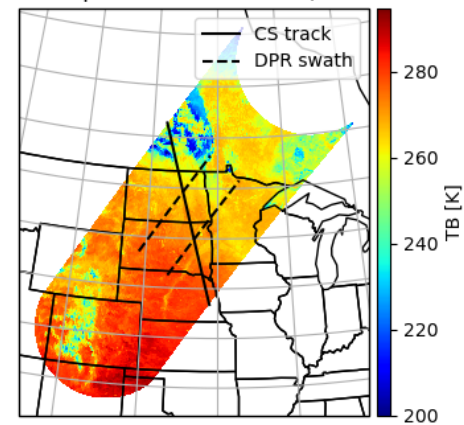
Brightness temperature at 10V GHz, orbit: 000329



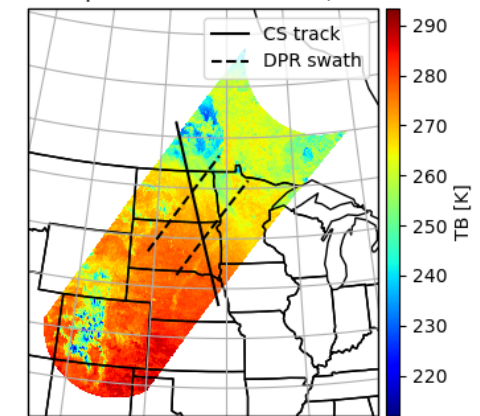
Brightness temperature at 37V GHz, orbit: 000329



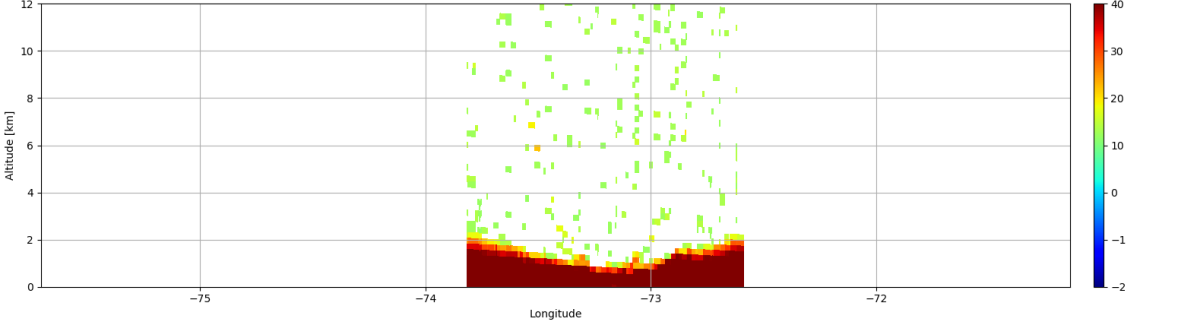
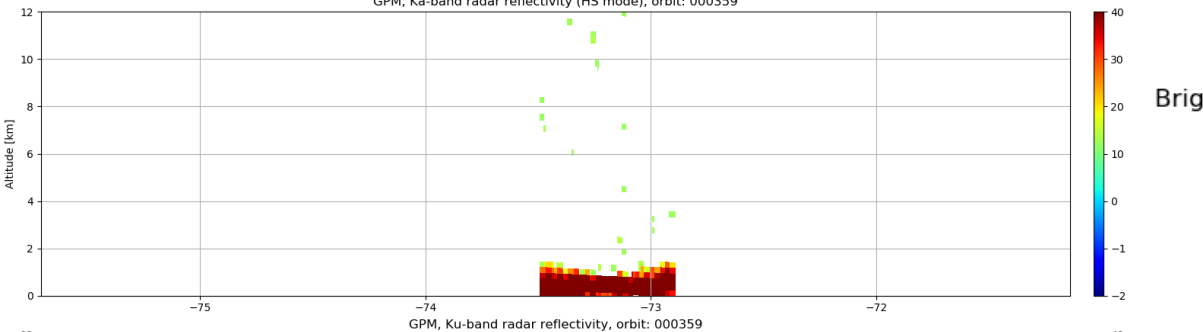
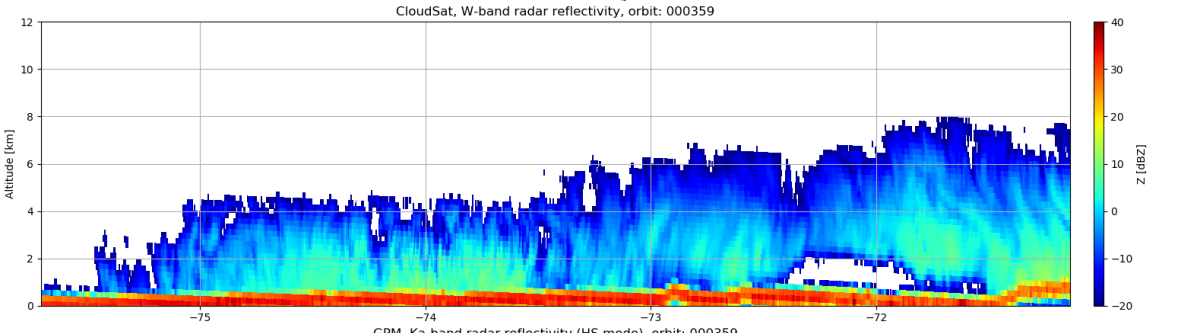
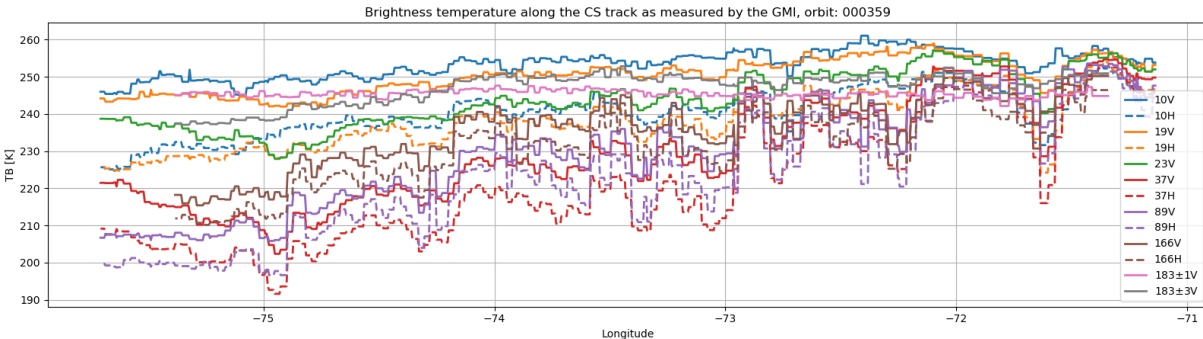
Brightness temperature at 89V GHz, orbit: 000329



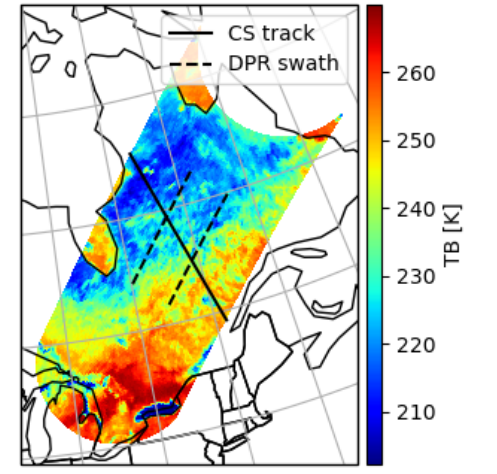
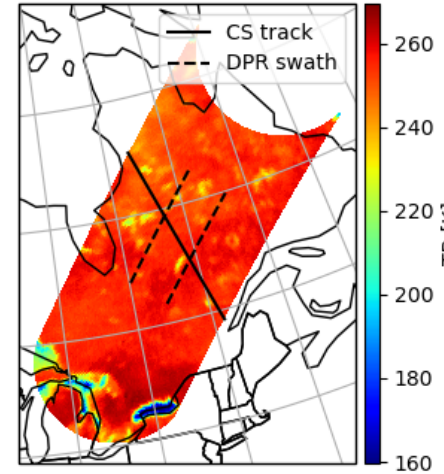
Brightness temperature at 166V GHz, orbit: 000329



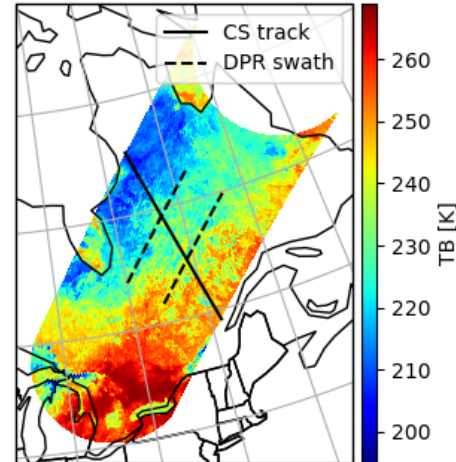
Orbit: 359



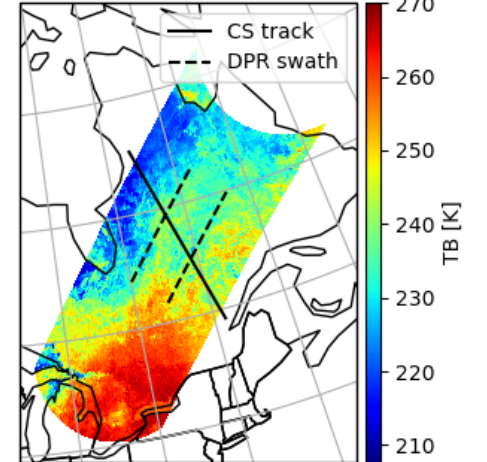
Brightness temperature at 10V GHz, orbit: 000359



Brightness temperature at 89V GHz, orbit: 000359

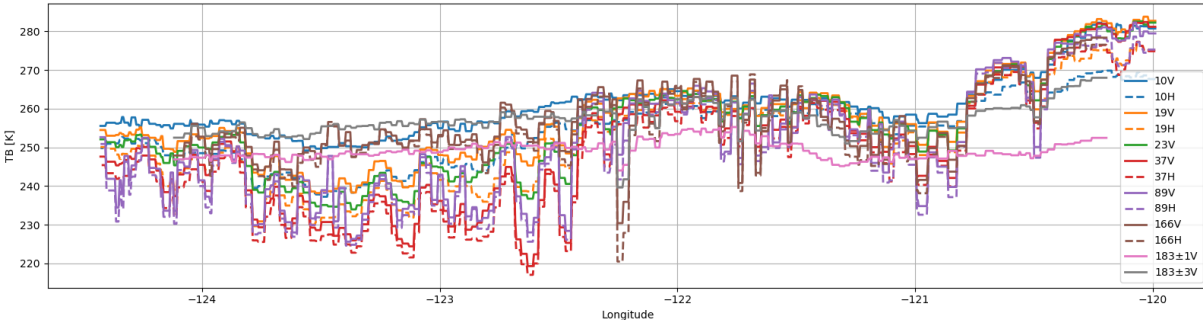


Brightness temperature at 166V GHz, orbit: 000359

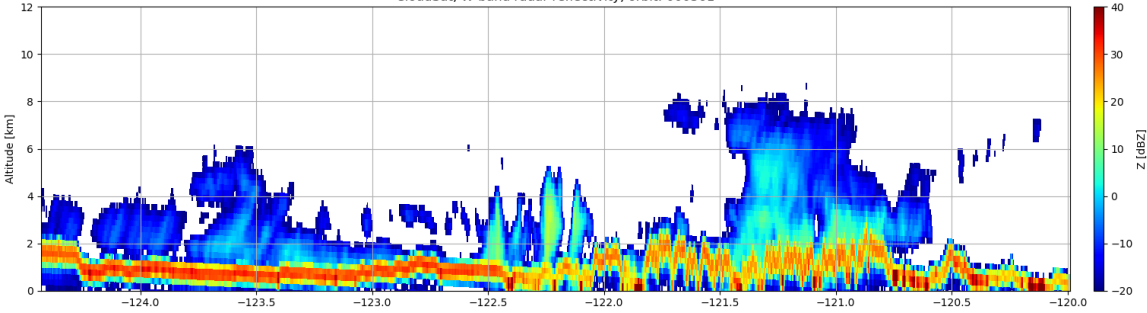


Orbit: 361

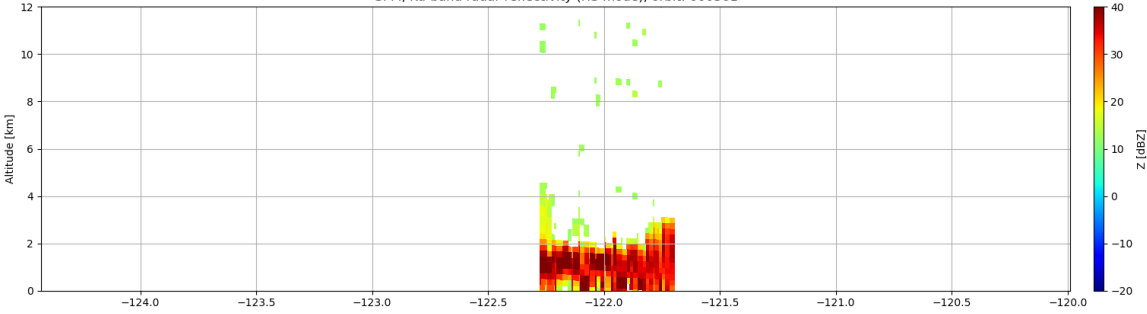
Brightness temperature along the CS track as measured by the GMI, orbit: 000361



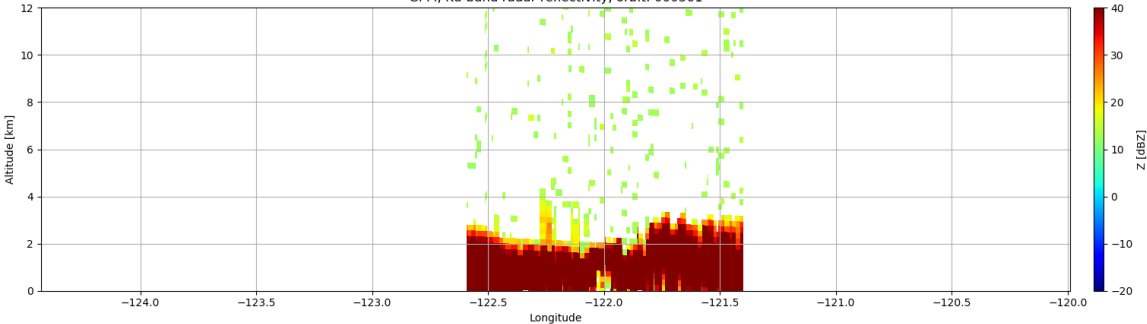
CloudSat, W-band radar reflectivity, orbit: 000361



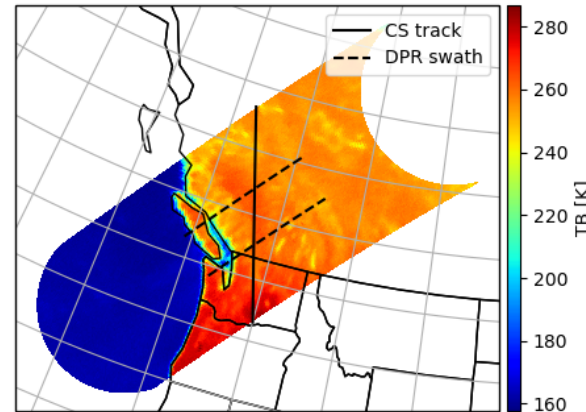
GPM, Ka-band radar reflectivity (HS mode), orbit: 000361



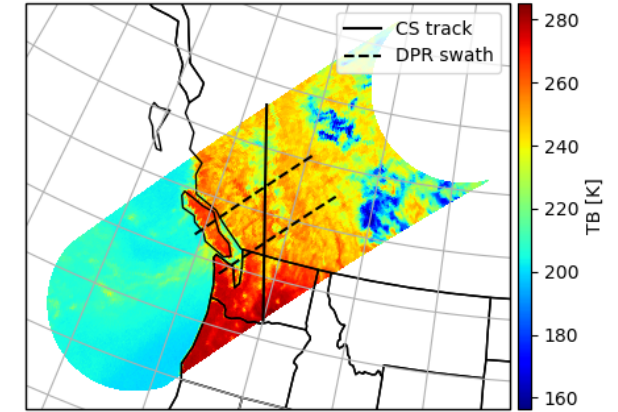
GPM, Ku-band radar reflectivity, orbit: 000361



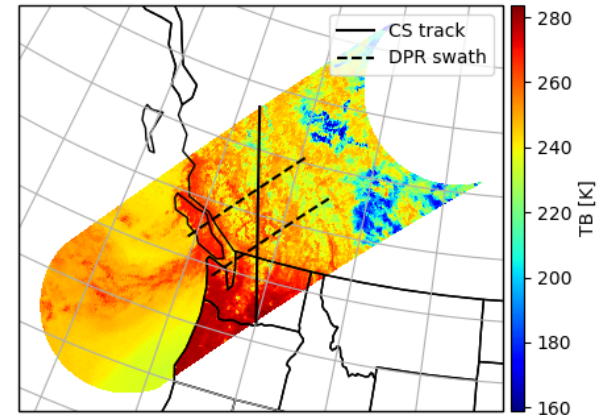
Brightness temperature at 10V GHz, orbit: 000361



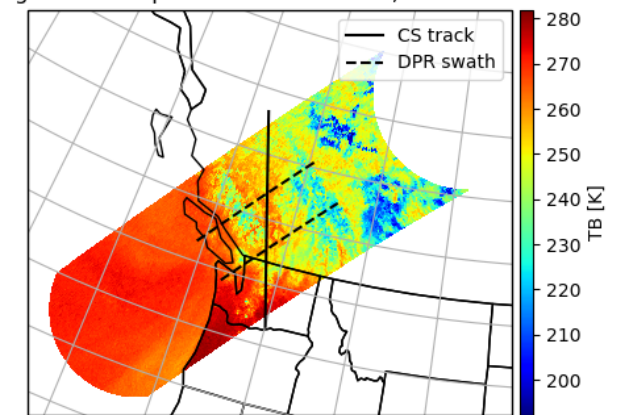
Brightness temperature at 37V GHz, orbit: 000361



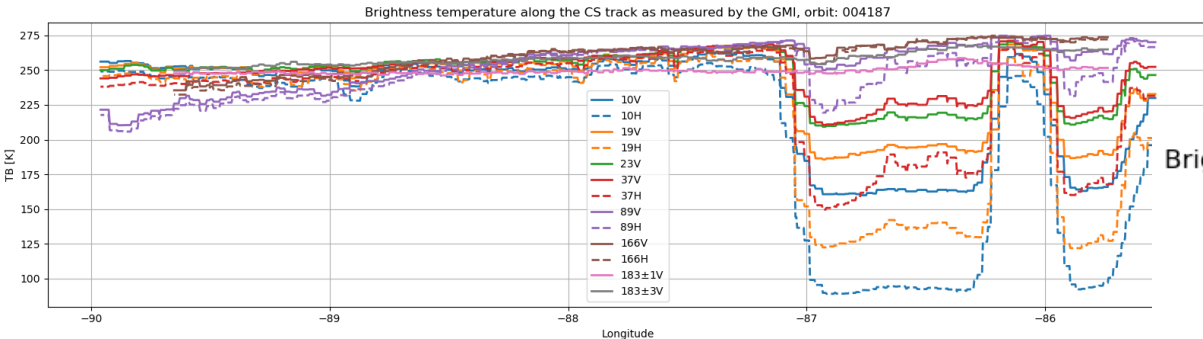
Brightness temperature at 89V GHz, orbit: 000361



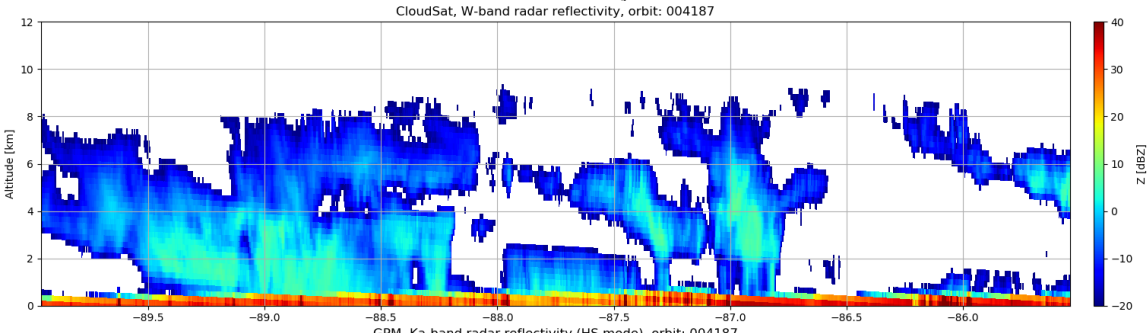
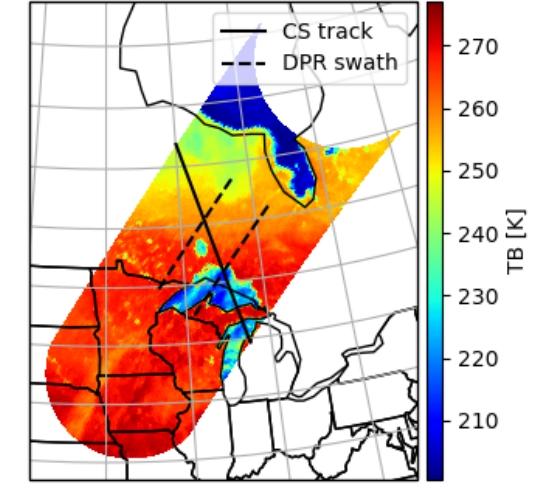
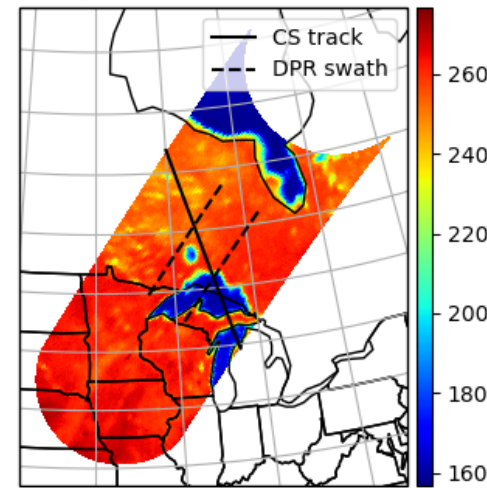
Brightness temperature at 166V GHz, orbit: 000361



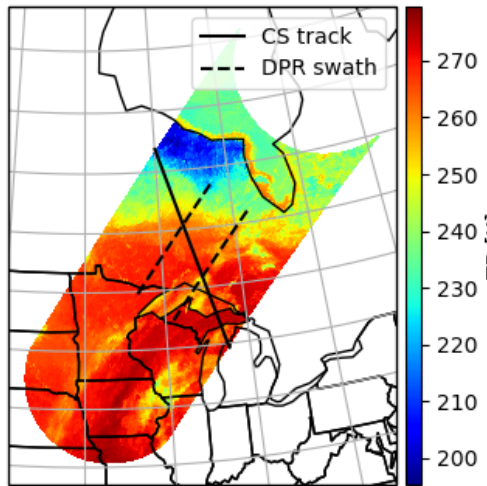
Orbit: 4187



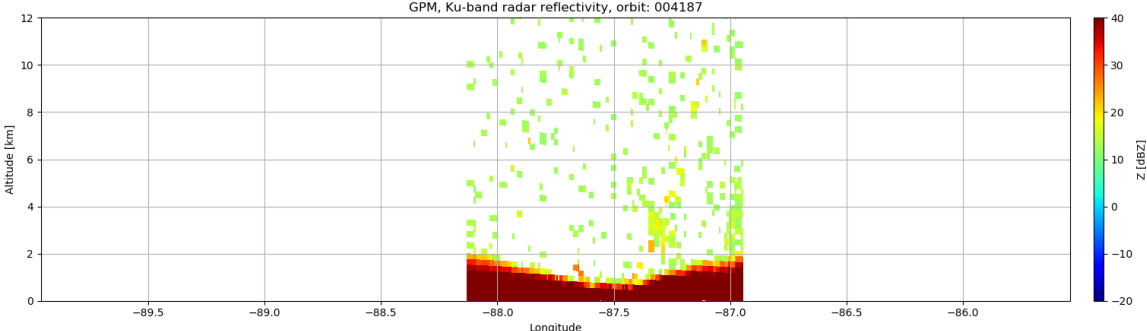
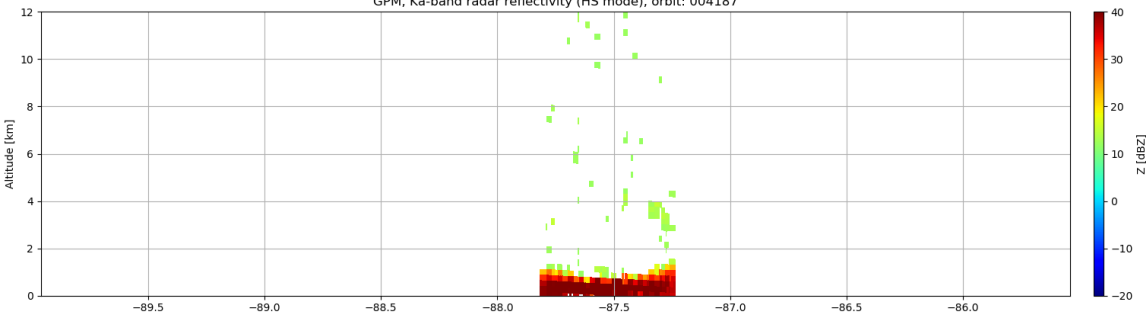
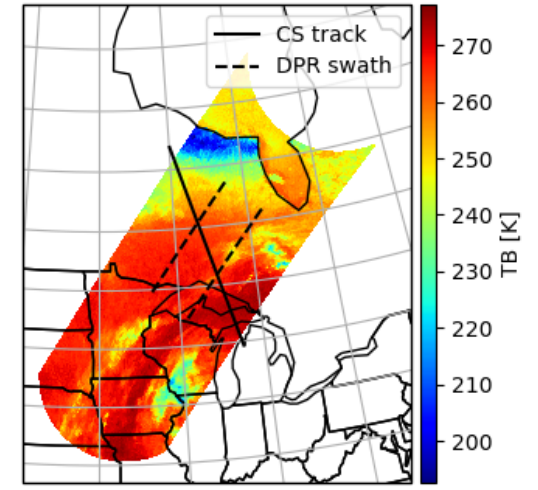
Brightness temperature at 10V GHz, orbit: 004187 Brightness temperature at 37V GHz, orbit: 004187



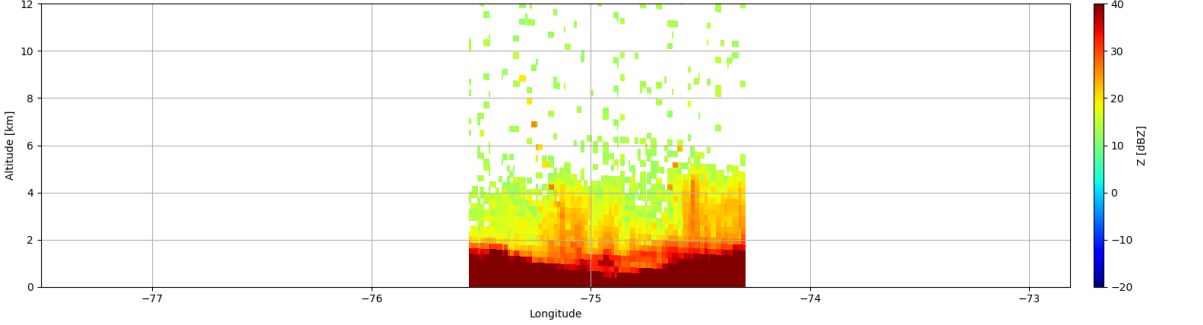
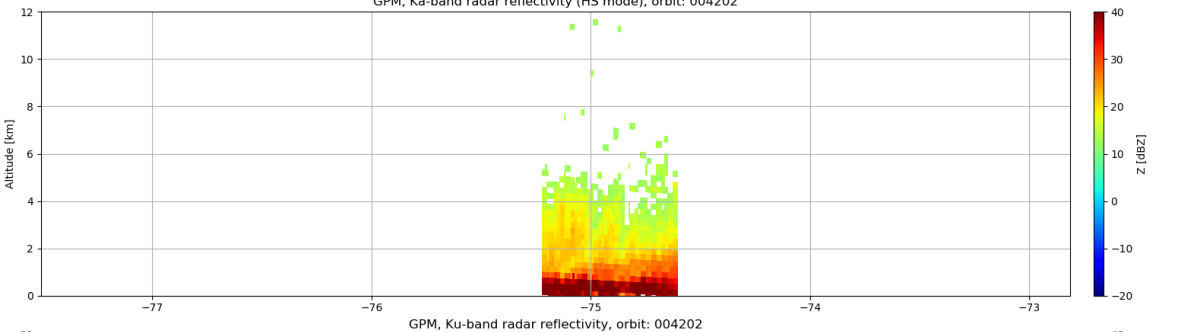
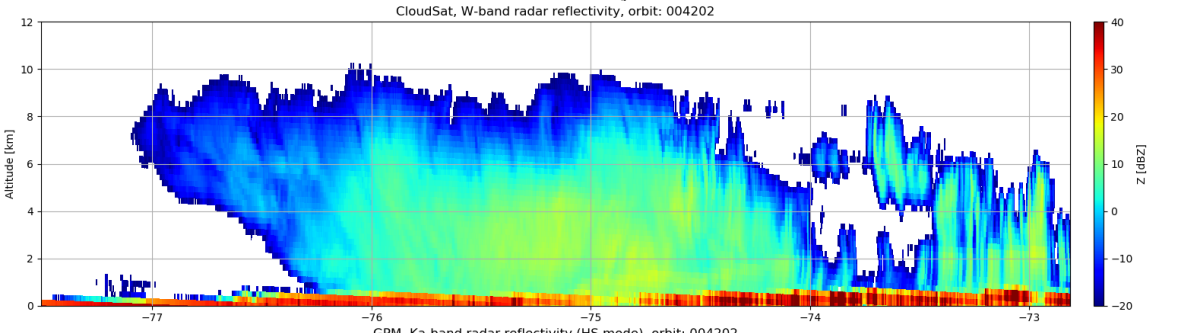
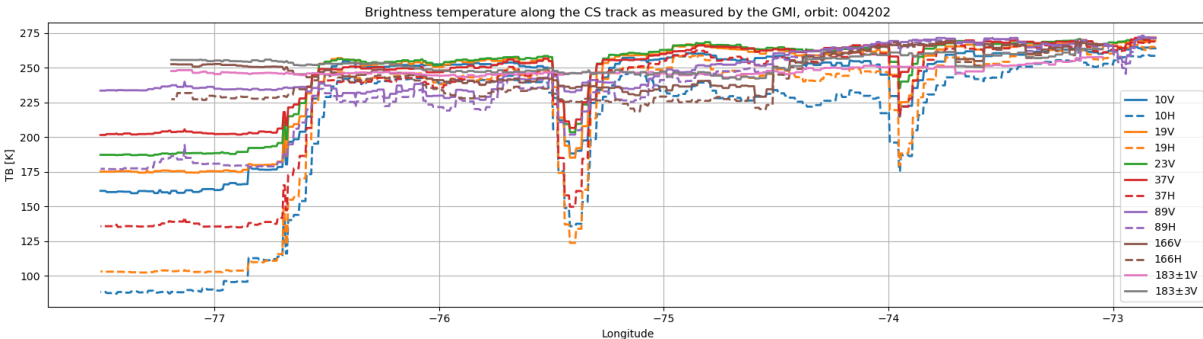
Brightness temperature at 89V GHz, orbit: 004187



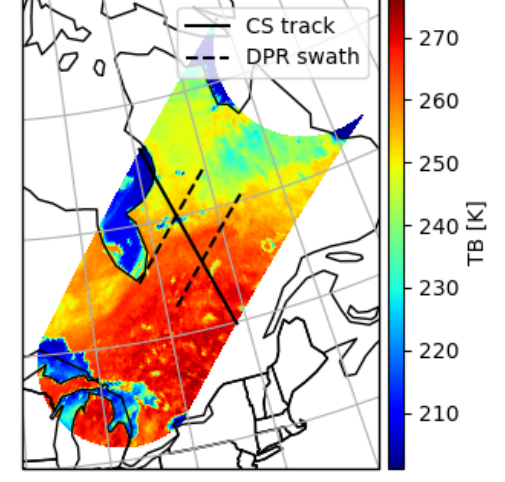
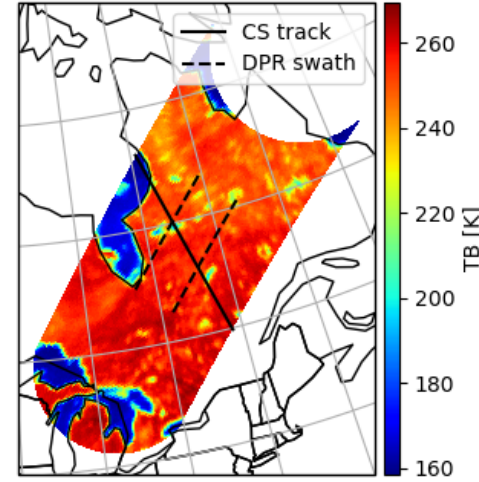
Brightness temperature at 166V GHz, orbit: 004187



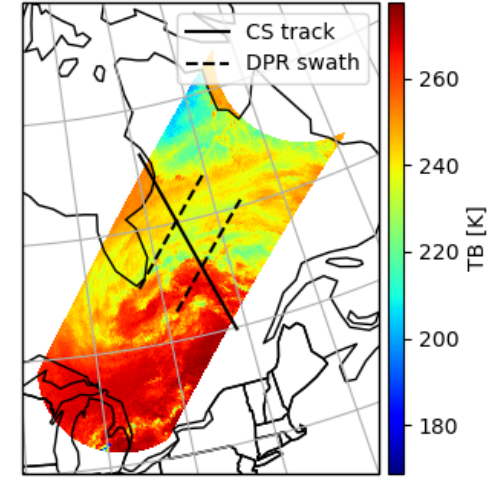
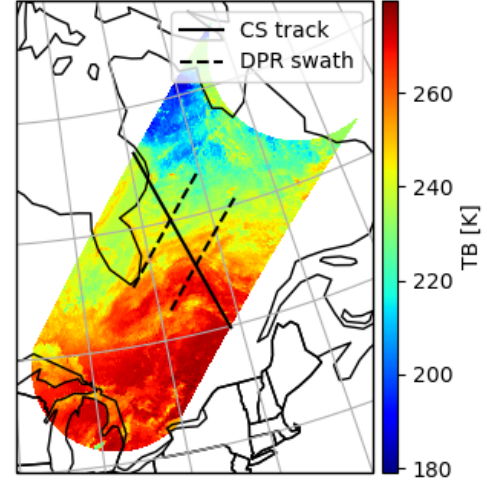
Orbit: 4202



Brightness temperature at 10V GHz, orbit: 004202 Brightness temperature at 37V GHz, orbit: 004202

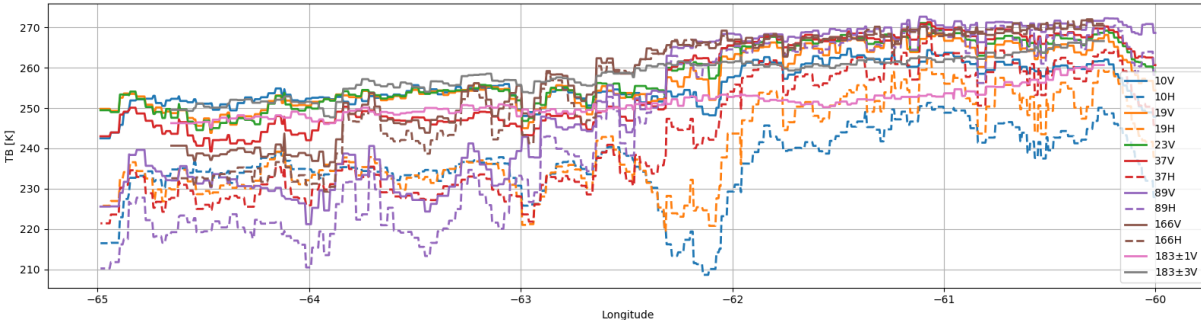


Brightness temperature at 89V GHz, orbit: 004202 Brightness temperature at 166V GHz, orbit: 004202

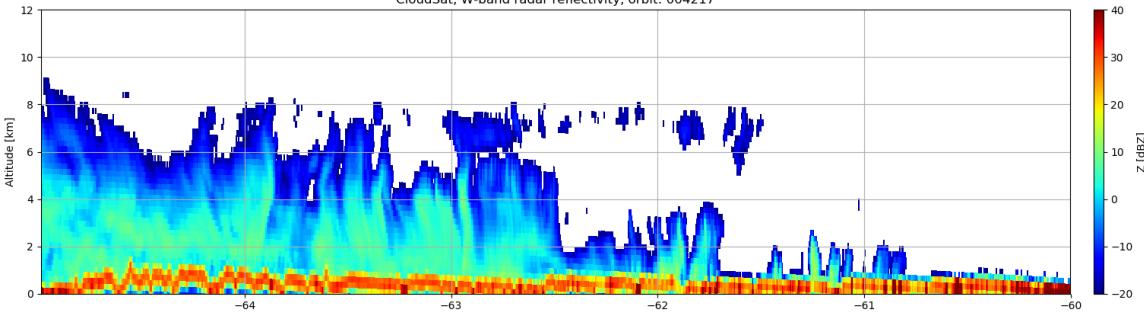


Orbit: 4217

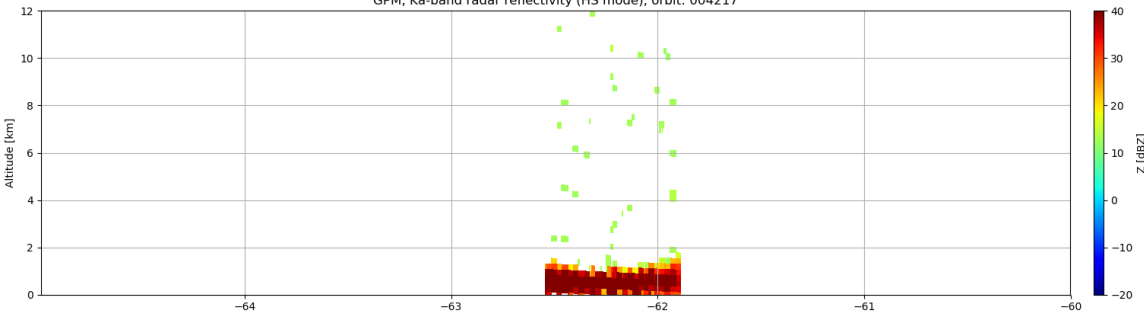
Brightness temperature along the CS track as measured by the GMI, orbit: 004217



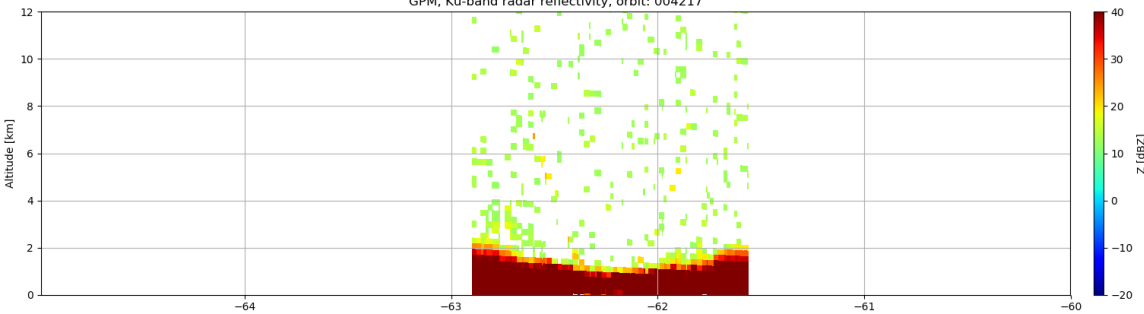
CloudSat, W-band radar reflectivity, orbit: 004217



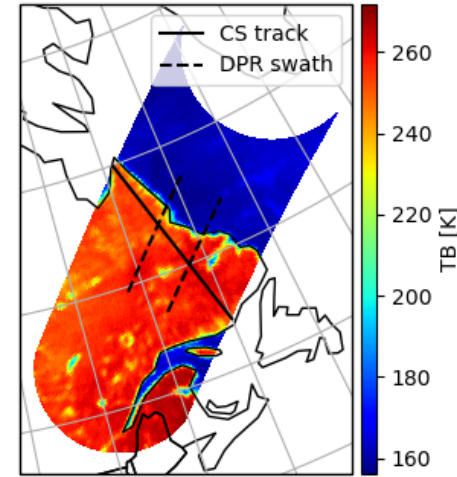
GPM, Ka-band radar reflectivity (HS mode), orbit: 004217



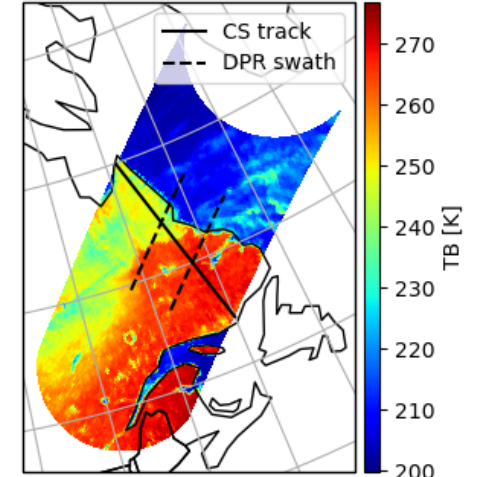
GPM, Ku-band radar reflectivity, orbit: 004217



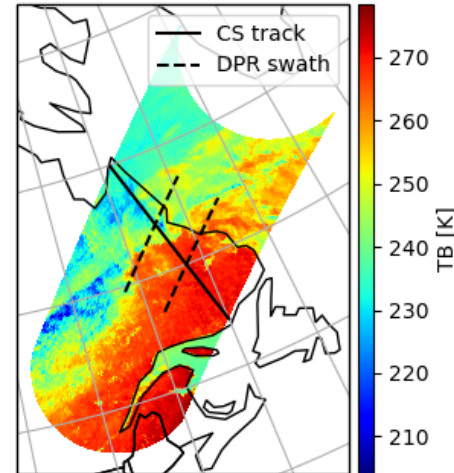
Brightness temperature at 10V GHz, orbit: 004217



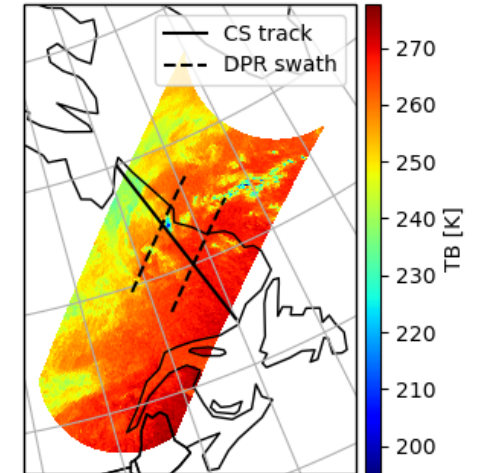
Brightness temperature at 37V GHz, orbit: 004217



Brightness temperature at 89V GHz, orbit: 004217

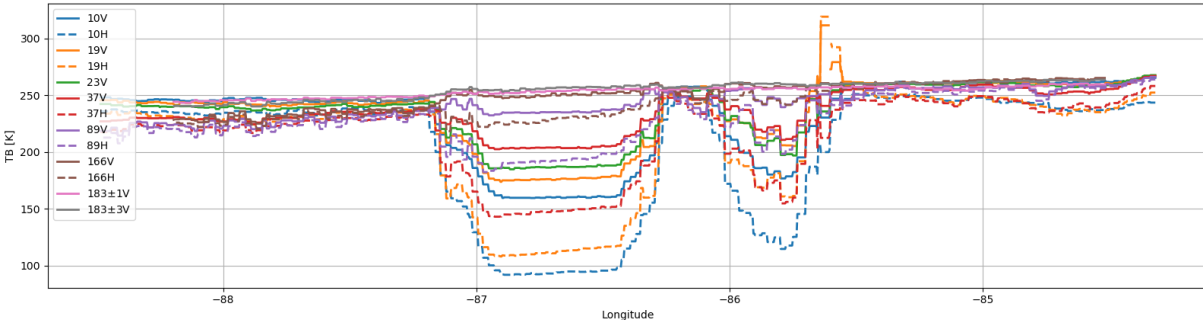


Brightness temperature at 166V GHz, orbit: 004217

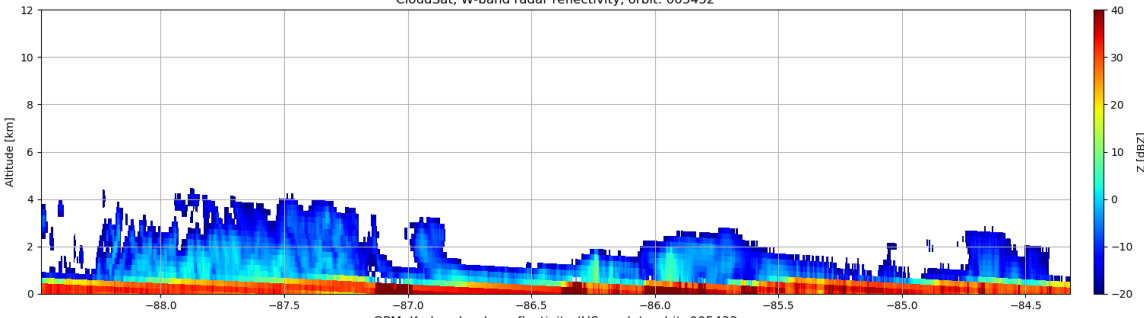


Orbit: 5432

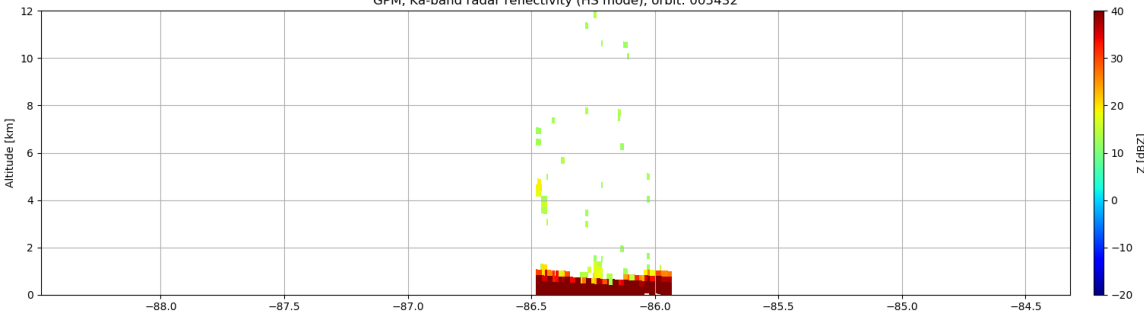
Brightness temperature along the CS track as measured by the GMI, orbit: 005432



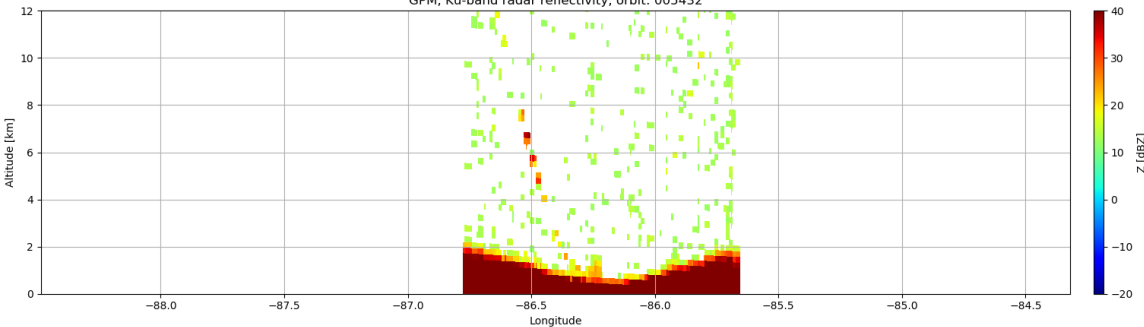
CloudSat, W-band radar reflectivity, orbit: 005432



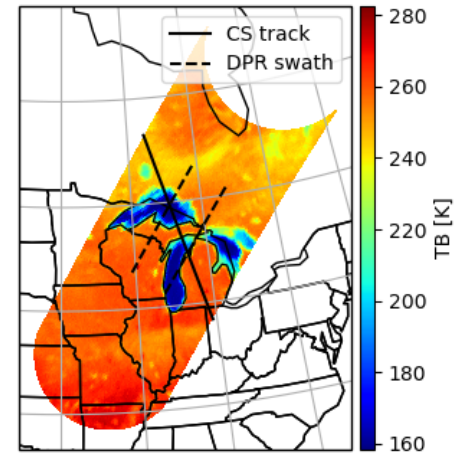
GPM, Ka-band radar reflectivity (HS mode), orbit: 005432



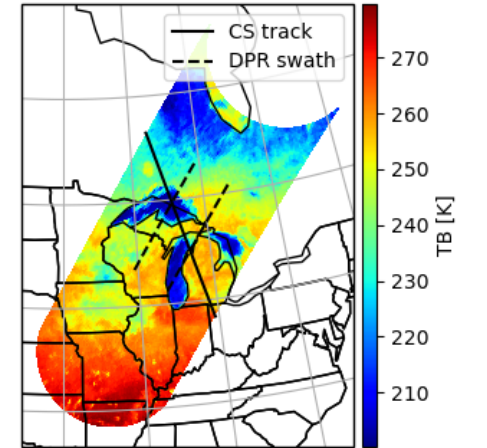
GPM, Ku-band radar reflectivity, orbit: 005432



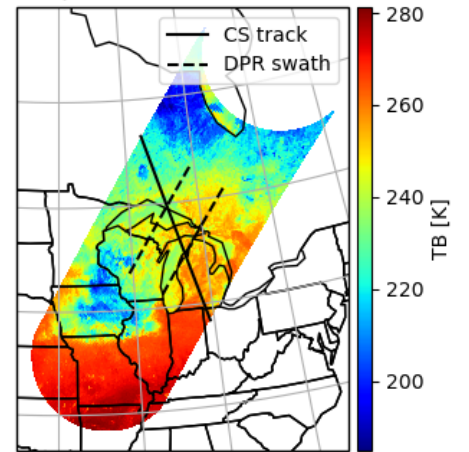
Brightness temperature at 10V GHz, orbit: 005432



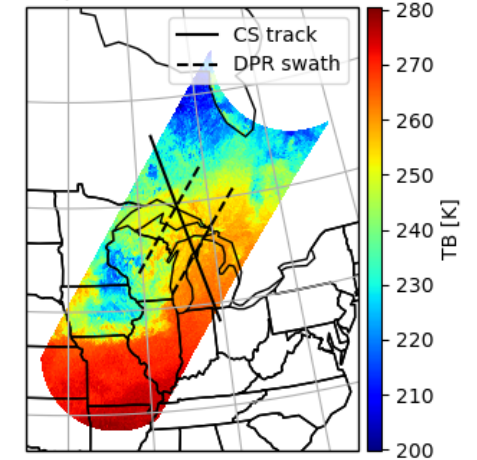
Brightness temperature at 37V GHz, orbit: 005432



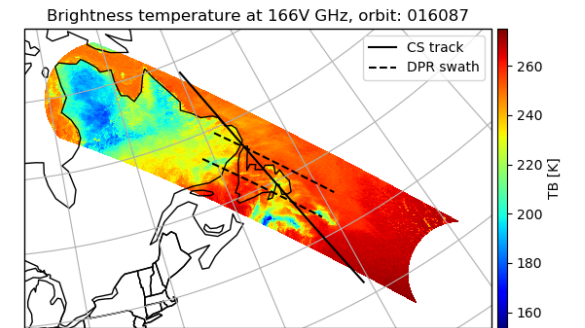
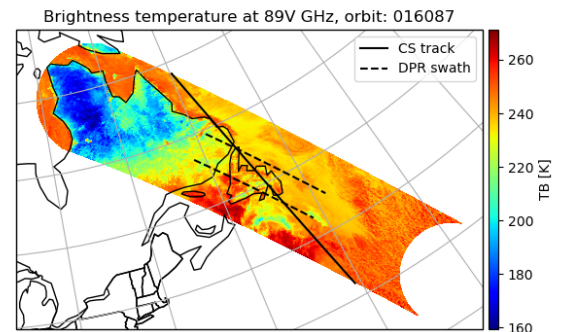
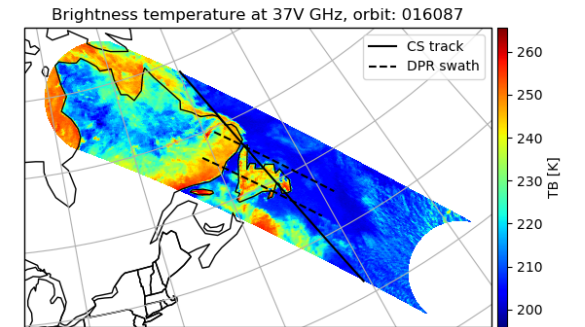
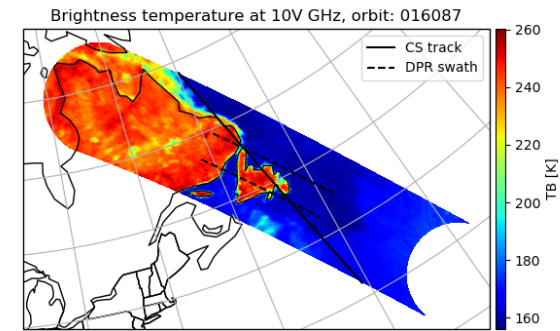
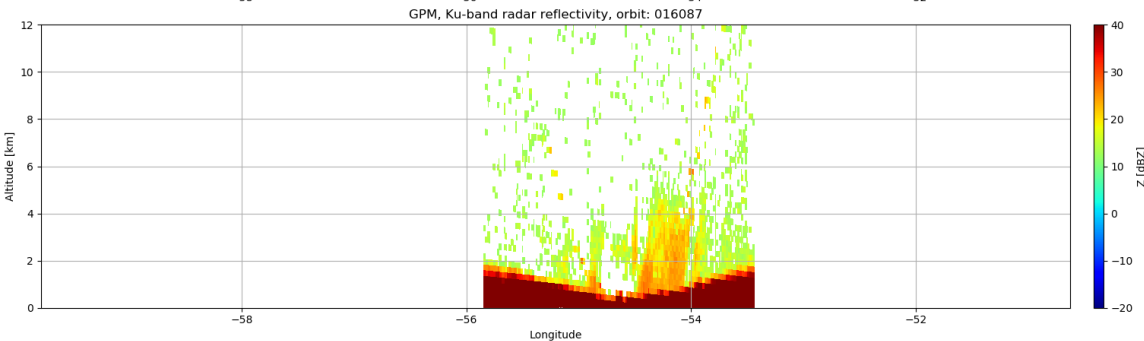
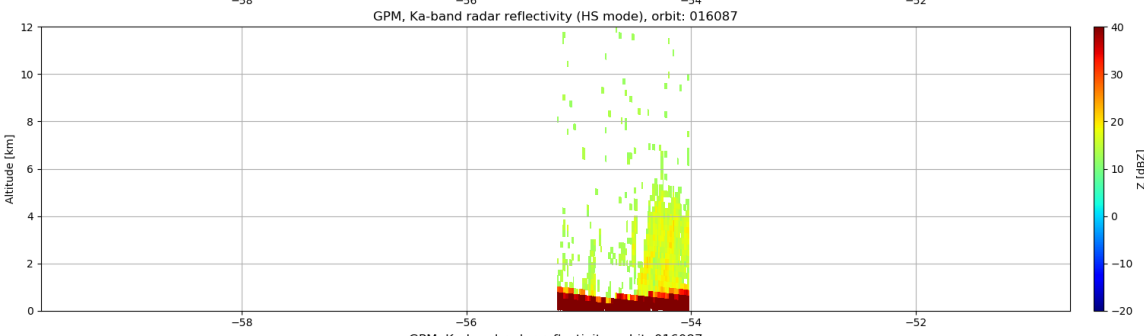
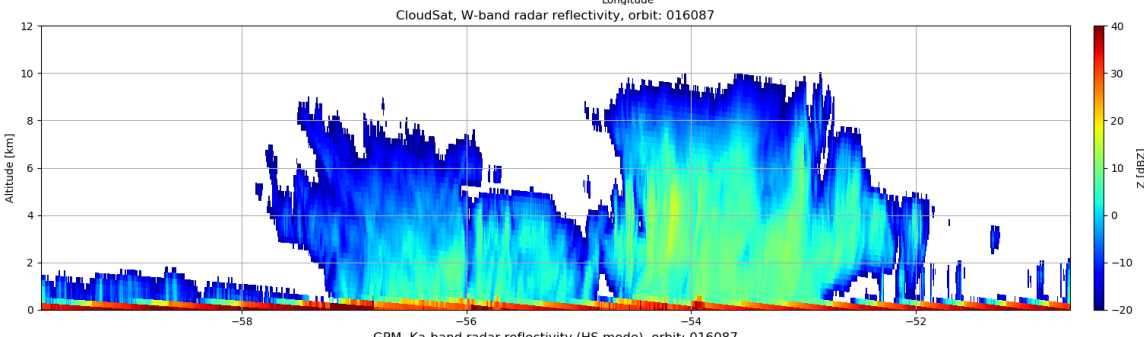
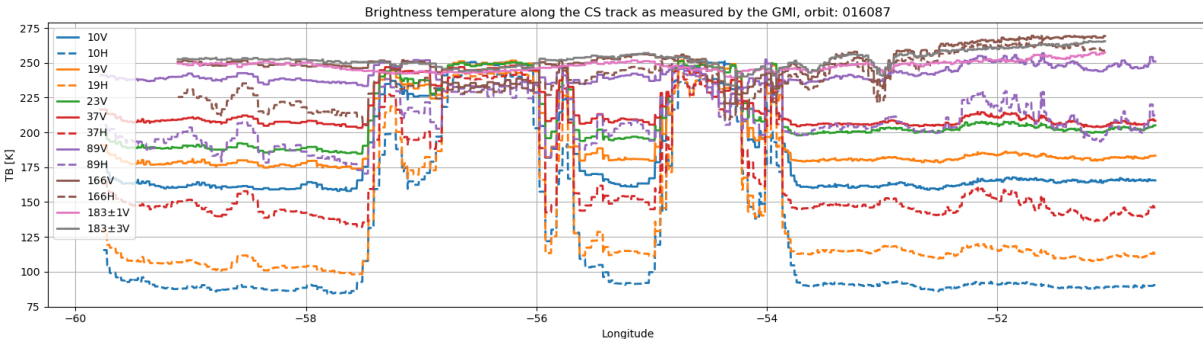
Brightness temperature at 89V GHz, orbit: 005432



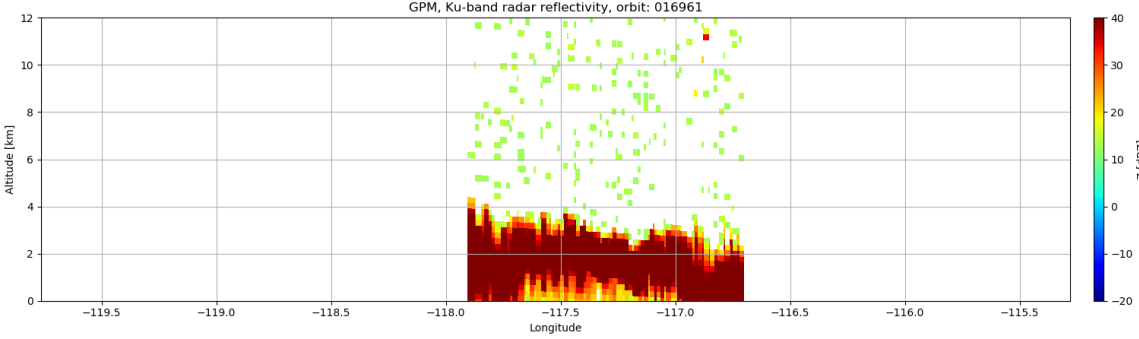
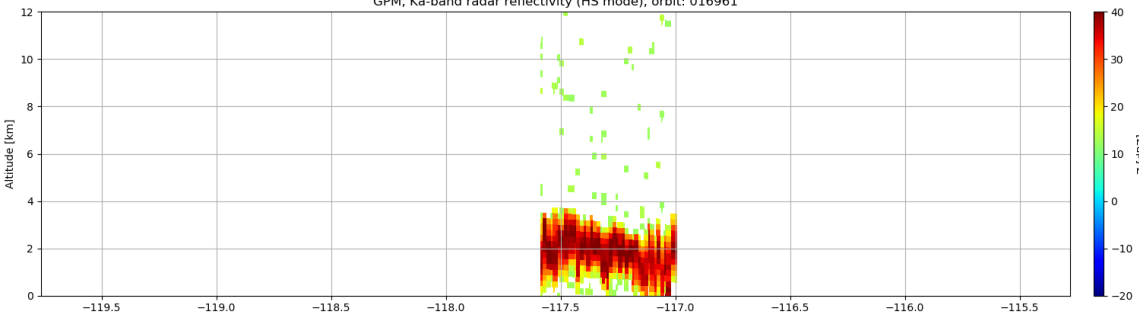
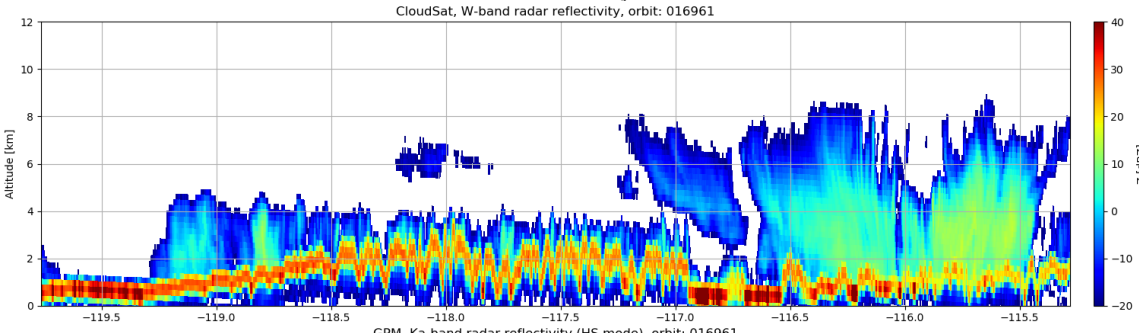
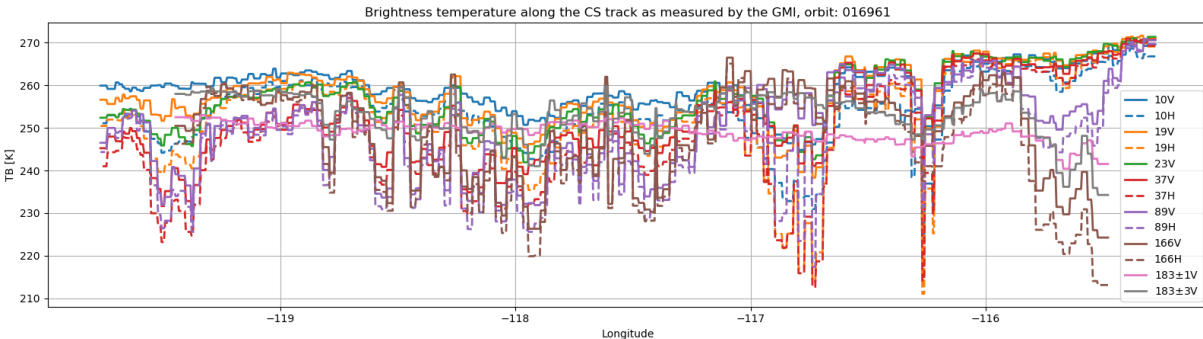
Brightness temperature at 166V GHz, orbit: 005432



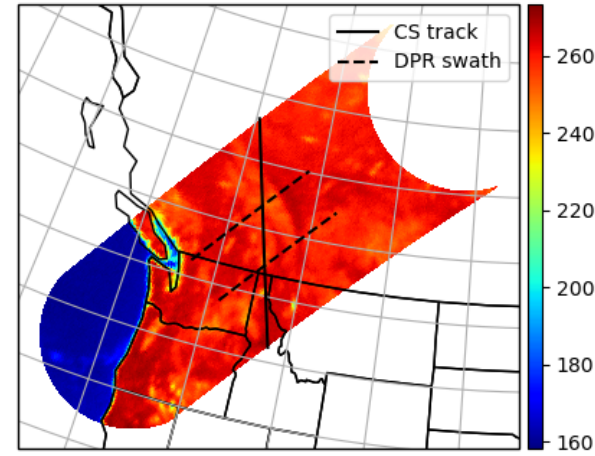
Orbit: 16087



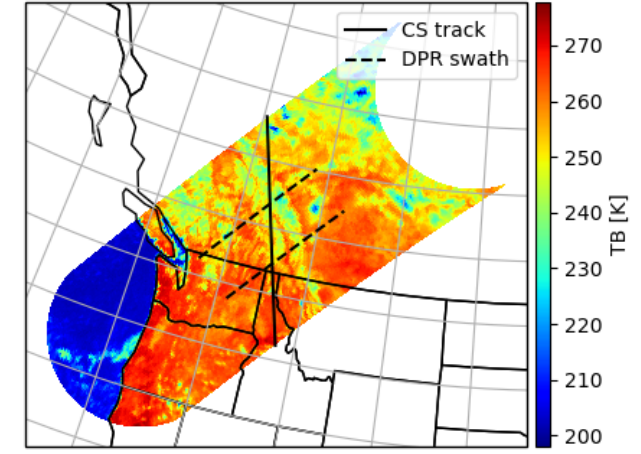
Orbit: 16961



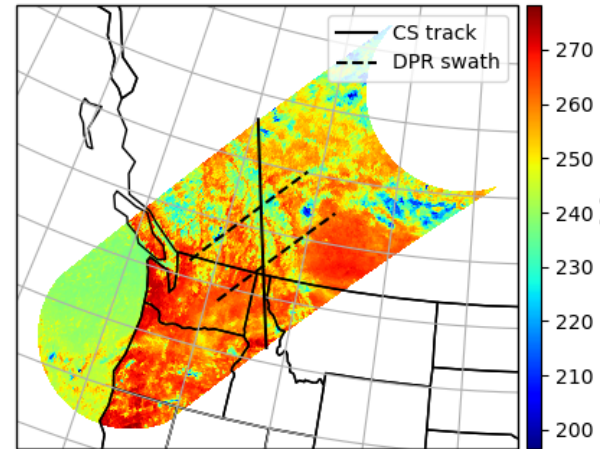
Brightness temperature at 10V GHz, orbit: 016961



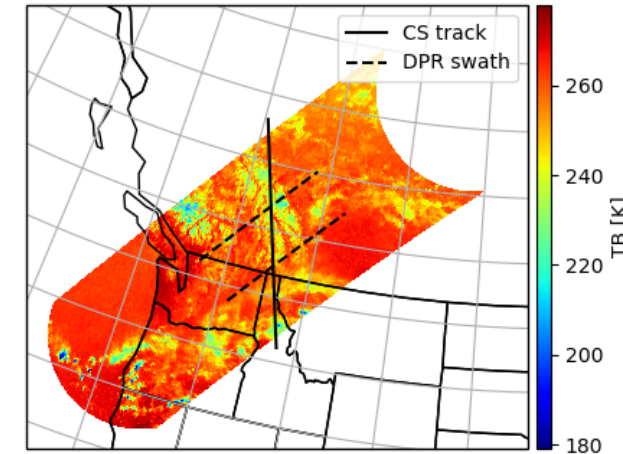
Brightness temperature at 37V GHz, orbit: 016961



Brightness temperature at 89V GHz, orbit: 016961



Brightness temperature at 166V GHz, orbit: 016961



Orbit: 17916

