

ARCSIX

Flight planning lessons learned and Satellite Validation

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Satellite Validation / Overpasses

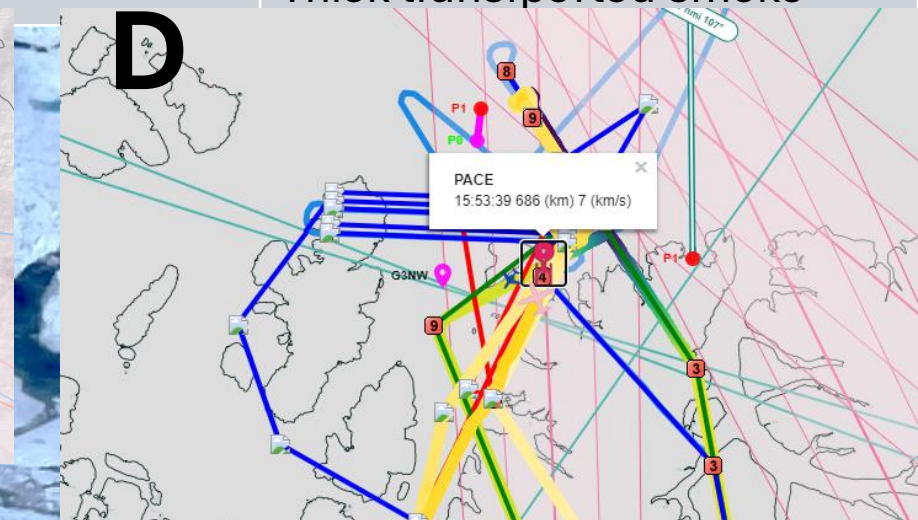
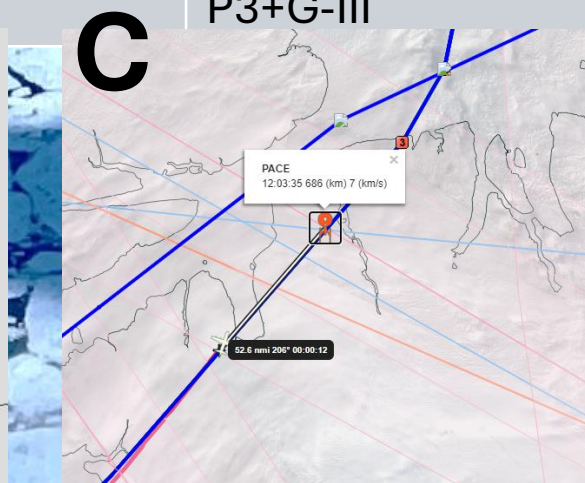
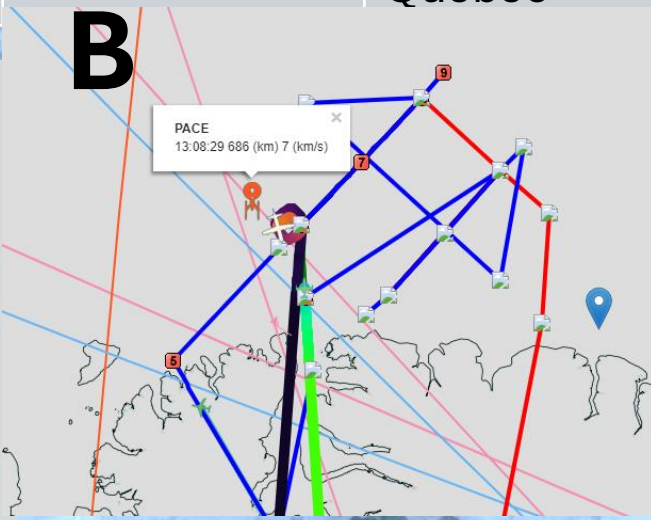
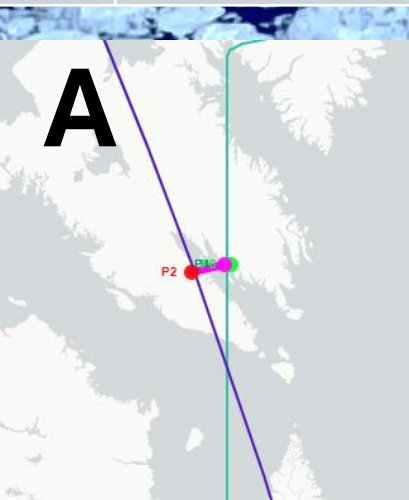
During ARCSIX, often we had coordination with satellite remote sensing. The EOS were quasi permanent staples, however some other satellite were frequently sampled

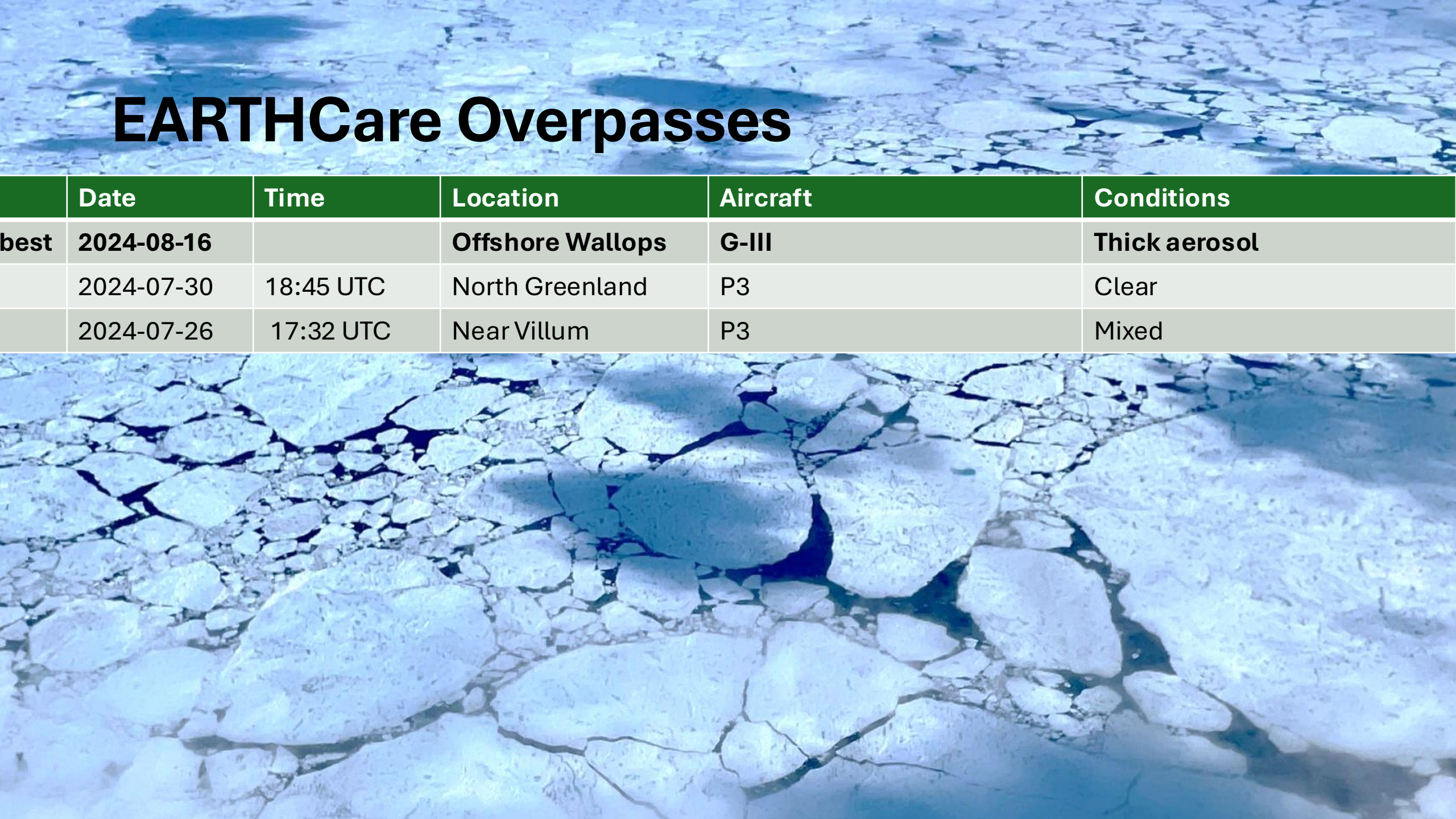
This is not an exhaustive list, but a starting point

- **PACE** ~ **4 good** within the SPeXone swath, multi-aircraft stacks (many more 'in-passing')
- **EarthCARE** ~ **1 good** G-III underpass of the lidar, in thick aerosol, during transit back
- **PREFIRE** ~ **1 good** along track underpass over Baffin Island with G-III, but many with more than 2h separation, especially near Pituffik.
- Many **ICESAT-2**, but few in clear conditions.

PACE Overpasses within SPEXone

	Date	Time	Location	Aircraft	Conditions
A	2024-07-24		Baffin Island	G-III	Aerosol over low clouds (some ci)
B	2024-08-07	13:08:29 UTC	North of Ellesmere	P3+G-III+Learjet	Low clouds over sea ice
C	2024-08-08	12:03:35 UTC	Northern Nares Strait	P3	Mixed clouds over ice
D	2024-08-09	15:53:39 UTC	Platypus (NW Ellesmere)	P3+G-III	Thin clouds (some clearing)
	2024-08-16		Quebec	P3+G-III	Thick transported smoke





EARTH*Care* Overpasses

	Date	Time	Location	Aircraft	Conditions
best	2024-08-16		Offshore Wallops	G-III	Thick aerosol
	2024-07-30	18:45 UTC	North Greenland	P3	Clear
	2024-07-26	17:32 UTC	Near Villum	P3	Mixed

Potential PREFIRE Overpasses

	Date	Time	Location	Aircraft	PREFIRE #	Conditions
Best	2024-08-06	~11:35 UTC	Baffin Island	G-III	2	Variable
+2h	2024-05-28	~11:40 UTC	Humbolt Glacier	P3	2	Mostly clear
+2h	2024-05-30	~11:40 UTC	Humbolt Glacier	P3+G-III	2	Some cirrus
+3h	2024-05-31	~12:00 UTC	North Ellesmere Island	P3+G-III	2	Clear (?)
+2h	2024-06-03	~11:20 UTC	Thule	P3+G-III	2	Clouds
+1h	2024-06-05	~11:20 UTC	Qaanaaq	P3+G-III	2	Clear
+2h	2024-06-06	~11:20 UTC	Qaanaaq	P3+G-III	2	Clear
+2h	2024-06-07	~11:30 UTC	Humbolt Glacier	P3+G-III	2	Clear
0h	2024-06-10	12:19 UTC	Platypus	G-III	2	Clear + low clouds
+2h	2024-06-11	~11:00 UTC	Thule	P3+G-III	2	cirrus

