

ACLOUD Flight 2017 06 02, Friday

POLAR 6 In-Situ

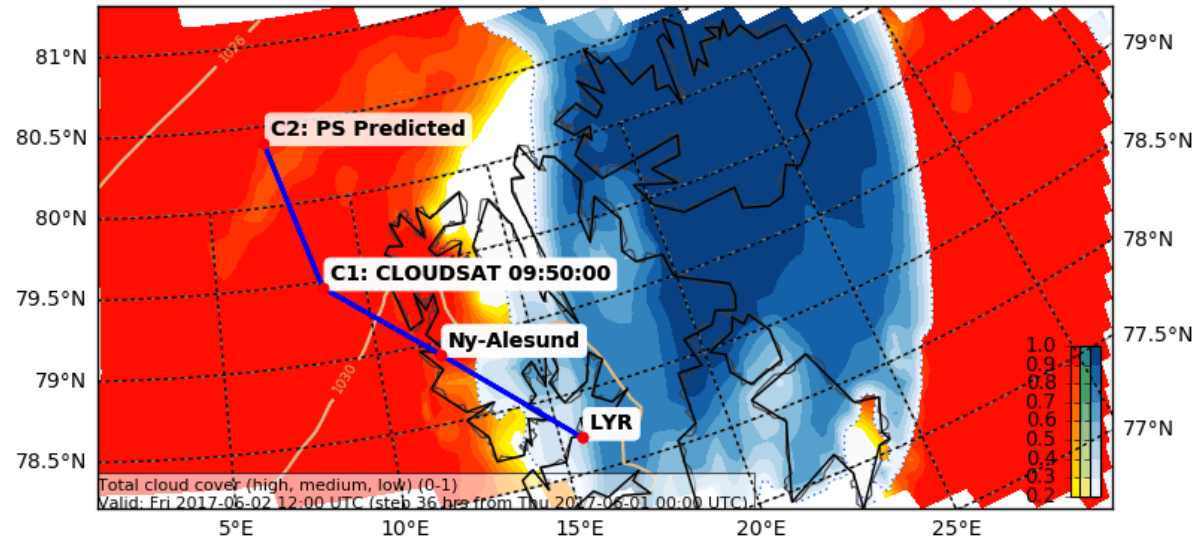
Crew:	Mission PI	Emma Järvinen	
	AWI	Daniel Damaske	Est. Take Off: 10:30 LT
	PMS	Delphine Leroy	
	Aerosol 1	Hans Clemen	Est. Duration: 4 h 40
	Aerosol 2	Stephan Mertes	Min
	Trace Gases	Heiko Bozem	
	Extra Seat	Dmitri Chechin	

Waypoints: **LYR:** 78° 14.816' N, 15° 27.545' E
NyA: 78° 55.421' N, 11° 55.377' E
C1 (Sat): 79° 27.732' N, 8° 34.356' E
C2 (PS): 80° 24.000, N, 7° 12.000, E

Overall goals:

- Relate remote sensing (**P5**) to cloud microphysics (**P6**)
- Characterize horizontal and vertical cloud variability

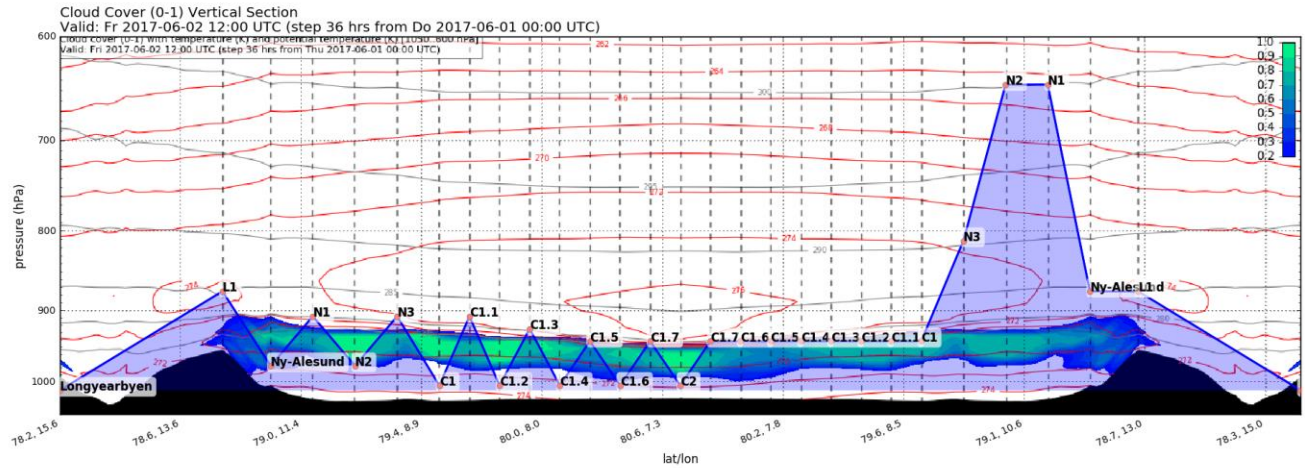
Cloud Cover (0-1) (Total Cloud Cover)
Valid: Fri 2017-06-02 12:00 UTC (step 36 hrs from Thu 2017-06-01 00:00 UTC)



EPSG:77790000

Waypoints:

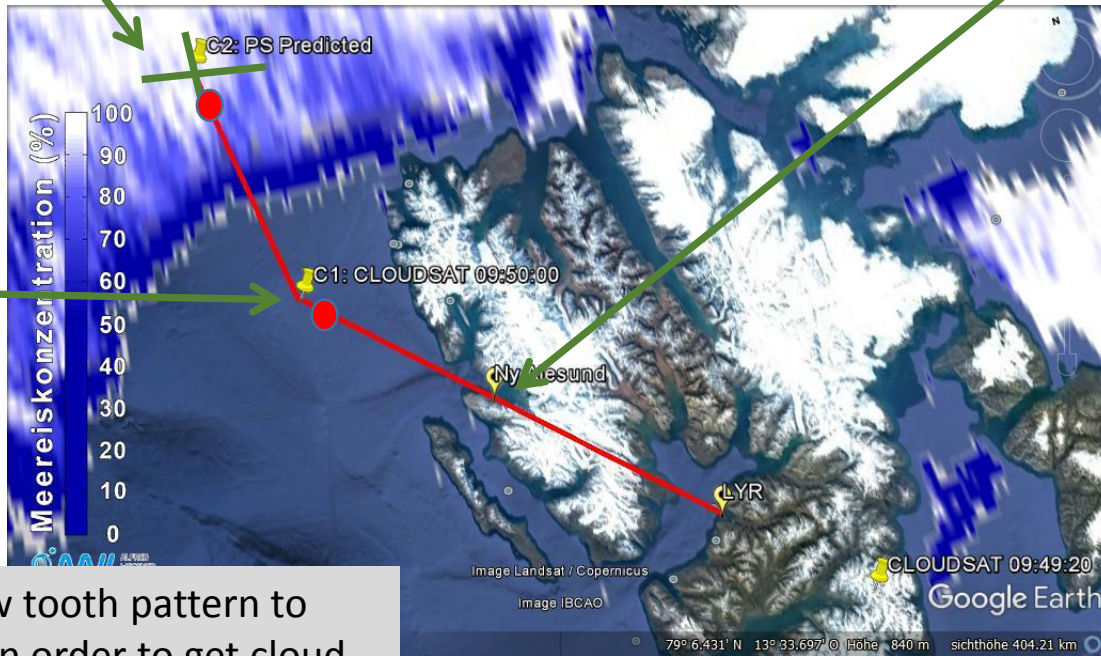
- LYR:** 78° 14.816' N, 15° 27.545'
NyA: 78° 55.421' N, 11° 55.377'
C1 (Sat): 79° 27.732' N, 8° 34.356'
C2 (PS): 80° 24.000' N, 7° 12.000'



Double Triangle at 4 levels above
Polarstern, duration about **25 min** **4x**

TEMP in Ny Alesund, duration about ?? min

**Vertical
Profile**
40 min



P6 fly saw tooth pattern to
Polarstern in order to get cloud
profiles

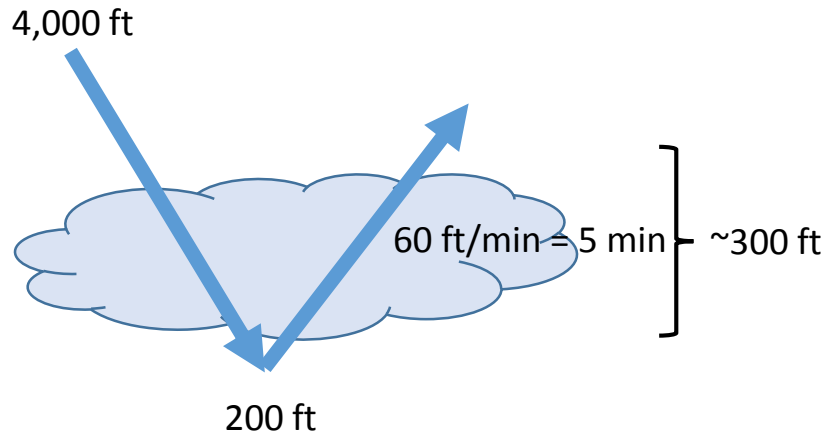
Ny Alesund
extra RS at 8 UT

Flight Plan P6

LYR – NyA climb and stay at 4,000 ft:	60 NM @ 140kn	25 min
NyA approach 4,000 ft – 200 ft – above cloud		20 min
NyA – C1 saw tooth	50 NM @ 140kn	20 min
Meet satellite at: 79° 27.732' N, 8° 34.356' E 11:50:00 LT		
C1 – C2 saw tooth	58 NM @ 140kn	25 min
C2 Four double-triangle pattern , 4 altitudes, 15 miles leg length, 120 kn (7 min?) In coordination with P5		100 min
C2 – C1 5 min in cloud/5 min above cloud: (try maintain one level in cloud)	58 NM @ 140kn	25 min
C1 Vertical profile , 10 min one height, 3 heights	140kn	40 min
C1 – LYR	110 NM @ 140kn	45 min
cloud – 6,000 ft (500 ft/min)		
6,000 ft (3-5 min)		
6,000 ft – 12 000 ft (500 ft/min)		
12,000 ft (3-5 min)		
12,000 ft – LYR (500 ft/min)		
	Total:	??? NM 4 h 40 min

Ny Alesund

Profile through cloud

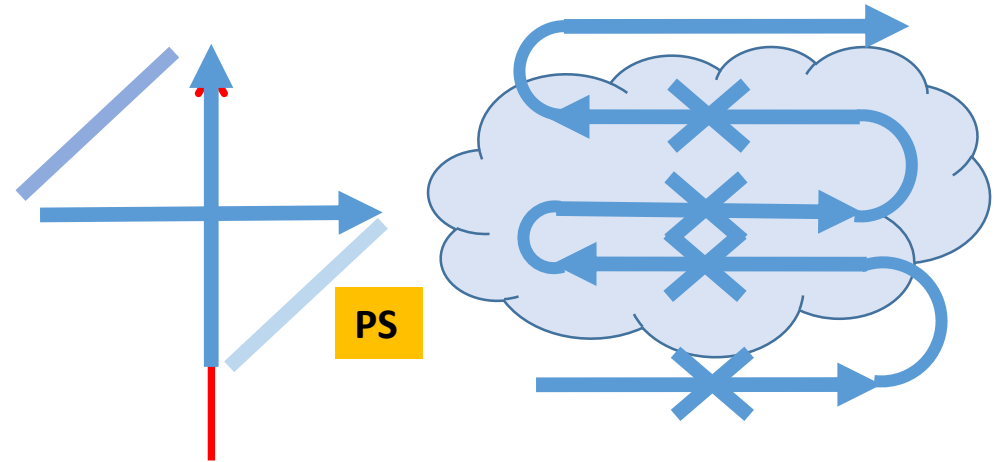


P6 make TEMP by approaching NYA runway to get microphysics

Double triangle-pattern at C2 and C1

4 altitudes (1 below cloud, 3 in cloud)

15 mile straight leg, parallel to wind (7 min)



P6 fly long legs at the same time as P5 in lower levels within cloud

C1 (if clouds)

Vertical Profile through cloud

