

ACLOUD Flight 2017 06 04, Sunday

POLAR 6
In-situ

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|-------|-------------|----------------------|---------------------------|
| Crew: | Mission PI | Emma Järvinen | |
| | AWI | Daniel Damaske | Est. Take Off: 10:15 LT |
| | PMS | Christophe Gourbeyre | |
| | PMS | Martin Schnaiter | Est. Duration: 5 h 50 Min |
| | Aerosol 1 | Hans Clemen | |
| | Aerosol 2 | Stephan Mertes | |
| | Trace Gases | Heiko Bozem | |

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|------------|-------------|-----------------------|----------------------|
| Waypoints: | LYR: | 78° 14.816' N, | 15° 27.545' E |
| | C1: | 78° 46.464' N, | 15° 54.654' E |
| | C2: | 80° 41.400' N, | 0° 39.060' E |
| | PS: | 81° 57.180' N, | 10° 19.920' E |
| | C1: | 78° 46.464' N, | 15° 54.654' E |
| | LYR: | 78° 14.816' N, | 15° 27.545' E |

LYR – C1 climb and stay at 4,000 ft: **33 NM @ 140 kn** **15 min**

Waiting loop to start at C1 at 10:38 LT

C1 – C2 **200 NM @ 140 kn** **85 min**

leave C1 at **10:38 LT** on the satellite track

Meeting with satellite: **11:38:00 LT at 80° 16.236' N; 5° 14.406' E**

Fly to coast at 4,000 ft

From coast saw tooth pattern in clouds

C2 – PS saw tooth pattern **115 NM @ 140 kn** **50 min**

PS position **75 min**

Three double-triangle pattern, each leg 100 ft apart starting underneath the cloud, 15 miles leg length, 120 kn, in coordination with P5

PS – C1 **200 NM @ 140 kn** **85 min**

Aerosol profile (10,000 ft - 6,000 ft)

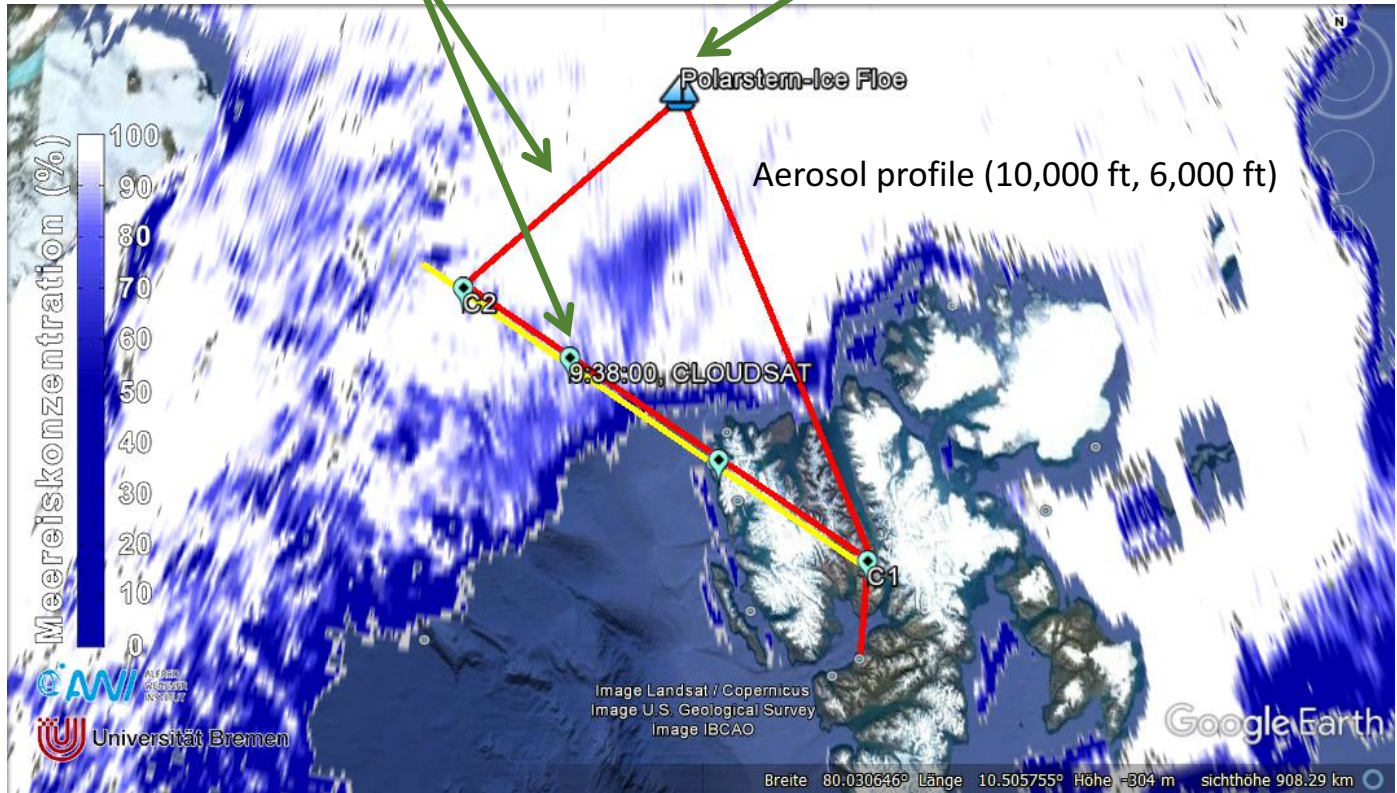
Afterwards saw tooth

C1 – LYR descend **33 NM @ 140 kn** **15 min**

Total: **582 NM** **5 h 25 min**

Saw tooth pattern, ascent/descent with 100-200 ft/min

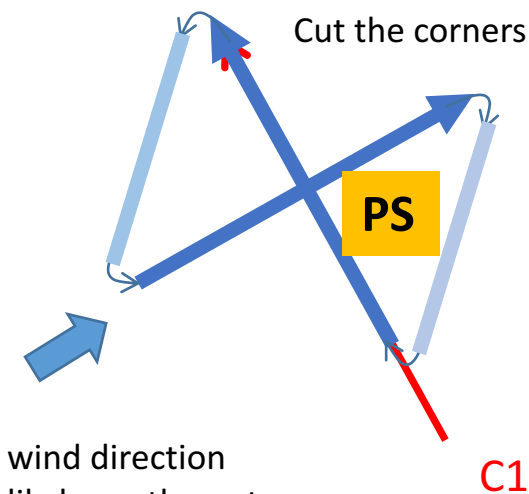
Double Triangle at different altitudes near Polarstern, duration about 3 x 25 min



B. Double triangle-pattern

15 mile straight leg, parallel and perpendicular to the wind

Cut the corners



A. Saw tooth

5 min (100-200 ft/min) ascent and descent

Spend 2-5 minutes below and above cloud

