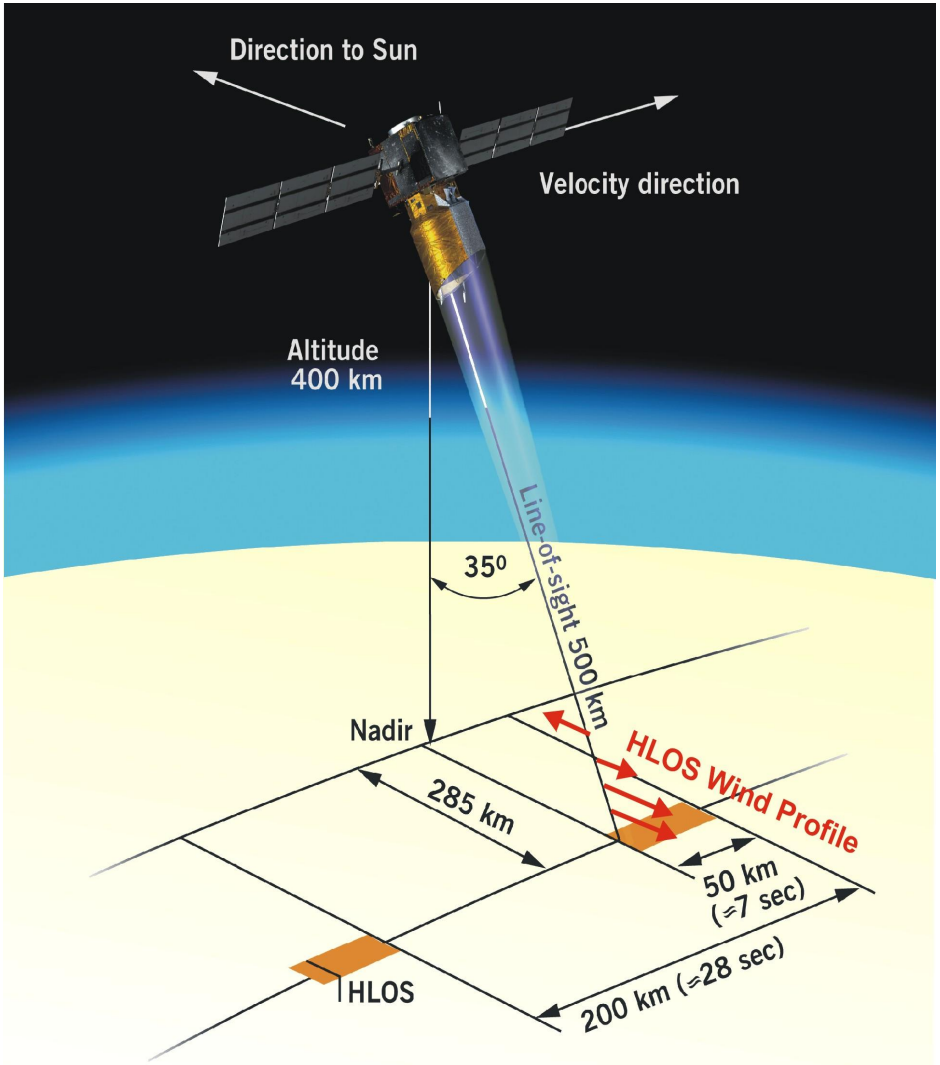
ADM-Aeolus Implementation



- Aeolus will measure wind profiles along the line-of-sight from ground up to about 30 km in 24 vertical levels, accuracy better than 2 m/s
- Direct detection UV lidar (355 nm) with two receivers:
  - Mie receiver for aerosol winds
  - Rayleigh receiver for the clear atmosphere
- The line-of-sight is pointing
  - 35º from nadir and
  - orthogonal to the ground track
- Aeolus orbit: a sun-synchronous dusk-dawn orbit at about 400 km altitude
- Data downlink: once per orbit to Svalbard for Near Real Time data, downlink to other ground stations for Quasi Real Time data possible

ADM-Aeolus Data Products

Product	Contents	Product size [Mbytes / orbit]
Level 0	Time-ordered source packet with Aladin measurement & housekeeping data	47
Level 1B	***geo-located, calibrated observational data*** • preliminary HLOS velocity profiles (standard atmosphere used in Rayleigh channel) • viewing geometry & scene geo-location data	10 … 15 (BUFR format)
Level 2.A	***Supplementary product*** • Cloud profiles / coverage, cloud top heights • Aerosol extinction profiles, ground reflectance, others	12
Level 2.B	***consolidated HLOS wind observations*** Consolidated HLOS wind profiles; actual correction (T, p, …) applied	18
Level 2.C	***Aeolus assisted wind vector product*** Vertical wind profiles (u and v components); result of NWP processing	22

- Level 2.B and Level 2.C processing performed by ECMWF