



Description of 2 trajectory models used within EARLINET (technical poster)

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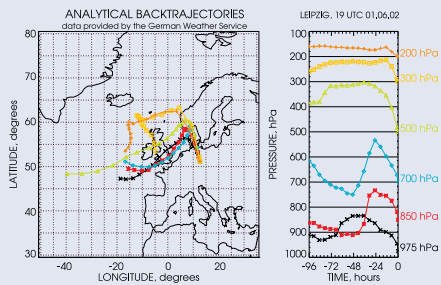
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DWD trajectories

4-day backward trajectories

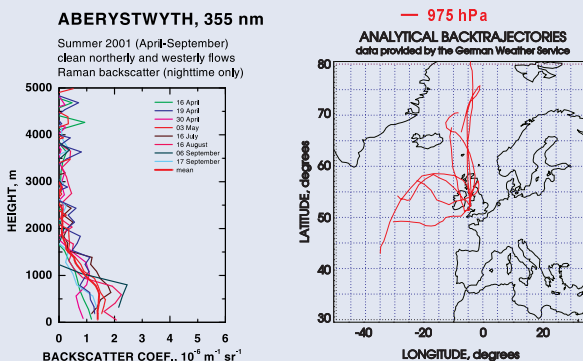
- calculated on a 3-dimensional grid
- Kottmeier, C. and Fay, B. (1998) Trajectories in the antarctic lower troposphere. *J. Geophys. Res.* **103**, 10947-10959
- arrival times: 13 and 19 UT (approximately at times of routine measurements)
- arrival pressure levels: 975, 850, 700, 500, 300, and 200 hPa
- data base: GME model of the DWD
- available for all 20 EARLINET stations (<http://earlinet.tropos.de:8084>)
- available since May 2000

More than 40000 data sets

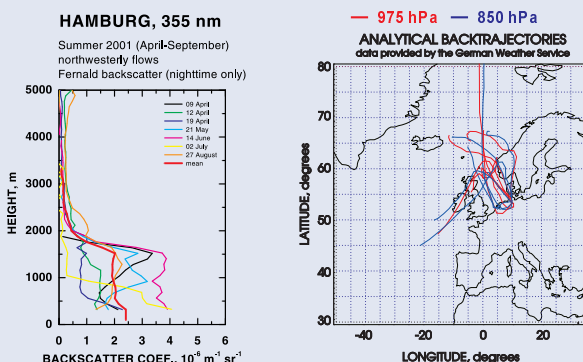


Statistical analysis of routine measurements: Example

U. Wandinger: Aerosol modification over Europe



Optical depth estimate 0-3000 m: 0.04
(with $S = 25 \text{ sr}$ for clean marine aerosols)



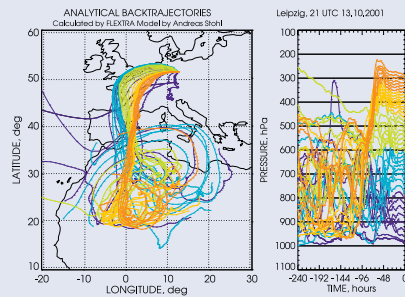
Optical depth estimate 0-3000 m: 0.13
(with $S = 35 \text{ sr}$ for polluted marine aerosols)

FLEXTRA trajectories

10-day backward trajectories

- calculated on a 3-dimensional grid
- Stohl, A., Wotawa, G., Seibert, P., and Kromp-Kolb, H. (1995) Interpolation errors in wind fields as a function of spatial and temporal resolution and their impact on different types of kinematic trajectories. *J. Appl. Meteor.* **34**, 2149-2165
- time resolution: 3 hours
- height resolution: 250 m between 0 and 10 km
- data base: ECMWF model of Andreas Stohl
- available for all 20 EARLINET stations on request
- available for special events

About 3000 data sets



Interpretation of measurements during special events: Example

Major Saharan dust outbreak on August 2-3, 2001

