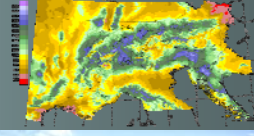


Atmosphärenphysik III



Marc Wüest (& Huw Davies)

Institut für Atmosphäre und Klima
IACETH

ETHZ CHN

www.iac.ethz.ch/people/wueest

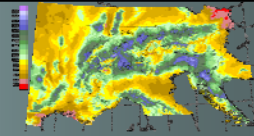
www.iac.ethz.ch/people/davies



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im Web

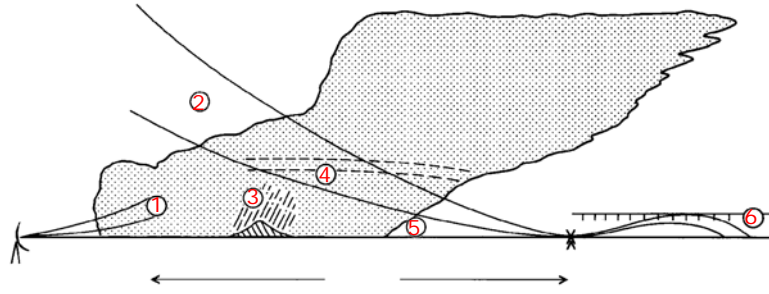
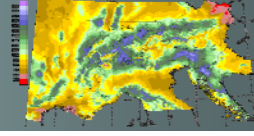


- allgemein schöne Link-Sammlung
www.westwind.ch
- das ETH Radar
www.metradar.ch
- Niederschlagsprognosen
www.meteoradar.ch

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Typische Radarprobleme

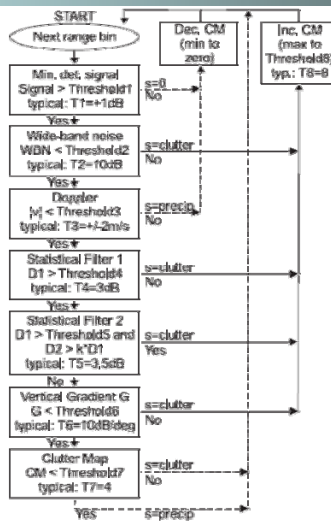
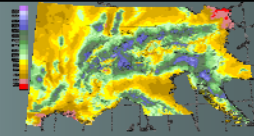


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5

Clutter Filter der MeteoSchweiz



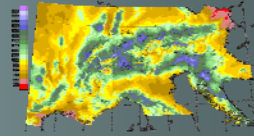
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Figure 1.3: The seven stage decision tree for the elimination of ground clutter in the Swiss radar network. The figure is taken from Joss et al. (1998).

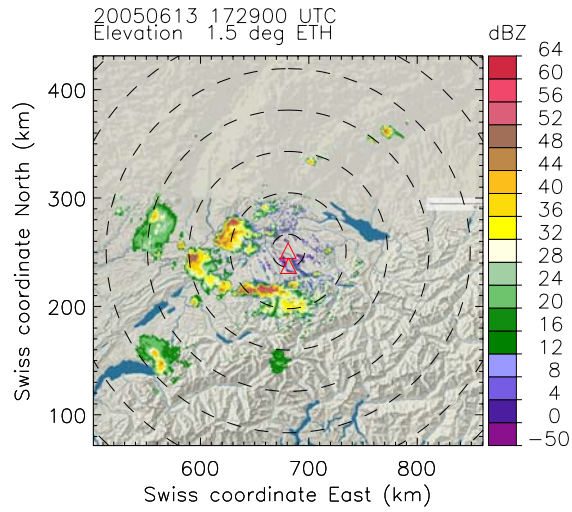
6

Montag, 13.06.2005



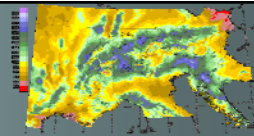
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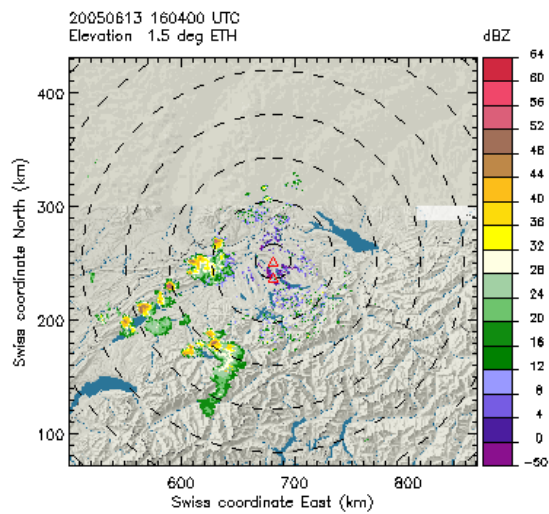
7

Montag, 13. Juni 2005



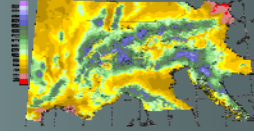
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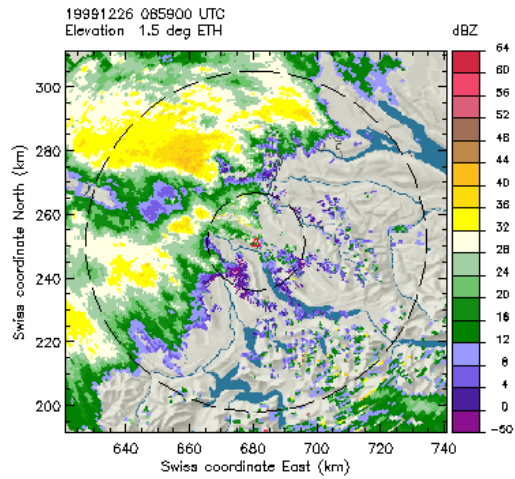


8

Lothar, 26. Dezember 2004



Ein Wintersturm mit eher wenig Niederschlag!

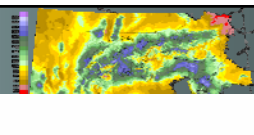


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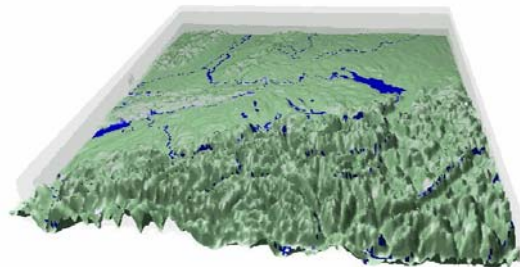
9

3D Animation der Reflektivität



- Albis Volumenscan mit 20 Elevationen zu CAPPis interpoliert
- Topographie mit 1 m Auflösung (Rimini)
- Topographie und Seen als Polygonobjekte

20000821 013500 UTC

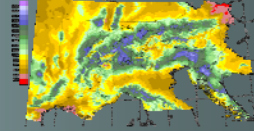


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Reflektivität als
halbtransparente
Voxels

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10

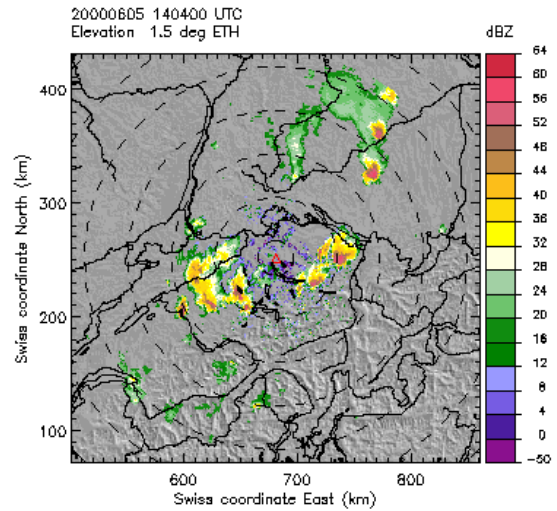
5. Juni 2000, Hagel über Zug mit dem ETH Radar beobachtet



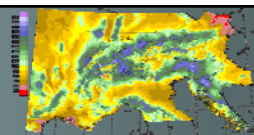
www.radar.ethz.ch

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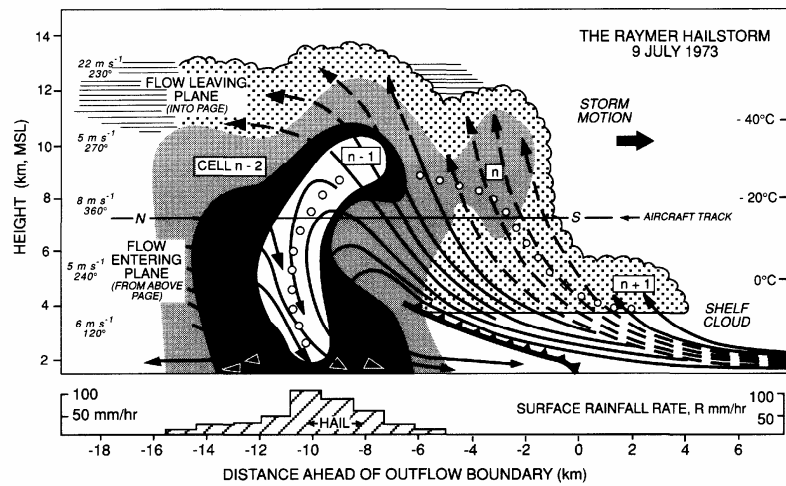


Gewitter-Querschnitt

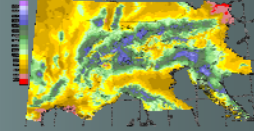


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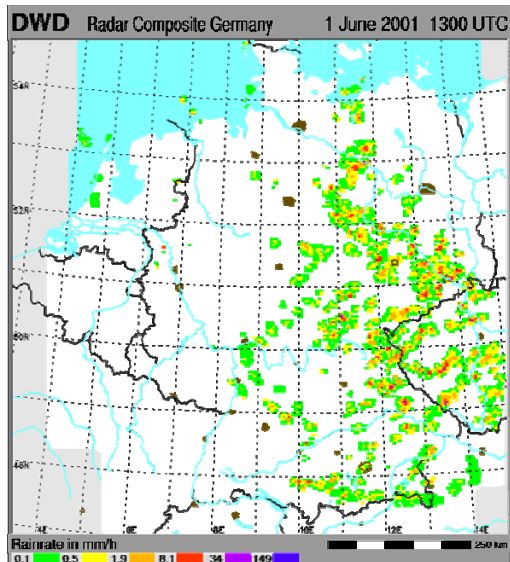


Radarbild konvektiver Niederschlag



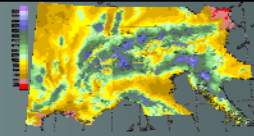
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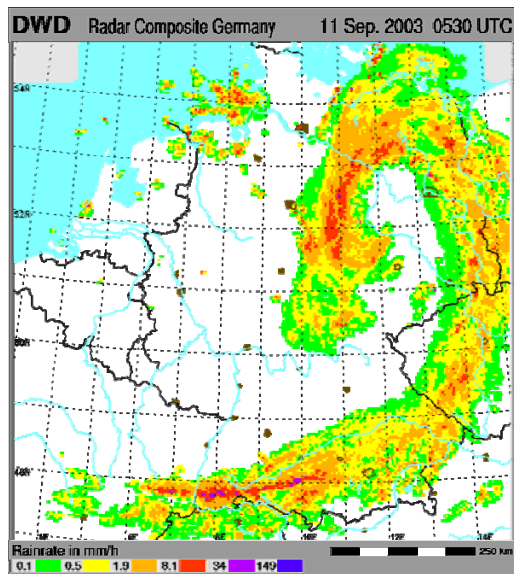
13

Radarbild stratiformer Niederschlag



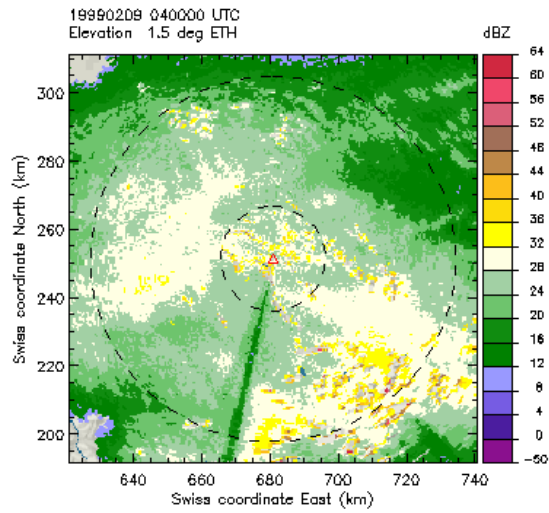
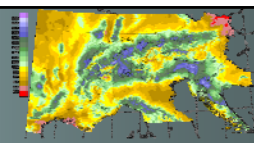
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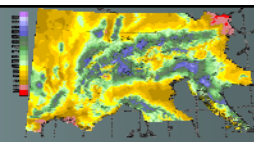
14

Lawinenwinter 1999, 9. Februar

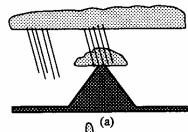


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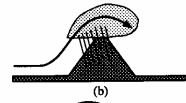
Orographische Niederschläge



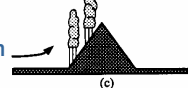
Seeder-Feeder Mechanism



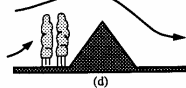
Upslope Condensation



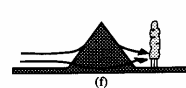
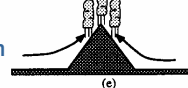
Upslope Triggering of Convection



Upstream Triggering of Convection



Thermal Triggering of Convection



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Figure 12.24 Mechanisms of orographic precipitation. (a) Seeder–feeder mechanism; (b) upslope condensation; (c) upslope triggering of convection; (d) upstream triggering of convection; (e) thermal triggering of convection; (f) lee-side triggering of convection; (g) lee-side enhancement of convection. Clouds are lightly stippled. Slanted lines below cloud base indicate precipitation.