

- 26 OCT 2006      **Synoptic Scale** (20'000 - 2'000 km)  
Weather Analysis - what's that?  
*DJURIC (1994:27-49), STULL (2000:257-260)*  
Weather Forecasting - how to manage it?  
*STULL (2000:311-336)*  
Scale analysis  
*STULL (2000:205-206), DJURIC (1994:10)*  
Large scale features. Long wave / short wave / trough - ridge.  
Jetstream.  
*STULL (2000:230-249) / DJURIC (1994:128-138; 184-200)*  
Basic thermodynamic and kinematic variables  
Divergence, deformation, vorticity, thickness, advection.  
*DJURIC (1994:50-68)*  
*STULL (2000:179-204).*
- 02 NOV 2006      **Synoptic Scale** (20'000 - 2'000 km)  
Basic thermodynamic and kinematic variables  
Development of lows (barotropic, baroclinic)  
*STULL (200:281-310)*  
Anticyclones  
*STULL (2000:251-256)*  
Types of cyclogenesis (*BADER et al., 1997:285-286*)  
*DJURIC (1994:165-183)*  
Rapid cyclogenesis  
*SATREP (Conceptual Models / Short Versions)*  
<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>  
Polar Low  
[http://meted.ucar.edu/norlat/snow/polarlows/print\\_index.htm](http://meted.ucar.edu/norlat/snow/polarlows/print_index.htm)  
*DJURIC (1994:230-231)*  
*SATREP (Conceptual Models / Short Versions)*  
<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>
- 09 NOV 06      **Meso  $\alpha$  Scale** (2'000 - 200 km)  
Fronts (Ana cold front, kata cold front,  
warm front, occlusions,  
conveyor belts, stationary fronts, convergence line).  
*STULL (2000:251-279)*  
*DJURIC (1994:122-153)*  
*SATREP (Conceptual Models / Short Versions)*  
<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>

- 16 NOV 2006      **Meso  $\alpha$  / Meso  $\beta$  Scale** (200 - 2 km)  
Convective weather elements  
LCL, CCL, CAPE, stability indices  
*<http://meted.ucar.edu/mesoprim/skewt/>*  
*<http://meted.ucar.edu/mesoprim/cape/index.htm>*  
*DJURIC (1994:69-87)*  
*STULL (2000:119-141)*  
isolated thunderstorms, gust front, hail  
*STULL (2000:337-346)*  
*SATREP (Conceptual Models / Short Versions)*  
*<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>*
- 23 NOV 2006      **Meso  $\beta$  Scale** (200 - 20 km)  
Multicell thunderstorms, mesohigh, mesolow,  
squall line, thunderstorm climatology.  
*DJURIC (1994:209-225)*  
*STULL (2000:347-352)*  
*<http://meted.ucar.edu/convectn/mcs/>*  
*<http://meted.ucar.edu/mesoprim/severe2/>*  
*<http://meted.ucar.edu/mesoprim/hodograf/index.htm>*  
*<http://meted.ucar.edu/mesoprim/shear/index.htm>*  
*SATREP (Conceptual Models / Short Versions)*  
*<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>*
- 30 NOV 2006      **Meso  $\gamma$  Scale** (20 - 2 km)  
Mountain weather, valley winds, gap flow,  
Mountain waves, local pressure gradients, turbulence,  
windshear, inversions  
*STULL (2000:205-222)*  
*<http://meted.ucar.edu/mesoprim/flowtopo/index.htm>*  
*<http://meted.ucar.edu/mesoprim/mtnval/index.htm>*  
*<http://meted.ucar.edu/mesoprim/gapwinds/index.htm>*  
*<http://meted.ucar.edu/mesoprim/mtnwave/print.htm>*

- 07 DEC 2006      **Meso  $\beta$  / Meso  $\gamma$  Scale** (200 - 2 km)  
Low stratus, radiation fog,  
<http://meted.ucar.edu/mesoprim/mpradfog/index.htm>  
<http://meted.ucar.edu/mesoprim/dynfog/index.htm>  
rain (convective, stratiform), snow,  
seeder feeder mechanism, cold air damming  
<http://meted.ucar.edu/nwp/pcu2/etapcp2y.htm>  
<http://meted.ucar.edu/mesoprim/cad/index.htm>  
*SATREP (Conceptual Models / Short Versions)*  
<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>
- 14 DEC 2006      **Alpine weather types** (Meso  $\alpha$  / Meso  $\beta$  Scale)  
Characteristics of flow patterns over the Alps.  
Severe weather, heavy precipitation, model guidance.  
<http://meted.ucar.edu/mesoprim/mtnwave/index.htm>  
<http://www.wetteran.de/foehn/windsysteme.html>
- 11 JAN 2007      **Test** (Multiple Choice - ohne Formeln)  
Lernziel: Wesentliche Mechanismen des Wetters verstanden zu haben  
und bezüglich Scale korrekt einordnen zu können (Lebensdauer /  
horizontale Ausdehnung).

**Literatur / Internet**

BADER, M.J., G.S.FORBES, J.R. GRANT, R.B.E. LILLEY and J. WATERS (eds.) 1997:

*Images in weather forecasting - a practical guide for interpreting satellite and radar imagery.* Reprint of the first edition (1995). Cambridge University Press, Cambridge, 499 pp

DJUIRC, D., 1994: *Weather Analysis.* Prentice Hall, Englewood Cliffs, New Jersey, 304 pp.

STULL, R.B., 2000: *Meteorology for Scientists and Engineers.* Second Edition, Brooks/Cole, Thomson Learning, Pacific Grove, 502 pp.

PROMET Jg. 32 / Heft 1/2, *Atmosphäre und Gebirge*

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GAP FLOW - Stand des Wissens

[http://www.map.meteoswiss.ch/map-doc/icam2005/pdf/  
sesion-01/S1.2\\_Mayr\\_GAP\\_flows.pdf](http://www.map.meteoswiss.ch/map-doc/icam2005/pdf/sesion-01/S1.2_Mayr_GAP_flows.pdf)

<http://www.wetteran.de/foehn/windsysteme.html>

TYPISCHE WETTERLAGEN IM ALPENRAUM

[http://www.meteoschweiz.ch/web/de/services/aviatik.Related.0016.DownloadFile.tmp/  
broschuere.pdf](http://www.meteoschweiz.ch/web/de/services/aviatik.Related.0016.DownloadFile.tmp/broschuere.pdf)

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<http://www.meteorisk.info/v2/casestudies.asp?lang=1>

SATREP Homepage

<http://www.zamg.ac.at/docu/Manual/SatManu/main.htm>

MetEd Homepage

<http://meted.ucar.edu/>