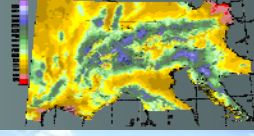


## Atmosphärenphysik III



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ETHZ CHN

[www.iac.ethz.ch/people/wueest](http://www.iac.ethz.ch/people/wueest)

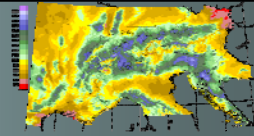
[www.iac.ethz.ch/people/davies](http://www.iac.ethz.ch/people/davies)



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## Vertically Pointing Radar (VPR)



- Einige Niederschlagsprozesse sind mit einem **vertikal orientierten Radar** besser studierbar.

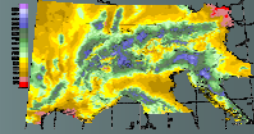


Radarbus IAC (X-band)

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und wie er früher war ..

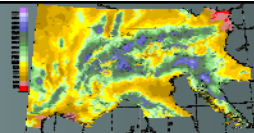


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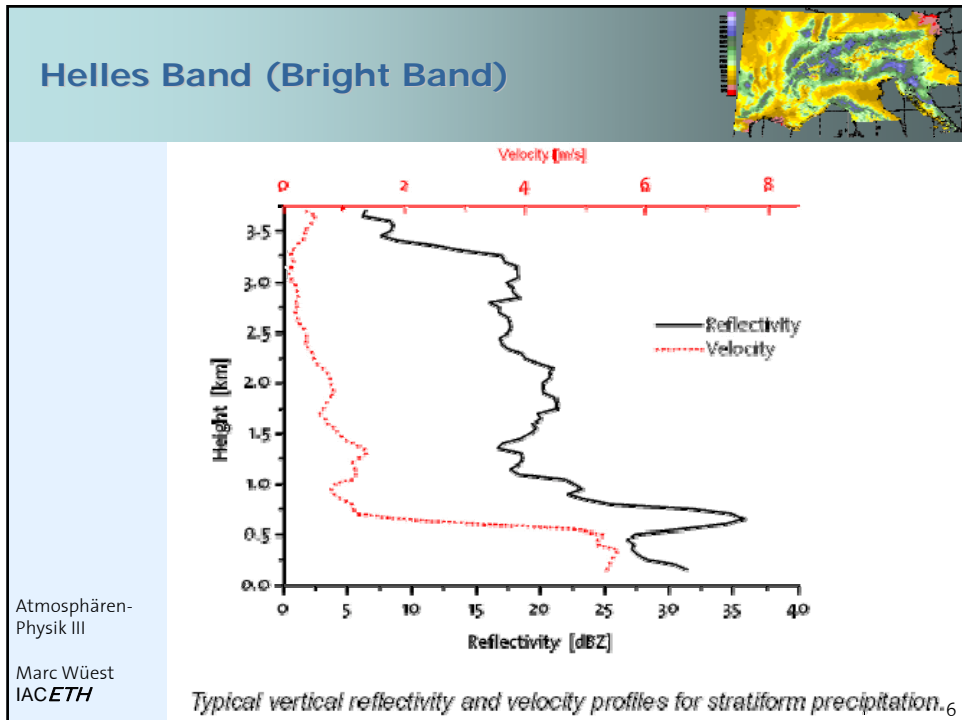
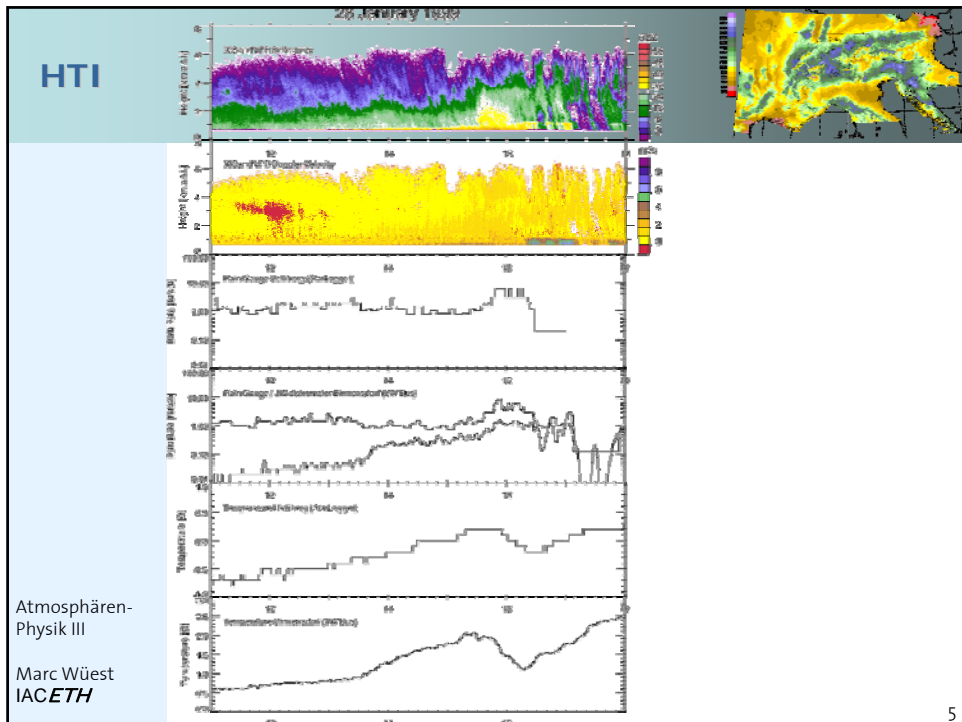
Innenraum Radarbus



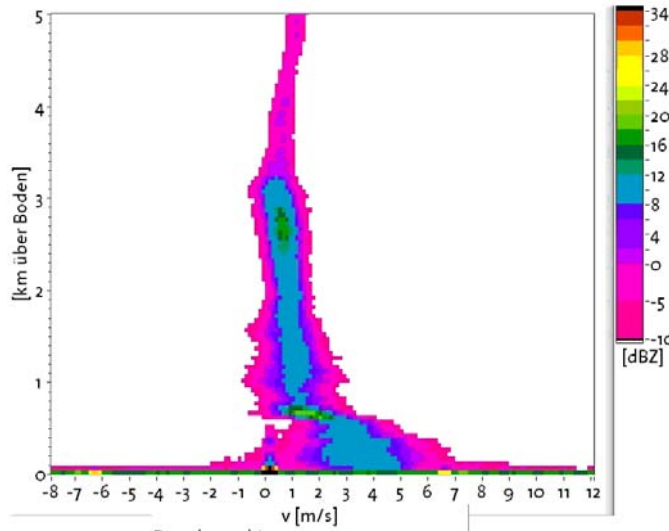
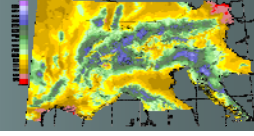
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## Dopplerspektren



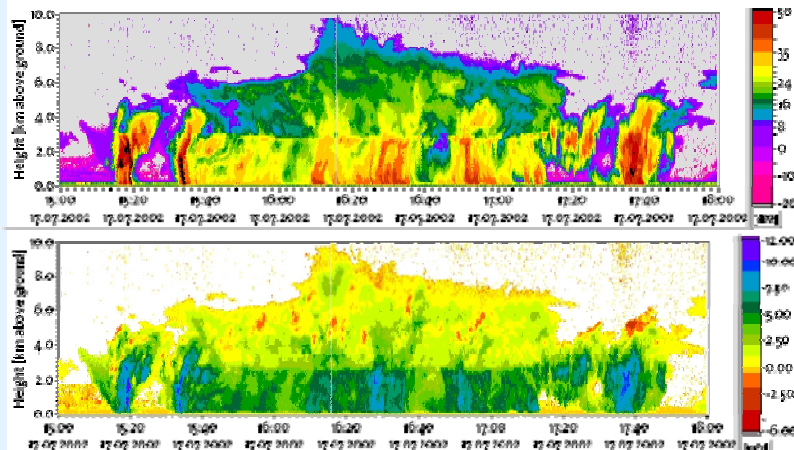
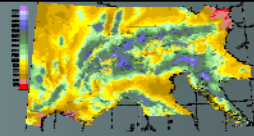
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Dopplerspektren - 07.11.2002, 10:01:00

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## HTI (height time indicator)



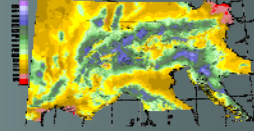
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Figure 3.6: Example for reflectivity and velocity displays in strongly convective rainfall.

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## Distrometer



class	mean diameter [mm]	diameter range [mm]	class	mean diameter [mm]	diameter range [mm]
0	0.359	< 0.406	10	1.9115	1.80 - 2.10
1	0.455	0.40 - 0.50	11	2.269	2.10 - 2.45
2	0.5495	0.50 - 0.60	12	2.5995	2.45 - 2.75
3	0.6565	0.60 - 0.71	13	2.8915	2.75 - 3.05
4	0.774	0.71 - 0.83	14	3.1885	3.05 - 3.35
5	0.9135	0.83 - 1.01	15	3.541	3.35 - 3.75
6	1.1135	1.01 - 1.21	16	3.944	3.75 - 4.15
7	1.3315	1.21 - 1.42	17	4.385	4.15 - 4.65
8	1.5130	1.42 - 1.60	18	4.882	4.65 - 5.20
9	1.6625	1.60 - 1.80	19	5.4475	> 5.2

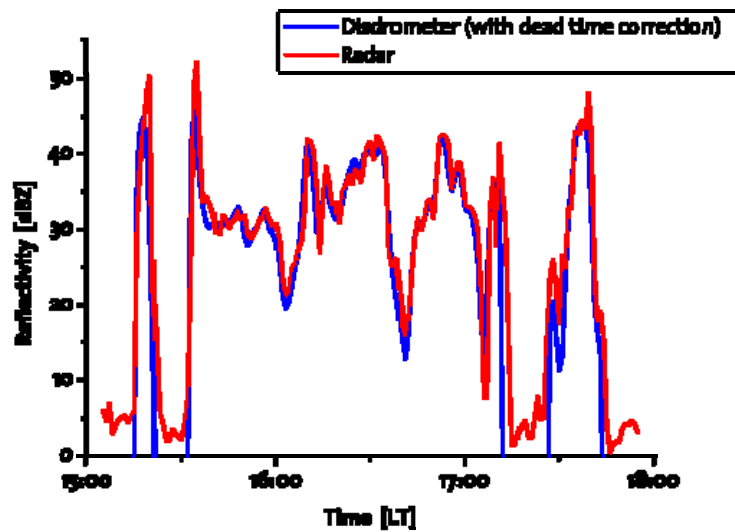
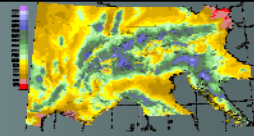


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## Vergleich mit Distrometer

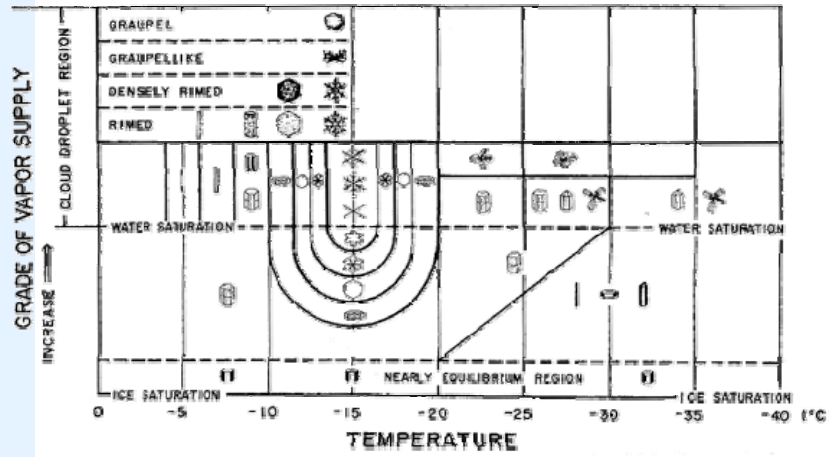
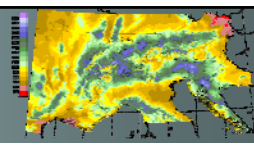


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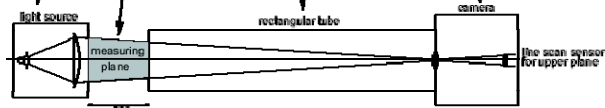
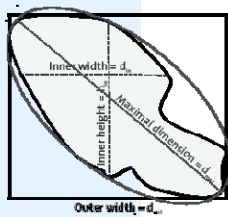
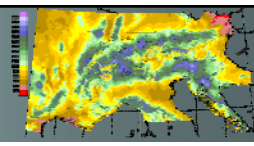
# Schneeteilchentypen



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# Schneespektrograph



(b) Top view

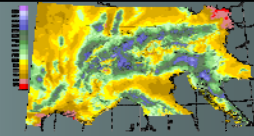


(c) Side view

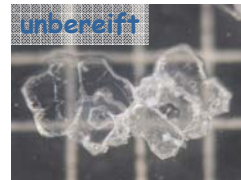
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# Bereifung



Bereifungsgrad nach Mosimann (1994)	Beschreibung
0	unbereift
1	leicht bereift
2	moderat bereift
3	dicht bereift
4	stark bereift
5	Graupel

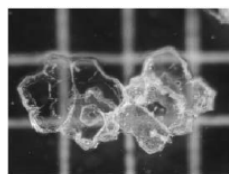
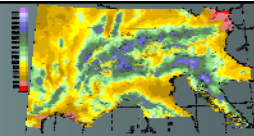


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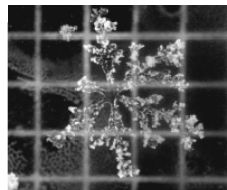
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Zunehmende Anzahl Wolkentröpfchen.  
In Bezug auf Masse ist Skala nicht linear.

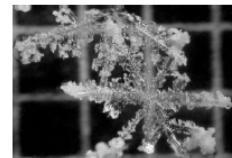
# Bereifung



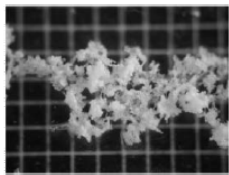
(a) RIM 0: unrimed



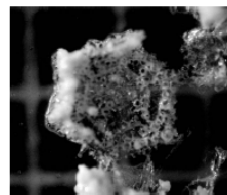
(b) RIM 1: lightly rimed



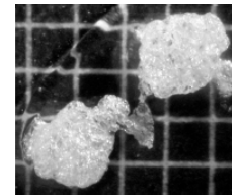
(c) RIM 2: moderately rimed



(d) RIM 3: densely rimed



(e) RIM 4: heavily rimed  
(almost)

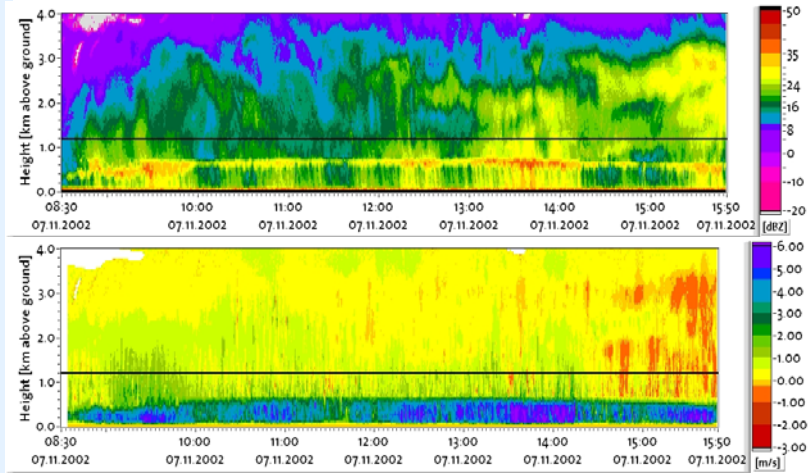
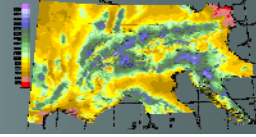


(f) RIM 5: graupel

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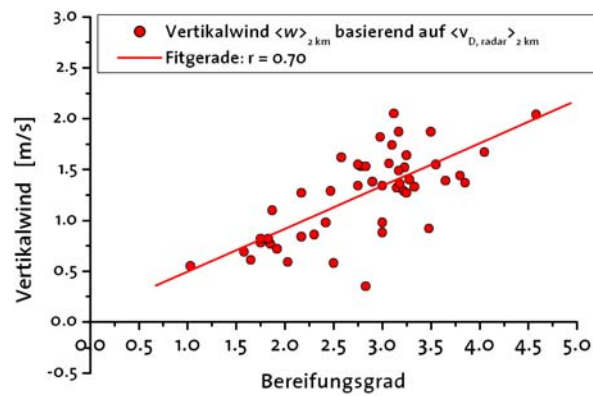
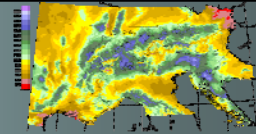


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## Vertikalwind und Bereifung

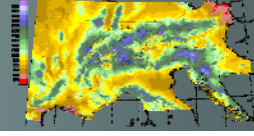


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## Paper von Fred Fabry



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