



Preliminary results on convective cells and rain fall studies during COPS 2007

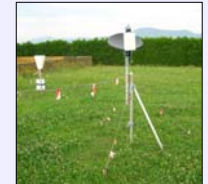
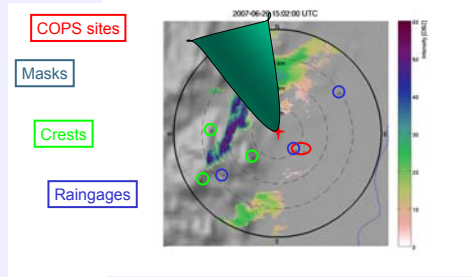


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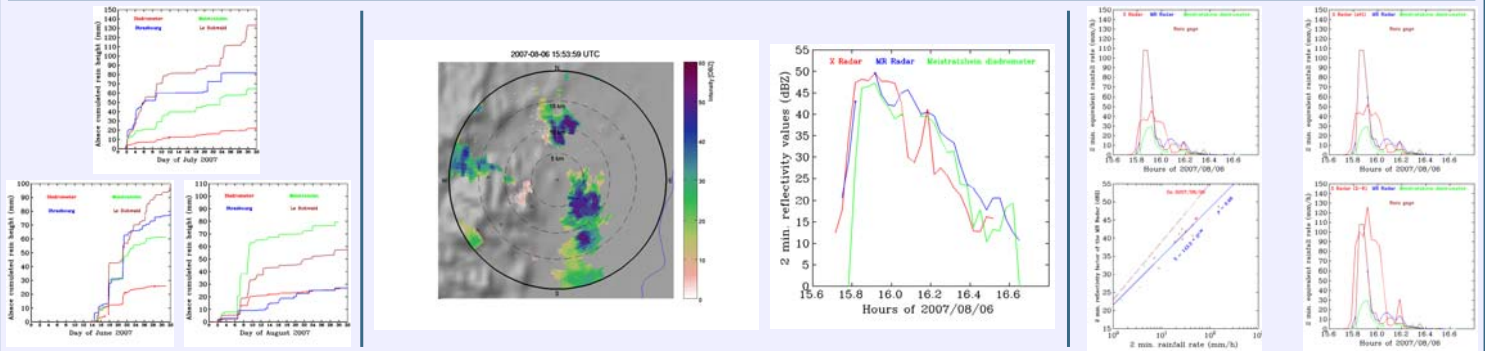
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COPS objectives and field deployment

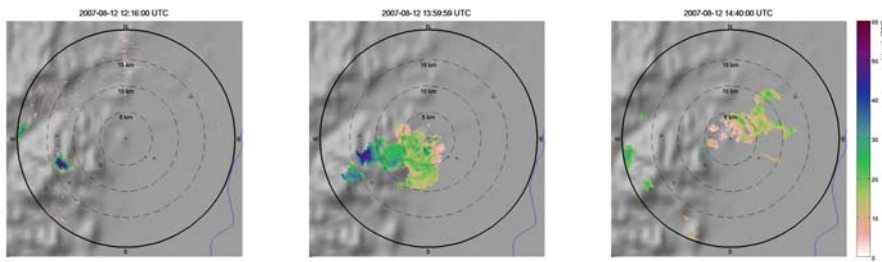
During the COPS (Convective Orographically-induced Precipitation Study) campaign that took place in summer 2007 between the Vosges and the Black Forest over the Rhine valley, the LaMP/OPGC X band local area precipitation radar was deployed in the foothills of the Vosges mountains in order to provide high resolution (60 m. in range and 30 sec. in time) observation of convective cells initiation and development. Along with the X band radar, a vertically pointing Micro rain Radar (K band) as well as a raingage and a disdrometer were deployed in order to provide DSD spectra and rain rate.



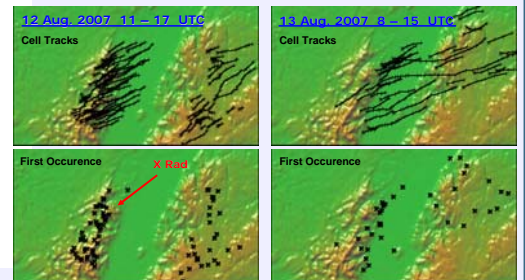
Rain measurements



IOP 15: August 12 and 13 contrasted behavior



POLDIRAD observations

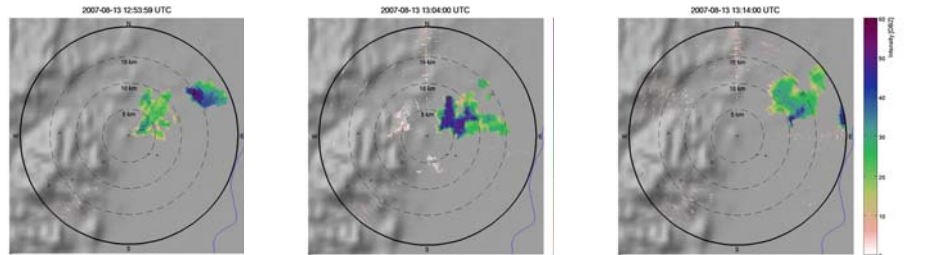


August 12:

- Cell generation on the crest
- Slow drift and disappearance on plains

August 13:

- Cells generated on foothills
- Reinforcement together with fast motion towards East



Futur work and prospective

- Combined studies with MRR in order to retrieve adapted Z-R relationships and improve rain rate estimations
- Comparisons with other radars (POLDIRAD + DOW) and instruments
- Link radar observations with humidity field structure and evolution (GPS tomography and airborne measurements)
- Detailed study of precipitation events within their meteorological context
- Comparison with LaMP microphysical simulations

