

Convection & atmospheric processes

WP2.1 Session

Outcomes

~30 persons

- *First WP2.1 meeting (expect the kick-off meeting)*
- *Very useful to know each others and to facilitate the interactions*
 - *Need of other meetings*
- *2 main objectives*
 1. **Review of ongoing scientific works**
 2. **Concordance between IIP & Scientific objectives**
 - Active contribution of WP2.1 to TT8 (Doug Parker, Cyrille Flamant, Alain Protat...)
 - not completed
 - Extra // session on wednesday afternoon



Partial Review of ongoing scientific works

Caution: not enough time to review all current activities → look at the next interim reports (API and AMMA-EU) for a complete synthesis. Sorry for teams that didn't have time to present!

- **Classification and climatology of MCS:** *Tomasini*
 - *to be used to stratify convection events during the SOP. To be completed with other data*
- **AEWs:** *N. Hall*
 - *A new approach = AEWs seen as the response to a convective heating instead of an instability problem*
 - *Maximum response for heating over Soudan*
 - *Implication for the SOP monitoring: diagnostics (heating and wave activity) to test this theory*
- **2D idealized modelling:** *Peyrillé, Lafore*
 - *Analysis of the Heat Low budget and its diurnal cycle*
 - *Realistic seasonal cycle (onset) - Mediterranean Sea and Guinea Gulf SST role*
 - *Available to analyze processes and couplings, to prepare SOP...*



Diurnal cycle of the WAM and of the Heat Low: *Drobinski, Sultan, Janicot*

Open issues: Review of ongoing scientific works

- **Dry intrusions** : *Roca, Lafore, Redelsperger*
 - *Towards a climatology - need to be forecasted*
 - *Still questions about the role of this midtropospheric dry air (above 500hPa) and its link with other layers (AEJ)*
- **Case studies of extra-tropically forced rainfall events**: *Fink*
 - *Interactions with mid-latitude (trough, PV...), Early spring events.*
 - *Include this synoptic approach in the forecasting team*
- **Evolution of a mesovortex** within a simulated MCS (15-17 Aug 04): *Evan, Roux*
 - *Instructive on the vortex generation by MCSs → pre-cyclogenesis stage. Need of conceptual model*
- **Microphysics, dynamics and radiation interactions in tropical cirrus**: *Stubenrauch*
 - *Average properties in tropics: 25 to 45% of the cloud cover (ISCCP, TOVS Path_B)*
- **SOP-D on non-precipitating clouds**: *Giraud*
 - *Direct effect and modulation of the surface coupling - A new AMMA component*
- **Lightning**: *H. Holler*
 - *Coordination need with aircrafts and chemistry flights (NOx)*
 - *Activity expected in July - August? Start early in the season*

