- **Direct aerosol effect – Improve the understanding of the direct aerosol effect and provide a best estimate (input to IPCC)**

  - Missing some details on the description of the experiments, particularly on the differences of the instantaneous and flux perturbation. Recommendation that cloud fields and properties needs to be identical. Some additional diagnostics are needed. Please contact us if something is unclear.
  - Single column experiment – consider to add some realistic cases such as from ARM sites or potentially from the UK project ADIENT. Problems related to implementation can be an issue for realistic cases (Cynthia Randles)

Direct aerosol effect, continued

- Surface aerosol direct radiative effect efficiency (Jani Huttunen)

- Prescribed experiment (Philip Stier)

- Direct aerosol experiment (Gunnar Myhre)

- Best estimate direct aerosol experiment, to some extent a synthesis of the AeroCom work (Michael Schulz)

- We encourage more modelling groups to get involved in the direct aerosol effect experiment and all groups that perform the full experiment are strongly recommended to also contribute to the single column experiment and the prescribed experiment.

- Atmospheric Composition & Radiative Forcing with Uncertainty for AR5 (ACU5)

- **Semi-direct aerosol effect**
  - A new set of diagnostics must be defined. Some idealized cases must be considered. Potentially can this be performed with the prescribed aerosol experiment set up. Time frame open (Ellie Highwood, Cynthia Randles, Michael Schulz, Philip Stier)
- **Indirect aerosol effect**
  - One study with carefully specification with susceptibility, precipitation, satellite simulators. Hopefully some aspects ready before the IPCC deadline (Johannes Quaas, Philip Stier)