RTTOV Technical Sub-group
IR cloudy simulations

• Could there be a better way of specifying input cloud data?

• Currently RTTOV has 5 cloud water particle types:
  • Stratus Continental/Maritime
  • Cumulus Continental-Clean/Continental-Polluted/Maritime

• For ice cloud the preferred parameterisation is based on Anthony Baran’s database of optical properties in terms of temperature and IWC.

• Inputs are LWC/IWC profile for each water particle type and ice, and cloud fraction profile.

• Consider introducing a water particle parameterisation similar to the Baran ice scheme.

• We are also looking at alternative cloud overlap options to maximum-random overlap.
Other issues

• Calculate full Stokes vector.
• Consider sub-mm for upcoming ICI.

• Due to issues related to the HDF5 library (e.g. installation of the Fortran interface) we will keep ASCII versions of hi-res IR sounder coefficient files on the website.
• C++ bindings for RTTOV.
• Optimisation of interpolation.