

Title: Intercomparison of operational stratosphere-resolving global NWP systems

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Many, if not all, global NWP systems now resolve the whole stratosphere, and it is important to review the use and performance of these systems in operational NWP, in order to understand the impact the representation of the stratosphere has on tropospheric weather forecasts, and also to identify the ongoing research challenges.

In this presentation, the stratosphere-resolving models used in operational global NWP systems around the world are documented and intercompared, with a focus on parametrization schemes relevant to the middle atmosphere (eg radiation, gravity waves). The performance of each NWP system in the stratosphere is summarised. Also discussed is the important question of the impact of the better representation of the stratosphere on tropospheric analyses and forecasts (eg from better use of satellite data, stratosphere / troposphere interaction and its impact on medium range forecasts). Finally, future research plans and challenges are summarised.