

## **New reanalyses and how they behave in the middle atmosphere**

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During 2017 several new global reanalyses has been released (MERRA2, ERA5 or CFS v2). We compare behaviour of several parameters which are very important in the stratospheric dynamics and climatology. We analyze and compare temperature, wind and ozone climatology with existing observations at several pressure levels in the middle atmosphere. Next we analyze important stratospheric phenomena like SSW, QBO or ENSO and their interpretation in these new reanalyses. We analyze whole available periods for each reanalysis. Finally we computed trends of basic parameters for comparison. This analysis will bring a new overview on the new released reanalysis and their comparison with the observations shows the possibility of using them for trend or climatology study.

Key words: reanalyses, middle atmpsheric dynamics, long term trend analysis