

## Bremen 2 D CTM

- Latitude / altitude model, horizontal resolution  $\sim 9^\circ$
- calculates its own T and wind speed
- vertical transport from radiative heating / cooling
- isentropic surfaces from the ground to  $\sim 90\text{km}$ ,  $\sim 3\text{ km}$  spacing
- no-family model using the same chemistry as the B3dCTM:
- JPL-2006 rates
- Parameterisation of NO<sub>x</sub> and HO<sub>x</sub> increase due to atmospheric ionisation (*Jackman et al, 2005*)

## Model approach for HEPPA comparison

- 24 2d model runs, 15° spacing in longitude
- 1d model runs initialised at position of individual MIPAS measurements, 12 hours local solar time
- run for 24 hours, and read out at time of MIPAS overpass