



include detailed profiles from  
 the models. The figures and Mar  
 2004.

## Lower and middle stratospheric tropical isolation

**Why does this matter?** Realistic  
 the tropical pipe is important to  
 and polar composition. To produce  
 levels of reactive chlorine ( $Cl_y$ )  
 vortex, chlorofluorocarbons must  
 transported to the middle and  
 stratosphere to be photolyzed.  
 that is too leaky allows too much  
 transport of young air at low altitudes  
 preventing CFCs from rising high enough  
 photolysis.

We will assess the seasonally-varying  
 of tropical-midlatitude separation  
 hemispheres from 15-50 hPa. Phase  
 distribution functions (PDFs) of  
 10N and 10S-46N generally show  
 distribution in winter and spring  
 al., 1999). The distinctiveness of  
 is less from mid-summer to fall  
 degrees depending on the height  
 hemisphere. Air exits the extratropical  
 stratosphere (100 hPa) and descends  
 for this diagnostic include 4 years  
 N2O (2004-2008) and 2 years of  
 (2002-2004).

assesses whether a model can  
 represent the seasonal  
 transport processes to