



*Journal of Geophysical Research - Atmospheres*

Supporting Information for

**Dry layers in the tropical troposphere observed during CONTRAST  
and global behavior from GFS analyses**

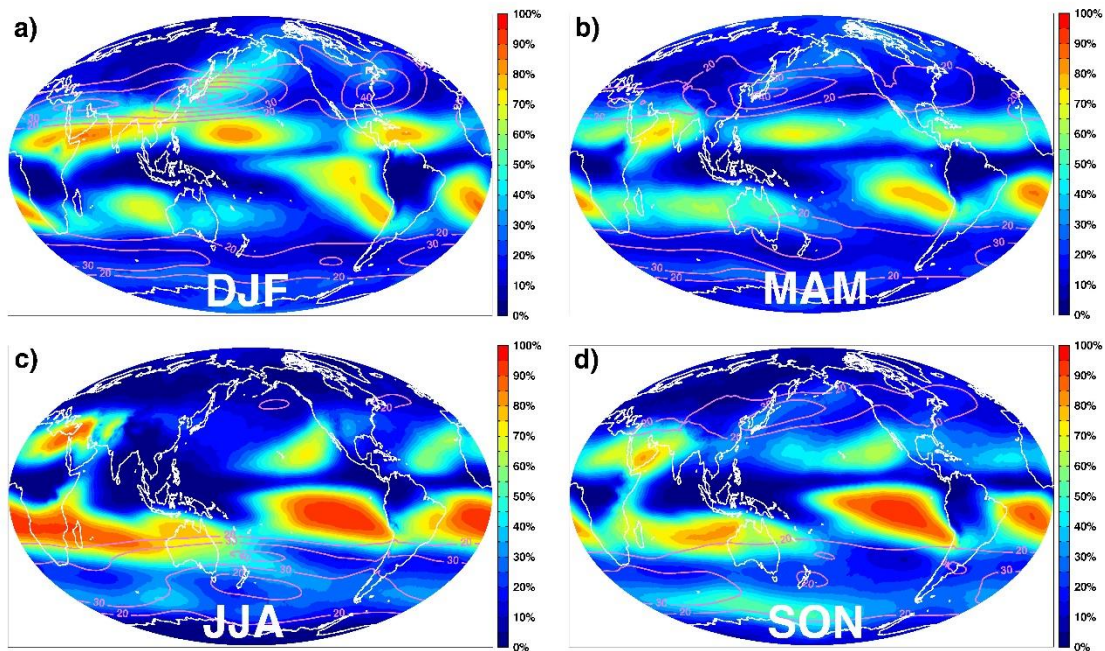
William J. Randel<sup>1</sup>, Louis Rivoire<sup>2</sup>, Laura Pan<sup>1</sup> and Shawn Honomichl<sup>1</sup>

<sup>1</sup>National Center for Atmospheric Research, Boulder, CO 80307

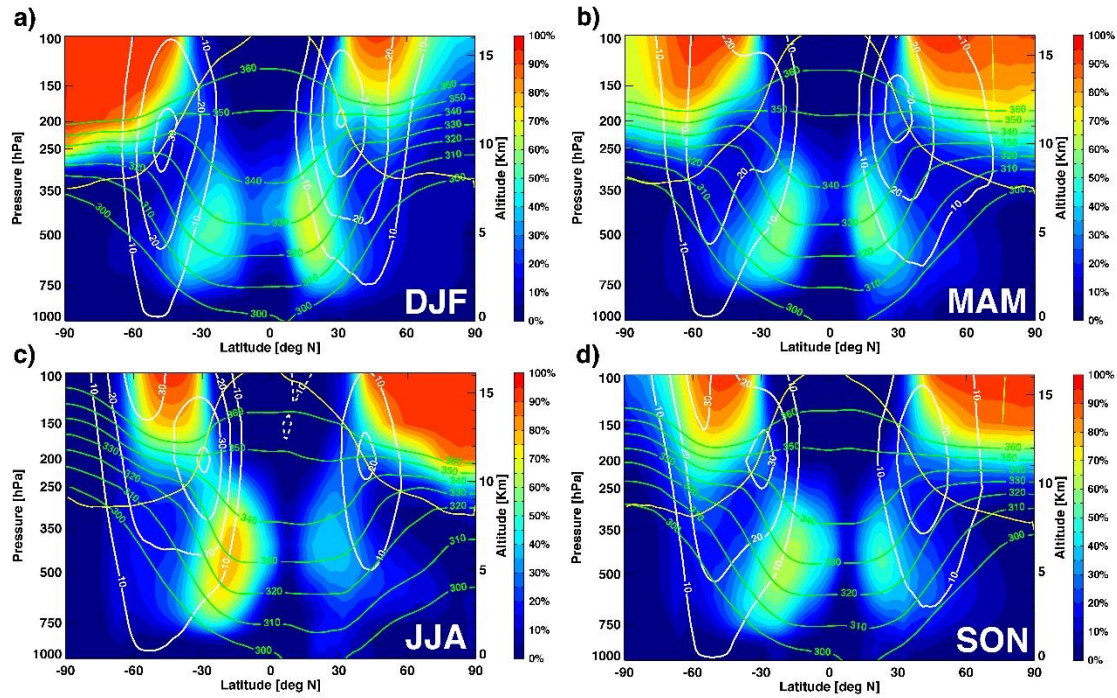
<sup>2</sup>Dept. of Atmospheric Sciences, Colorado State University, Ft. Collins, CO

**Introduction**

This Supporting Information includes figures showing the spatial structure of dry air occurrence frequency derived from GFS analyses, for the four seasons. This is intended to complement the solstice seasonal maps shown in the main body of the paper.



**Figure S1.** Fractional occurrence of dry layers ( $RH < 20\%$ ) on the 330 K isentrope during the four seasons, derived from GFS analyses over 2010-2014. Pink lines show the corresponding seasonal zonal winds at 330 K.



**Figure S2.** Climatological (2010-2014) latitude-altitude cross sections of the occurrence frequency of dry air (RH<20%) calculated for all longitudes (i.e. zonal averages) during the four seasons. Zonal winds, isentropes and altitude of the PV=2 tropopause (yellow line) are also included.