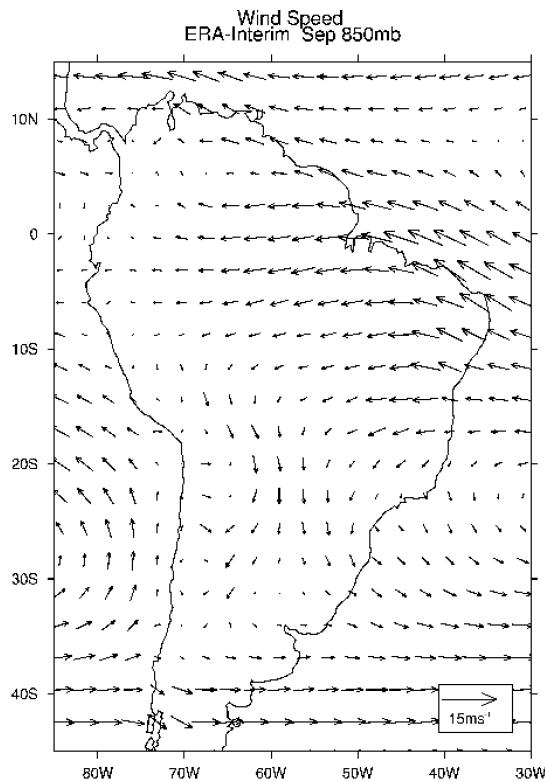
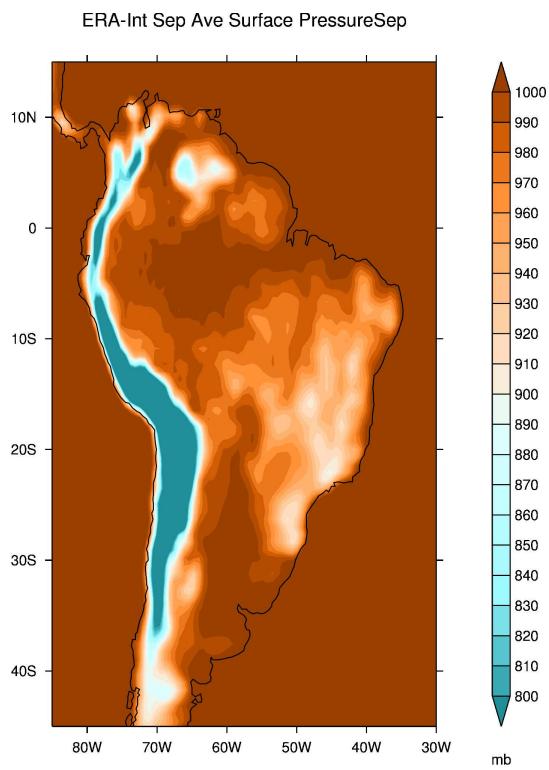


## 1 Supplemental Material



**Figure 1.** ERA-Interim September means over 1982-2012 for wind circulation at 850mb (b) Surface pressure in mb.

The ERA-interim September means (1982-2012) generally compare well with the model results for the surface pressure and circulation, and are included here to demonstrate confidence in the model's ability to reproduce the broad elements of the meteorology for South America in September.



**Figure 2.** ERA-Interim September means over 1982-2012 for surface pressure in mb.