

***Interactive comment on “Climatology of intermediate descending layers (150 km) over the equatorial and low latitude regions of Brazil during the deep solar minimum of 2009” by Ângela M. Santos et al.***

**Qian Wu**

qw@ucar.edu

Received and published: 21 June 2019

Dear Editor, I have reviewed the paper by Santos et al. titled “Climatology of intermediate descending layers (150 km) over the equatorial and low latitude regions of Brazil during the deep solar minimum of 2009”. The paper describes digisonde observations of the intermediate layers (IL) over two Brazilian stations: Cachoeira Paulista and San Luis. The IL or the “150 km echo” is of great interest to the aeronomy community, it should be considered for publication. However, I have some issues with the paper in the current form.

1. I would like to have the term '150 km echo' somehow included in the title, which will be useful to many readers who are more familiar with that name. 2. When we get into discussion, we should be talking about things already shown. Yet, we see new things in the discussion. While they may be interesting, they should have been mentioned earlier. 3. There is a discussion about the tidal influence on the IL, but there is no discussion on regional difference and seasonal variations of tides at the two stations. Are the ILs affected by the in-situ tidal force or MLT tides via dynamo effects? There should be more discussion on this topic. Including some tide observation papers will be very useful.

Minor issues 1. What is color code for data in Figure 4? 2. P27, L20, 'some studies have mentioned about this ...' need to add references 3. P3, L5 to L10 'At 17 UT ...' what is the local time? 4. I think the abstract can be shortened to a list of short statements.

---

Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2019-74>, 2019.

Printer-friendly version

Discussion paper

