Effectiveness of TEST algorithm lies in the simultaneous presence of shallow ABL cloud and biota at the same height level which was missed to address clearly in the submitted Manuscript. Here we would like to fill that gap for much clarity.

TEST algorithm is able to filter out biota and preserve the shallow ABL layer clouds (figure AC1(c)) when both the echoes are possessing same range of reflectivity values. This further shows superior biota removal capability of TEST. Smaller de-correlation period associated with biota are further confirmed with less spectral width values (<0.3 m^2 s^{-2}; figure AC1(d)). Higher spectral width values, of the order of ~ 1 m^2 s^{-2} of the cloud indicates the random motion of the smaller particles of cloud with in radar scattering volume are affected by the ABL turbulence. Shallow ABL cloud regions show LDR values <-20 dB whereas insects shows varied LDR values in the range of -25-to -5. Thus, LDR alone is not sufficient to remove all insects. Adding TEST used shorter running average period of 4-5 second with LDR enables one to filterer out non-meteorological contribution from the radar returns. It is interesting to note that TEST algorithm with SW could be future efficient combination to filter all biota once we ensure that first few range bins are not affected by the local clutter.

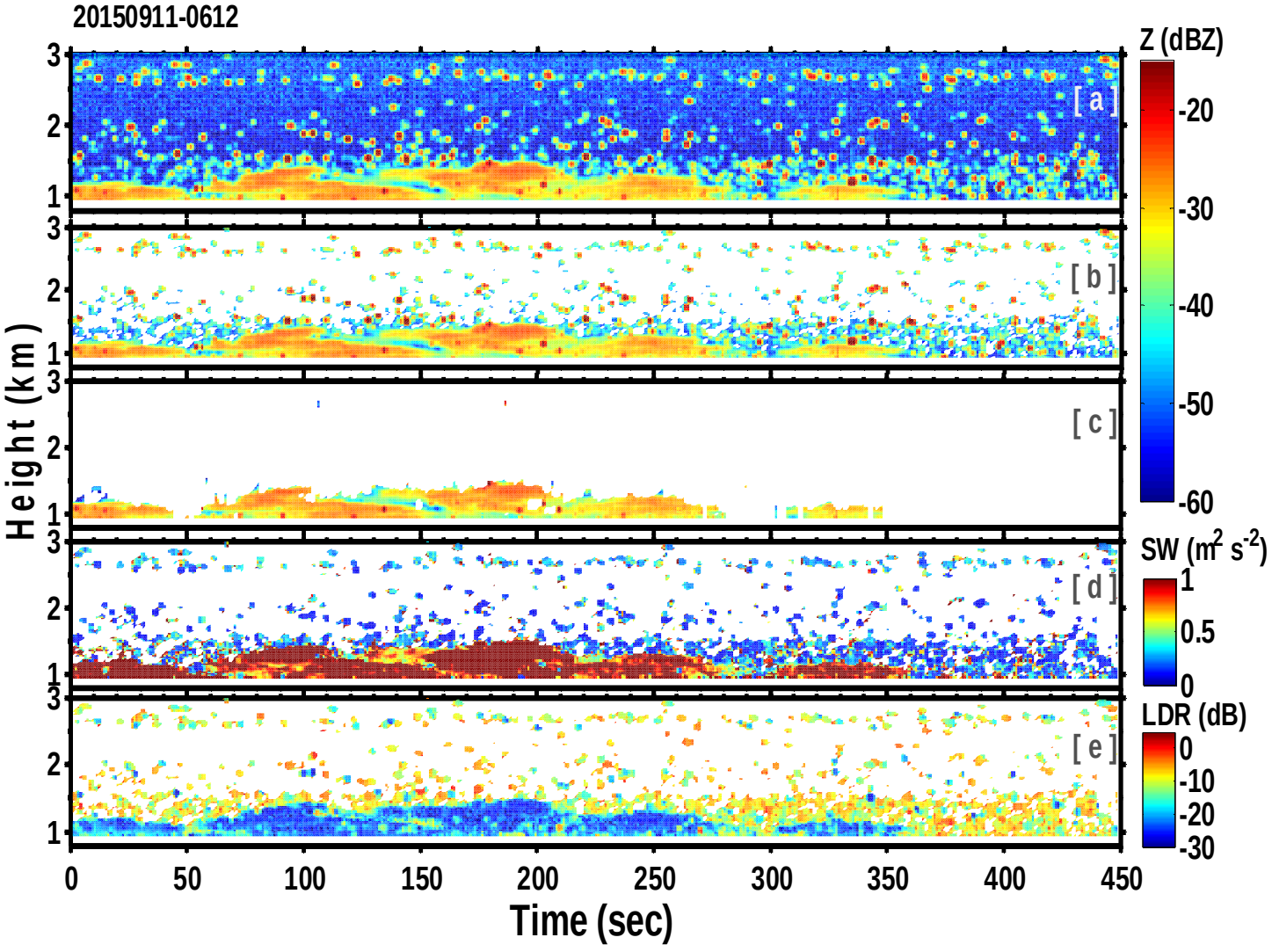

Figure AC1: HTI plot of cloud radar measured (a) Reflectivity (Z), (b) noise removed Z, (c) TEST filtered Z, (d) Spectral Width (SW), and (e) LDR at 0612 UT on 11 Sep 2015.