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Author's response to Editor's comments

1. Reference for Hysplit changed.
2. Lines 51-58 now read: 'Raw data was collected with a time resolution of 10 minutes on most nights, and the files combined to whole-night averages for further analysis. Filters were applied during averaging to remove files affected by low cloud to guard against signal-induced noise problems. Analysis proceeded by converting the elastic signal profiles to lidar backscatter ratios - the ratio of the total backscatter profile to that which would be returned by a pure molecular atmosphere. The optimum way to accomplish this is to use data from the N2 Raman channel, as in Vaughan et al. (2018), as this automatically allows for attenuation of the signals by the aerosol layer. However, the faint signals on the N2 Raman channel in the lower stratosphere meant that long runs of data had to be combined to accumulate enough signal for analysis. This was only possible for a few nights during the period under consideration here.'