Figure 2. Detected IO absorption structure for a number of elevation angles on day 180 at approx. SZA = 70º pm.
Figure 3. (a) IO DSCD for 0°, 5° and 70° instrument elevation angles elevation evaluated with a single reference taken on the morning of day 180 (June 29th) at 49° SZA. Red line is the most unfavourable detection limit between 0° and 5° IEAs. (b) 0° and 5° differences with respect to 70° for the same measurement cycle (see text). (c) Aerosol optical depths above the station. (d) Daily means and standard deviations. Red encircled squares are pristine days. Yellow shadowed areas corresponding to Saharan events.
Figure 4. (a) Diurnal evolution of IO DSCD for elevation angles from 0° to 70° during day 278 (October 5th). (b) Differences for each elevation in (a) respect to elevation 70°. (c) \(O_4\) diurnal variation on day 278 for a set of elevation angles. (d) IO/O_4 ratio for the same day.
Figure 5. Differential intensity-weighted box-AMF for different conditions, elevation angles of observation and solar zenith angles.
Figure 6. Top panel, different set of IO profiles used to simulate IO DSCD at the level of the observatory for IEA 0° and 5°. Middle panel, simulated IO DSCD using different profiles of IO and comparison with measurements for IEA=0°. Bottom panel, same for IEA=5°.
Figure 8. Upper panel, sky radiance at zenith (circles) and horizon (triangles) for a clean (black) and desert (grey) days. Bottom panel, differential optical path for the same cases as upper panel. Clean is day 181/2010 (June 30th). Desert is day 190/2010 (July 9th).