



## The Measurement of H and OH in the Mesosphere

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The OSIRIS instrument on the Odin satellite makes limb measurements of both the scattered sunlight and the airglow. Absorption within the scattered spectrum can be used to derive the  $O_3$  profile, although this profile can be extended into the MLT region using tomographically retrieved profiles of the  $O_2(a^1\Delta_g)$  emission at  $1.27 \mu\text{m}$ . The OSIRIS observations also yield the limb profile of the OH (A-X) emission, at 308 nm, and the height profile of the OH Meinel bands. By combining all of these observations and retrievals, together with the currently accepted atmospheric chemistry responsible for the airglow emissions, it is possible to derive both the OH ( $v = 0$ ) concentration profile and the H-atom profile. This work explains the procedures used to derive these profiles and presents some recent measurements that show both seasonal and latitudinal effects in the concentration profiles.