

# ***Interactive comment on “The OH<sup>\*</sup>(3–1) layer emission altitude cannot be determined unambiguously from temperature comparison with lidars” by Tim Dunker***

**Anonymous Referee #2**

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The paper addresses the question to what extent temperature observations taken by a Na-LIDAR-instrument can be used to help estimating the height and the width of the hydroxyl airglow layer. The author uses measurements of the OH<sup>\*</sup>-rotational/vibrational temperatures which were derived by the GRIPS-9 instrument at ALOMAR, Norway, by the German Aerospace Center, DLR. Temperature observations at the upper mesosphere / lower thermosphere are of interest to a broad variety of scientific questions ranging from temperature trend studies to atmospheric circulation aspects as well as to studies dedicated to detailed process understanding. The manuscript therefore falls well into the scope of ACP. The authors conclude that lidar measurements cannot clearly determine the OH emission height and width of the OH-layer. The manuscript

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Discussion paper



is scientifically sufficiently sound to be published as is.

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