

# Issue 7 - Profiling of the lower troposphere

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Although temperature (and humidity) trends in the upper troposphere and stratosphere are important, a primary need for long-term monitoring lies in the lower troposphere. Deriving temperature and humidity trends separately from GPS-RO alone in the lower troposphere, however, is confounded by the contributions both make to RO soundings there (cf. issues 6 and 9). What role, therefore, should GPS-RO play in a baseline temperature (and/or humidity) monitoring network for the lower troposphere? To what extent will other sounding systems (e.g., a reference radiosonde network) still be required, and how should these other networks be optimally configured in conjunction with GPS-RO?

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### Response from Kevin Trenberth:

I agree with the concerns here and I do not believe GPSRO should be regarded as a baseline measurement below 500 hPa. New methods and wavelengths may make progress in this domain, but that is in the future.

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