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Two years of JIRAM measurements of minor species in the Jupiter atmosphere

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The Jovian Infrared Auroral Mapper (JIRAM) on board of the Juno NASA spacecraft has been acquiring spectroscopic observations of the Jupiter atmosphere in the range 2-5 μm since August 2016, during the 15 perijove passages performed so far.
These observations have demonstrated as effective in constraining the contents of water, ammonia and phosphine at the pressure levels of few bars in regions with a relatively thin (τ<2 @ 5 μm) cloud coverage [1][2][3].
In this contribution, we review the retrievals of the mixing ratios of these minor components from the JIRAM dataset processed so far, with special emphasis on the general longitudinal trends observed in North and South Equatorial belts and on small-scale (smaller than about 1000 km), IR-bright features observed in both polar regions poleward of 50°.

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[1] Grassi et al, 2017a https://doi.org/10.1016/j.jqsrt.2017.08.008
[2] Grassi et al, 2017b https://doi.org/10.1002/2017GL072841
[3] Orton et al, 2017 https://doi.org/10.1002/2017GL073019