N87-17619

A DETECTED FEATURE AT THE EXPECTED WAVELENTH FOR THE HD $R_5(0)$ LINE IN JUPITER'S AND URANUS' ATMOSPHERES

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The presentation by Smith *et al.* is largely contained in a paper which has been submitted to *Icarus*. The abstract of that paper is reproduced here.

We have detected a feature at the expected wavelength for the HD $R_5(0)$ line in Jupiter's and Uranus' atmospheres. We also have an upper limit for Neptune. Added to our earlier detection of a similar feature for Saturn, we propose that all evidence from this type of measurement can be interpreted as arising from a D/H ratio of about 10^{-4} for all the major planets. This value is not in agreement with measurements from CH_3D transitions, and is at least fifty times the accepted interstellar medium value of 5×10^{-6}, implying deuterium enhancement in the solar system via fractionation in the proto-solar nebula.

This research was supported by NASA under Grant NSG-7334 and by the NSF under Grant 8303108.