LINE INTENSITIES OF PHOSPHINE IN THE 10 μm REGION FOR PLANETARY SPECTRA ANALYSIS.

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A preliminary study of the line intensities of phosphine PH_3 in the 10μm region between 800 and 1300 cm^{-1} is reported. The objective is to provide a prediction for planetary spectra studies of the absorption in the Saturnian atmosphere. Over 1000 intensity measurements were performed using the Fourier transform spectrometer located at the Pacific Northwest Laboratory at a resolution of 0.0011 cm^{-1}. Using the rovibrational line assignments and positions published by Fusina and Di Lonardo[a] for the two fundamental bands ν_2 and ν_4 located near 992.13 and 1118.31 cm^{-1} respectively, and treating these two bands within a dyad interacting system, we will report preliminary intensity analysis for this spectral range.[b]

[a] L. Fusina and G. Di Lonardo *J. Mol. Struct.* **517-518**, 67 (2000).

[b] Part of the research reported in this paper was performed at the Jet Propulsion Laboratory, California Institute of Technology, under contract with the National Aeronautics and Space Administration.