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 PH₃ 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* for the two fundamental bands ν₂ and ν₄ 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.²

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