



Water Spin Temperatures and Production Rates in Several Comets Observed with NIRSPEC at Keck 2

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Abstract

We report H₂O spin temperatures and production rates derived from analysis of non-resonant (“hot-band”) fluorescent emission near 2.9 microns detected with NIRSPEC at Keck 2. Our sample includes the Jupiter-family comets 21P/Giacobini-Zinner, 10P/Tempel-2, and 103P/Hartley, and the Oort Cloud Comets C/2007 W1 (Boattini) and C/2007 N3 (Lulin). Production rates are compared with those measured by other techniques. Analysis and interpretation of cometary spin temperatures are also discussed.

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