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Ground state preparation for HD+ rovibration transition measurement

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Generation of ground state HD+ based on the [2+1'] resonance-enhanced threshold photoionization (RETPI) is provided for rovibrational transition frequency measurement. Using state-selected [1+1'] resonance-enhanced multiphoton dissociation, the yield of rovibrational ground state HD+ is evaluated. The state preparation of HD+ lay an important basis of the proceed measurement which detects the $(v=0,j=0) \rightarrow (v=6,j=1)$ rovibrational transition frequency.

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