

## THRESHOLD ION-PAIR PRODUCTION SPECTROSCOPY (TIPPS) of H<sub>2</sub>S

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Threshold Ion-Pair Production Spectroscopy (TIPPS) of H<sub>2</sub>S will be presented. Hydrogen sulfide molecules were excited into weakly bound H<sup>-</sup> — HS<sup>+</sup> Rydberg-like state using XUV photons and then dissociated with pulsed electric fields. The TIPP spectrum was recorded by detecting the negative ion H<sup>-</sup>. The spectrum agrees quite well with a simulated spectrum. From the TIPP spectrum the H-SH bond dissociation energy could be determined within several wavenumbers. We found that the positive ion product, HS<sup>+</sup>, could be highly rotationally, or even vibrationally excited. The dynamics of the photodissociation process of H<sub>2</sub>S → H<sup>-</sup> + HS<sup>+</sup> will be discussed and compared to the process of H<sub>2</sub>S → H<sup>+</sup> + HS<sup>-</sup>.