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**Evidence for Triggered Star Formation by Collision of Molecular Filaments**[1] NATALIE KOVACEVIC, Western Illinois University, ESTEBAN D. ARAYA, WIU; NMT, OLGA S. BAYANDINA, JIVE, The Netherlands; ASC LPI, Russia, IRINA E. VALTTS, NADEZHDA N SHAKHVOROSTOVA, ASP LPI, Russia, STAN KURTZ, IRyA, UNAM, Mexico, PETER HOFNER, NMT; NRAO
— As part of a study of low-frequency CH transitions as tracers of outflows in high-mass star forming regions, we conducted observations of the star forming regions G35.79-0.17 and G35.83-0.20 with the 305 m Arecibo Radio Telescope. We detected two 3.3 GHz CH spectral lines toward each source. The spectral lines are found at approximately the same LSR velocities, i.e., 28 and 60 km/s, which correspond to the systemic velocities of G35.83-0.20 and G35.79-0.17, respectively. The angular separation between both sources is 2.8 arcminutes. A Spitzer-IRAC image of the region shows a large scale (>4 arcmin) infrared dark cloud (IRDC) filament, where both pointing positions are located. Given that the separation between both star forming regions is greater than the telescope beam, our data suggest that the two CH spectral lines are tracing the extended IRDC. We discuss the possibility that the two velocity components are tracing the interaction between two molecular clouds that triggers the star formation activity detected in the filament. As a broader-impact product of this work, we also present a Jupyter Notebook instructional activity that uses the data reported in this work to illustrate the basics of single-dish data reduction.

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