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A Database for Young Binary Stars

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Circumstellar disks are the sites of planet formation. Most solar analogs are found in binary systems; therefore, understanding how these systems influence circumstellar disk evolution is important. The occurrence of planet formation around binaries is low but not zero, raising the question of what drives or inhibits planet formation in these systems. Our goal is to identify which stellar or system properties influence planet formation via disk dissipation. Our dataset will combine state-of-the-art observations and archival data of approximately 100 binary systems from Keck, the VLT and ALMA, providing years of high-quality spectra for analysis. With the Young Binary Star Database, we will provide a comprehensive archive of high-resolution infrared data, including uniformly derived stellar parameters and reduced spectra, to the community. The database is meticulously maintained using MySQL and JavaScript, while incorporating automated Python scripts for seamless updates, providing a significant and up-to-date resource for the scientific community. The finalized database will illuminate how the interplay between stellar and system properties in binaries impacts disk formation, evolution, and planet formation.