

InSTAR Double Star Astrometry

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In the fall of 2024 six participants in the Institute for Student Astronomical Research's Double Star Astrometry seminar, under the guidance of Dr. Rachel Freed, formed a research team. Team members came from diverse backgrounds and institutions and each brought varying levels of astronomical knowledge and experience to the group. The goal of the research team was to shed additional light on WDS 00012+3716 DAM 274, whose double star nature is currently uncertain.

Using data collected from the Las Cumbres Observatory in November 2024, the current position angle and separation of the primary and secondary stars of WDS 00012+3716 DAM 274 were calculated via the astrometry aperture tool in AstroimageJ. The mean position angle was found to be 283.69 degrees and the mean separation was found to be 4.325 arc-seconds. While there is not yet enough observational data to determine whether the stars of WDS 00012+3716 DAM 274 are gravitationally bound, the parallax values collected by the Gaia space observatory seem to indicate these two stars are located the same distance from Earth.