



KAMARAJ IAS ACADEMY
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W Ursae Majoris (W UMa) Stars

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Astronomers from **ARIES** (Nainital) and **PRL** (Ahmedabad) used the **Devasthal Fast Optical Telescope (DFOT)** and NASA's **TESS** to study **W Ursae Majoris** stars—a unique type of "contact binary."

Scientific Significance

- **What are they?** These are binary star systems where two stars are so close that they touch each other, sharing a **common outer atmosphere** (common envelope).
- **The Research:** By analyzing "light curves" (how brightness changes over time), scientists found evidence of **star spots** (magnetic activity) and mass transfer between the twins.
- **Why study them?** They serve as "natural laboratories" for understanding stellar evolution and the eventual fate of stars (mergers or supernovae).