

W Ursae Majoris Star

January 7, 2026 • vajiramandravi.com



W Ursae Majoris Star Latest News

Astronomers from Aryabhata Research Institute of Observational Sciences used data from Devasthal Fast Optical Telescope and NASA's TESS space telescope to create detailed light curves of the W Ursae Majoris (W UMa) star.

About W Ursae Majoris Star

- It is also known as a **low mass contact binary**, is a type of **eclipsing binary variable star**.
- They share a **single outer atmosphere** and they orbit around each other.
- W UMa stars are easily recognized by their **light curves** with **near equal minima** and **continuous light variation**.
- Their variability ranges from a few tenths to slightly over a magnitude. The periods are typically short and range between **0.25 days to around 1.0 days**.
- **Origin:** The **traditional theory explaining** the origin of contact binaries is that W UMa **systems form from detached binaries of comparable periods through orbital decay by angular momentum loss**.
- The idea of the contact binary seems to have been **first introduced by Kuiper (1941)**.

- **Significance W Ursae Majoris Star Study:** They assist in precise determinations of fundamental stellar parameters such as masses, radii, and temperatures, crucial for testing theories about **how stars evolve over time**.

Key Findings about W Ursae Majoris Star

- It was found that **stars share their outer layers**, their **orbits shift** slightly over time, as if tugging and pulling on one another
- Some stars **appear lopsided**—brighter on one side than the other.
- It is found that there is an uneven brightness point at dark magnetic star spots similar to star spots.
- These spots rotate in and out of view, creating **bumps in the light curves**.
- This also suggests the stars **have strong magnetic activity**.
- Scientists also found **specific light signals** (called H-alpha and H-beta) that clearly show activity in the star's outer layer, which is linked to magnetic events like star spots and stellar flares.

Source: **PIB**

Source: <https://vajiramandravi.com/current-affairs/w-ursae-majoris-star/>

© Vajiram & Ravi. For personal use only.