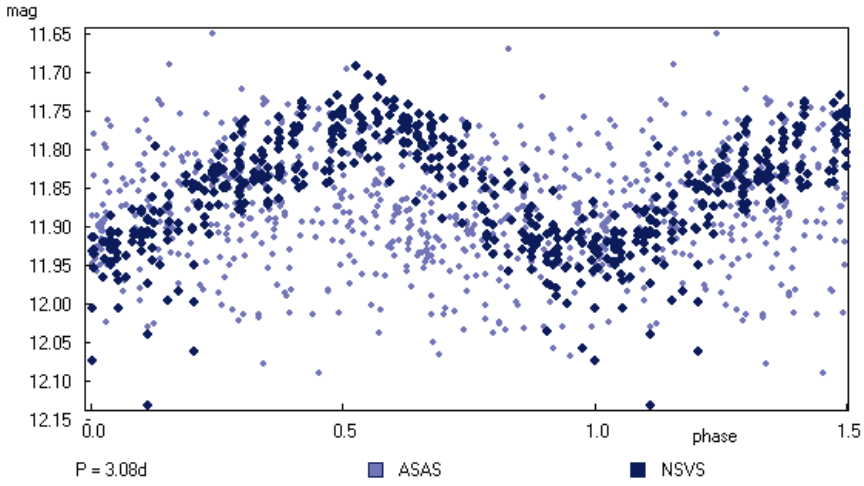
Elements for two T Tauri variables in Taurus

Photometric elements for two T Tauri-alike variable sources in the constellation of Taurus were refined by the VS-COMPAS team.

T Tauri itself is the prototype for a class of very young stars, still in the process of gravitational contraction; that is, they have yet to evolve to reach the main sequence. These are pre–main sequence stars – the youngest visible of F, G, K, M spectral type.

2MASS J05003003+1723591 (WTTS/ROT)	
AAVSO UID:	000-BKG-285
Constellation:	Taurus
J2000.0:	05 00 30.04 +17 23 59.2
Mag. range:	11.78 - 11.93 V
Epoch:	HJD 2451594.56 (20 Feb 2000)
Period:	3.08 days

Target stars are VSX J034605.3+292034 and a Weak-line T Tauri star 2MASS J05003003+1723591. For VSX J034605.3+292034, there is a possible flare at HJD = 2454743 that reaches 12.05 in CRTS data. The star is present in "Compiled catalog of Per OB2 star forming complex" (Belikov+, 2002).



2MASS J05003003+1723591 (WTTS/ROT). Period is 3.08 days.
by Andrey Prokopovich, Ivan Adamin (VS-COMPAS), Sebastian Otero

Mean magnitude changes in ASAS-3 data and the period may be slightly different between datasets for 2MASS J05003003+1723591 (WTTS/ROT), which is a Weak-line T Tauri star. Type is derived from 1998A&AS..132..173L. Spectral type is confirmed to be G5IV. The brightness varies between 11.78 and 11.93 V. Rotational period believed to be 3.08 days, according to the NSVS data.

Roughly half of T Tauri stars have circumstellar disks, which in this case are called protoplanetary discs because they are probably the progenitors of planetary systems like the solar system. Circumstellar discs are estimated to dissipate on timescales of up to 10 million years. Most T Tauri stars are in binary star systems. In various stages of their life, they are called Young Stellar Objects (YSOs).

Ivan Adamin