

## RU Pegasi

RU Peg is one of a select group of dwarf novae that can attain magnitude 10 when in outburst and has been a long-time favourite target for BAA VSS visual observers because of its location west of the “Square of Pegasus” and frequent outbursts.

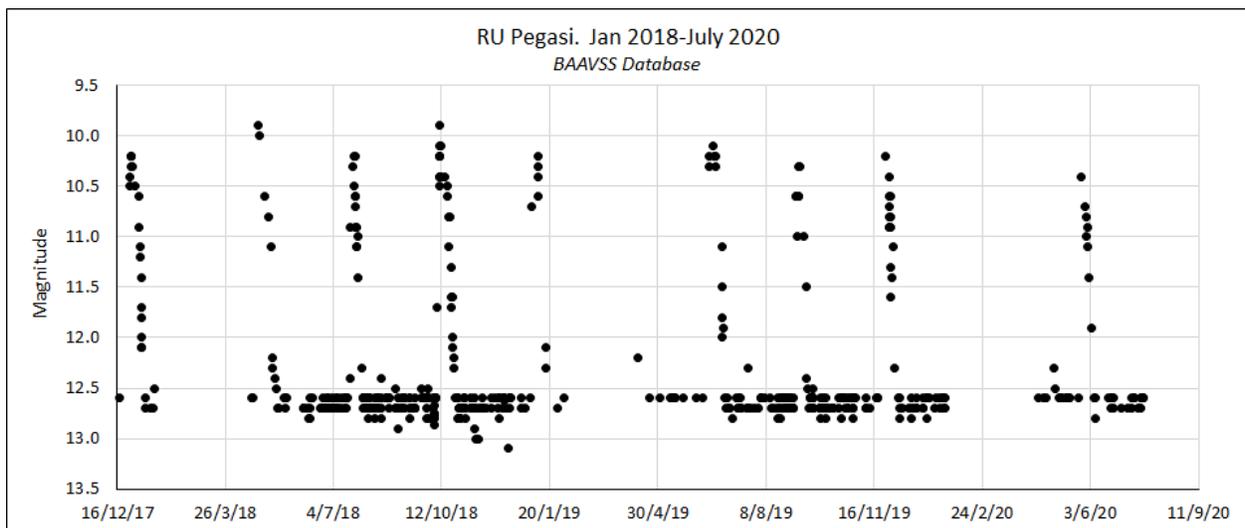
RU Peg was discovered by Kasimir Romuald Graff at Urania Observatory, Berlin on 10<sup>th</sup> July 1904 whilst he was investigating a star omission from the Bonner Durchmusterung Catalogue. It was the fifth dwarf nova to be discovered after U Gem, T Leo, SS Cyg & Z Cam and only the third out of four to be discovered by visual means.

RU Peg is located 2 degrees north west of the fifth magnitude star 31 Peg and one degree east of T Peg (Mira variable). Lying 24 degrees north of the ecliptic RU Peg can be followed all year from the UK apart from a short period between mid-February and mid-March.

At minimum light RU Peg is only slightly fainter than the close magnitude 12.6 companion 12” distant to the north east, listed as comparison star H on the accompanying chart. Observers using telescopes of 20cm aperture or smaller may struggle to separate the two stars on all but the steadiest of nights.

Like many UGSS stars the outbursts are normally long (13 days above magnitude 11.5 and peaking at magnitude 10.2 on average) and short (8 days above magnitude 11.5 and peaking at magnitude 10.5 on average). The long and short outbursts are roughly equal in quantity, with anomalous outbursts accounting for only 13%. The rate of rise to outburst is 1.5 days per magnitude whilst the decline takes longer at 3.4 days per magnitude. The mean period between outbursts based on BAA VSS data from 1951-1979 is 73.5 days.

RU Peg has an orbital period of 8.99 hours, which is at the extreme range for orbital periods for UG systems, and the temperature of the white dwarf star is estimated at 50,000K, which is the highest temperature yet detected for any dwarf nova system. The system is inclined at 33 degrees and lies at a distance of 280 parsecs.



014.03

30' FIELD INVERTED

RU PEGASI

22h 14m 02.6s +12° 42' 11" (2000)

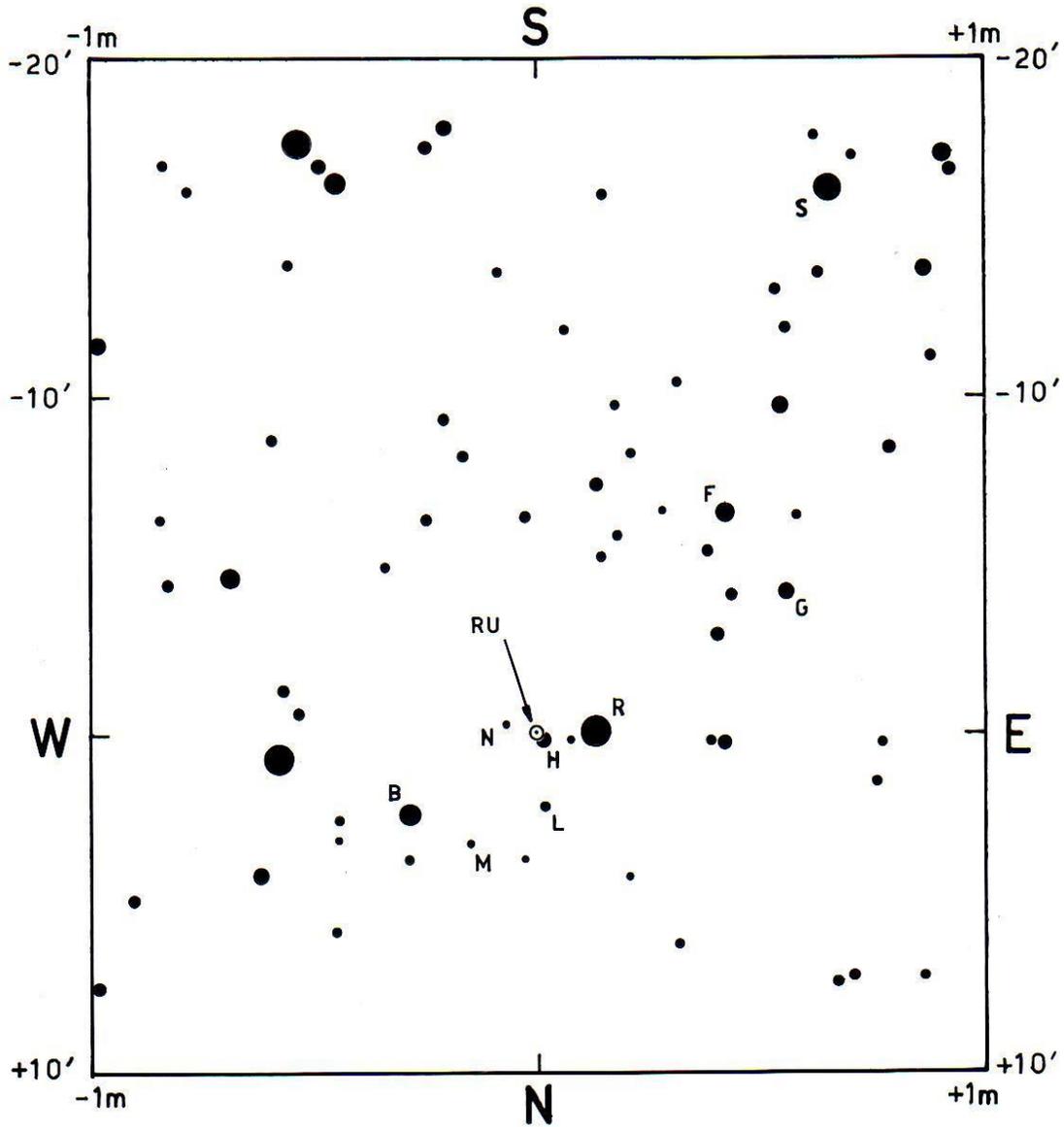


CHART:  
 GUIDE ♂  
 SEQUENCE:  
 R & S TYCHO 2 VJ  
 OTHERS HENDEN

R 8.4	H 12.6
S 9.6	L 13.5
B 10.4	M 14.0
F 11.1	N 14.6
G 12.0	

BAA VSS  
 EPOCH: 2000  
 DRAWN: JT 14-05-07  
 APPROVED: RDP