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POSSIBLE BEATS IN TWO DELTA SCUTI STARS

Observations of two Delta Scuti suspects were obtained using a 40 cm. reflector and a dry ice cooled 1P21. An OG-4 (4mm) filter approximates the V magnitude. Observations were made differentially between variable and comparison stars.

Percy (J., 1973, R.A.S.C.J. 67, 139) has reported 18 UMa (HR 3662) as a possible Delta Scuti star with a period of about 3 hours and an amplitude of about 0.03 magnitude. This star has been observed on four nights using 25 UMa (HR 3775) and 26 UMa (HR 3799) as comparison stars. On two nights the star was found to be variable with amplitude and period in agreement with Percy's results. On the remaining two nights no variation in 18 UMa was evident; the standard deviation of the variable minus comparison magnitude differences was about 0.003 magnitude which is about the same as the standard deviation of the comparison minus comparison magnitude differences. Thus the star was practically constant for 2.5 hours on one night and 5.0 hours on another night.

Percy also reports that either 24 Cnc (HR 3312/3) or 28 Cnc (HR 3329) is variable with an amplitude of about 0.02 magnitude, and a period of about 2.5 hours. Observations of both stars with 19 Cnc (HR 3268) as a comparison star were obtained on four nights. From these observations it is clear that 28 Cnc is the variable with a period of about 2.3 hours and an amplitude which ranged from 0.025 magnitude to a few thousandths of a magnitude. The star 24 Cnc shows some scatter but does not appear to have been variable with an amplitude greater than 0.005 magnitude on any of the four nights.

Both 18 UMa and 28 Cnc are Delta Scuti stars. Both stars show variations in amplitude that make the beat phenomenon a possibility. Further observations of high quality are needed.

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