

BOOKS FOR THE VARIABLE-STAR OBSERVER from Astro Books

VARIABLE STARS by John Glasby

This book, considered to be the standard work on the subject, gives an over-all picture of our present knowledge of the many different types of variable star.

1968: 332pp

£2.85

THE VARIABLE STAR OBSERVER'S HANDBOOK by John Glasby

The book covers naked-eye, binocular and telescopic variables, and also deals with photographic and photoelectric observations and spectroscopic observations. Some recent novae are also listed.

1971: 213pp

£2.35

THE DWARF NOVAE by John Glasby

Although a small class of variable star, the dwarf novae are amongst the most interesting. The book covers the masses, spectra and light variations of these stars.

1970: 293pp

£3.20

We have a few copies of "Invisible Astronomy" by C Ronan still available at the special price of 95p. See TA 99 for details.

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ASTRO BOOKS
342 Lower Addiscombe Road
Croydon CRO 7AT

from me. In AAVSO Circular 21, John Bortle writes:

"The supposed variable star located SW of R UMa is shown on AAVSO d charts and thus is not new. Since the scatter of mag estimates is fairly large, there is a possibility that the star is slightly variable and it is suggested that you continue to keep it under observation..."

AURORA OF AUGUST 4/5

M D Taylor: On the night of August 4/5, a narrow ray, R1, was noticed at 00.23, soon after preparation for a night's observing session. Little dark-adaptation had been achieved and there was drifting cloud from the SW with the moon, about 25d old, low in the NE. The ray appeared vertical, positioned almost on the N point, just to the west. It was glimpsed near Beta Cep, about 73° in altitude. The base of the ray was below altitude 15° and was not visible. Probably due to the lack of dark-adaptation, a wider feature appeared in the form of a truncated ellipse,

R2; the ray R1 forming a bright eastern edge of it. The minor axis of R2 corresponded with the E-W direction and was 12° broad. Its top reached near Alpha Cep, and appeared like the Milky Way (which was not visible on this night). Like R1, R2 was not visible below altitude 15° . By 00.28 R1 and R2, which could only be described as greyish-white, faded to invisibility.

At 00.29 a narrow ray R3 appeared from the NNE horizon and reached about 50° altitude, inclined from the vertical towards the east by about 5° - 10° . Its colour, intensity and lower altitude limit was as R1. This ray lasted for 1 minute.

From 00.30-00.35 there was a distinct hint of something happening although it was very difficult to make out its form. At times the area around the midpoint from Polaris to the horizon appeared extremely blue - almost as if the sun was nearing its rise or set. Comparison of the sky brightness in different regions confirmed the difference in colour. A faint glimpse of R2 became visible towards the end of this period and cloud which was covering part of the southern aspect was about to threaten the west.

At 00.40, R2 was still visible as were R3 and R4, a bright, searchlight effect appearing near the WNW horizon. The top of R4 slanted southwards and was within 2° of Eta Her.

R5, similar to R3, appeared in the NW. The only difference was in size - it was slightly smaller. R2-5 faded in brightness and disappeared at about 00.50 and cloud set in to put an end to the display.

Further checks on the clouded sky continued, and at 01.57 a dim, reddish area, somewhat fan-shaped, was apparent in the west. The sky at this time was totally clouded with no trace of the usual glare from nearby urban/city districts. - 17 Cross Lane, Horbury Road, Wakefield, Yorks WF2 8DA (lat 54° N).

Ian Howarth: On the night of August 4/5 a spectacular auroral display was observed from the Nelson Observatory, HQ of the Portsmouth Astro Group, by Storm Dunlop, Ian Howarth, Tony Knight and Alan Smith. It was first noted by Knight as a glow to the north at 22.55. Two homogeneous patches to the NE and NW were then observed to change form rapidly by Dunlop and Howarth. At 23.05 quiet rays developed to the NNE, while a quiet arc formed. The rays developed all along the N horizon, particularly around Capella, then faded by 23.25. At 23.33 one bright ray developed to the NE, doubling by 23.39, when it formed a green column reaching 20° into Cassiopeia. By 23.50 the display had considerably strengthened, with quiet rays stretching from Arcturus to Capella. At this point the green arc at the base of the pillars was observed to be double and folded. The strengthening continued, and by 24.00 blues, pinks and greens coloured the scene. At 24.07 the display reached an incredible climax, the beauty of the scene causing those present to disregard pneumonia, mosquitoes and even Alan Smith's coffee. Active rays 50° high stretched across 100° of the north horizon, a pulsating sheet of blue and pink, which was so bright that shadows were thrown by it. After a couple of

minutes a rapid fading set in until only a diffuse glow remained by 24.20, though occasionally rays could still be seen. It remained in this state until dawn and cloud halted observation. - 77 Eastfield Road, Southsea, Hants PO4 9EJ.

(At 23.30, though the sky was generally overcast, some gaps in the cloud low in the north had the greenish colour of midsummer twilight and a note of possible auroral activity was made in the observation book. A large spot was seen near the sun's meridian on the following day. - Ed)

COMET P/GIACOBINI-ZINNER

R W Panther: Jul 10, 01.00, small moderately condensed coma with slight extension in PA 265° , size $5' \times 4'$. Total magnitude 9.5. Conditions very good.

Jul 12, 00.15, total magnitude 10.0. Coma diameter $4' \times 3'$. Weak condensation on sunward side. Conditions moderate.

Jul 15, 00.45, total diameter of coma $3'$. Outer coma very diffuse. Weak condensation to sunward side. Total magnitude 9.8. Conditions moderate.

Jul 17, 00.25, oval coma with extension in PA 280° from weak condensation. Edge of coma very diffuse. Total size $4' \times 3'$. Total magnitude 10.0. Conditions rather poor.

The position of the comet excited some surprise at first, being about one degree north of the ephemeris in the BAA Handbook, the recovery correction being only -0.06 day. However, this was sorted out by Stan Milbourn of the Comet Section of the BAA to a printer's error in the declination for July 12. It should have read $+36^\circ$, not $+35^\circ$ as printed. All other values appear to be in order and the comet should have been back on track by the 22nd. - 15 Boughton Lane, Moulton, Northampton.

John E Bortle: During June and July of this year we in the eastern part of the United States have experienced the worst weather for observing in memory. In two months no more than six or seven nights have been suitable for any sort of work.

P/Giacobini-Zinner, 1972d, was observed during the maximum phase of the recent lunar eclipse and this may be of interest.

Jul 26: Mag 9.7 in 15cm spec, coma dia $1'$, degree of condensation 3. 32cm spec shows a teardrop-shaped coma with a small nuclear condensation located sunward (east) of the centre. A short tail, $4'$ long, extends towards PA 265° . It is quite narrow, possibly $\frac{1}{2}'$ wide and straight. - Gold Road, Stormville, New York, USA 12582.