

a cheap method. Astronomical navigation therefore still remains the primary means of navigation at sea, is still a standard method in the air and will always remain a "long stop" even when sophisticated methods are used.

For Further Reading

Lunar Distances. Explanation to Nautical Almanac and Astronomical Ephemeris for 1767.

Position-line Method. Admiralty Manual of Navigation Vols. II and III.

Time-Keepers. Journal of the Royal Naval Scientific Service Vol. 28 Nos. 4 and 5.

Marine Sextant. Admiralty Manual of Navigation Vol. II.

SOME OBJECTS OF INTEREST IN THE SOUTHERN SKY

by
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The appended list of comet-like objects supplements that published in MNASSA Vol. 28 page 85 (1969 August), and consists of objects which have been observed (many of them repeatedly) in comet sweeps since that time.

In the interim the following notes have been compiled concerning two objects of special interest:-

N. G. C. 5139 (Omega Centauri)

The position of this well-known globular cluster (No. 61 in the original list) has been found to be ten minutes of arc further South than that given in almost every modern list or catalogue. The declination for the epoch 1950.0 is $-47^{\circ}13'$ and not $-47^{\circ}03'$ as generally accepted.

In the New General Catalogue (Dreyer) the North Polar Distance of this object in 1880.0 is given as $136^{\circ}34'8$ in spite of a correction notice in the Second Index Catalogue which reads "N. P. D. is $136^{\circ}44'8$ (error of reduction in G. C.)".

Several practical checks have been made on the revised declination, for example by centering the cluster in the 24' field of a fixed telescope and waiting some $28\frac{1}{2}$ minutes, when the star Zeta Centauri (1950 declination $-47^{\circ}03'$) drifts through the field and passes 2' from the Northern edge, indicating that Omega Centauri is 10' further South than the star. In the "Star Catalogue of the Smithsonian Astrophysical Observatory", which includes all the N.G.C. objects, the star SAO 224145 appears 1 minute of arc South of the centre of NGC 5139, whereas telescopic observation shows that this 8.6 magnitude star is well North of the central blaze of the cluster; indeed, measurements on photographs show it to be 9 minutes of arc North of the centre. Thus

SUPPLEMENTARY LIST OF COMET-LIKE OBJECTS SOUTH OF THE CELESTIAL EQUATOR

(As observed with a 12 cm short-focus refractor x21)

No.	Catalogue Nos.		W. Her- schel	(1950)		Constella- tion	Description	Class	Books/ Charts
	NGC	Messier		R.A.	Dec.				
10a	1232	-	258 ²	3 ^h 07 ^m .5	-20 ^o 46	Eridanus	Galaxy	B4	S
14a	1350	-	-	3 29.1	-33 48	Fornax	Galaxy (Nu)	B4	HS
19a	1398	-	-	3 36.8	-26 30	Fornax	Galaxy	C2	S
21a	1512	-	-	4 02.3	-43 29	Horologium	Galaxy	C2	WNS
25a	1617	-	-	4 30.6	-54 43	Dorado	Galaxy (Nu)	B4	S
36a	2243	-	-	6 27.6	-31 15	Canis Major	Globular Cl.	C2	NS
37a	2467	-	22 ^h	7 50.4	-26 16	Puppis	Diff. Nebula	B3	HS
40a	2671	-	-	8 44.4	-41 42	Vela	Galactic Cl.	B3	S
41a	2972	-	-	9 38.5	-50 06	Vela	Galactic Cl.	B4	-
41b	2997	-	50 ⁵	9 43.5	-30 58	Antlia	Galaxy (Nu)	C2	MHS
59a	5068	-	312 ²	13 16.2	-20 47	Virgo	Galaxy	B4	S
63a	5253	-	638 ²	13 37.1	-31 23	Centaurus	Galaxy	C2	MNS
72a	-	-	-	15 57	-53 23	Norma	Galactic Cl.	B4	-
79a	6167	-	-	16 30.6	-49 40	Norma	Galactic Cl.	B4	MHNS
79b	6192	-	-	16 36.8	-43 17	Scorpius	Galactic Cl.	B4	MNS
91a	6318	-	-	17 14.3	-39 24	Scorpius	Galactic Cl.	B4	NS
98a	6440	-	150 ¹	17 45.9	-20 21	Sagittarius	Globular Cl.	C2	HS
98b	6445	-	586 ²	17 46.3	-20 00	Sagittarius	Plan. Nebula	C2	HS
107a	6603	24	-	18 15.5	-18 27	Sagittarius	Galactic Cl.	B4	WHNS
112a	6642	-	205 ²	18 28.9	-23 31	Sagittarius	Globular Cl.	C2	HS
129a	7410	-	-	22 52.2	-39 56	Grus	Galaxy	B2	HS
129b	IC1459	-	-	22 54.6	-36 42	Grus	Galaxy (Nu)	C2	S

Notes

- Classification:
 B3: Extended objects, irregularly shaped.
 B4: Extended objects, very faint, easily missed in sweeping.
 C2: Angularly small objects, almost stellar, faint.
 Nu: Nucleus (of a galaxy)
- Books in which the objects are listed, and star charts in which they appear:-
 W - Webb, Rev. T.W. "Celestial Objects for Common Telescopes"
 (Revised by Margaret Mayall, Dover Publications, 1962)
 M - Menzel, D.H. "A Field Guide to the Stars and Planets"
 (Collins, London, 1966)
 H - Hartung, E.J. "Astronomical Objects for Southern Telescopes"
 (Cambridge University Press, 1968)
 N - Norton's Star Atlas and Telescopic Handbook.
 S - Skalnate Pleso "Atlas of the Heavens" (Bečov)