

Winter is aurora time

by James Stokley

Although they can't be predicted exactly, there's a good chance that you'll be able to see some displays of northern lights this winter. Also called the aurora borealis, they are a terrestrial effect of activity on the sun. The 11-year cycle of solar activity is now at a maximum, so auroral displays will be more frequent than they were five years ago—or will be five years hence.

In the Northern Hemisphere they occur most frequently in a zone 20 to 25 degrees from the north magnetic pole in Viscount Melville Sound about 500 miles north of the Canadian Arctic.

The auroral zone passes across Canada and Alaska, and northern parts of the United States aren't far from it. In Minnesota, in fact, you're about as near as if you were in Iceland. Even in the Southern states, auroras are sometimes visible and they have even been observed from Mexico. You can

see them best when the sky is dark; only very bright ones are visible in competition with the glare of the full moon.

Usually, an aurora starts as a faint glow near the northern horizon. As it climbs higher, it may form an arc, pointing downward at the ends. There may be rays of light shooting upwards from the arc. Sometimes it looks like draperies waving in the wind. Green is the most common color, but red, blue and violet sometimes appear.

Two bright planets, Saturn and Mars, shine in the December sky. So do the bright stars of winter, some of which will be even more prominent next month.

The accompanying maps show the sky as it looks about 10 p.m. local time, on Dec. 1. At mid-month the stars appear similarly about 9 p.m. and on New Year's Eve at 8.

CELESTIAL TIME TABLE

Dec.	EST	
1	10:51 p.m.	Moon in last quarter
2	1:10 a.m.	Algol (variable star in Perseus) at minimum brightness
4	10:00 p.m.	Algol at minimum
5	9:00 p.m.	Moon passes south of Jupiter
7	6:50 p.m.	Algol at minimum
9	4:43 a.m.	New moon
10	7:00 p.m.	Moon nearest, distance 224,200 miles
14	1:00 a.m.	Moon passes south of Mars
15	8:10 p.m.	Moon in first quarter
18	10:00 p.m.	Moon passes north of Saturn
21	7:44 p.m.	Sun farthest south, winter begins in Northern Hemisphere
23	12:36 p.m.	Full moon
24	11:50 p.m.	Algol at minimum
26	noon	Moon farthest, distance 252,300 miles
27	4:00 p.m.	Mercury farthest east of sun, visible with difficulty for a few days around this date low in the southwest at dusk
	8:30 p.m.	Algol at minimum
30	5:20 p.m.	Algol at minimum
31	5:53 p.m.	Moon in last quarter

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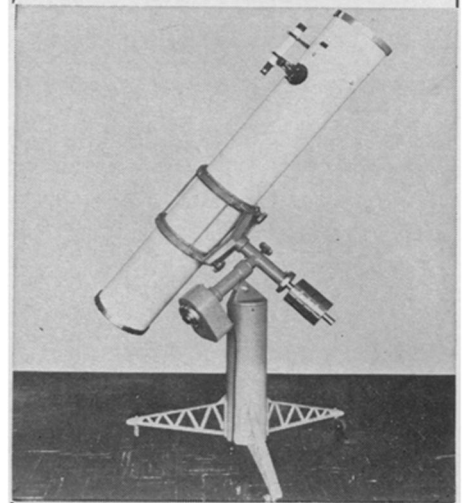
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