DARK SKIES for February 2019:

F/S	**Feb.**	**1/2**	**6:50**	**p.m.**	**5:37**	**a.m.**
S/S	**Feb.**	**2/3**	**6:51**	**p.m.**	**5:36**	**a.m.**
S/M	**Feb.**	**3/4**	**6:52**	**p.m.**	**5:35**	**a.m.**
M/T	**Feb.**	**4/5**	**6:53**	**p.m.**	**5:34**	**a.m.**
T/W	**Feb.**	**5/6**	**6:55**	**p.m.**	**5:33**	**a.m.**
W/T	Feb.	6/7	7:09	p.m.	5:32	a.m.
T/F	Feb.	7/8	8:08	p.m.	5:31	a.m.
F/S	Feb.	8/9	9:07	p.m.	5:30	a.m.
S/S	Feb.	9/10	10:08	p.m.	5:29	a.m.
S/M	Feb.	10/11	11:09	p.m.	5:28	a.m.
M/T	Feb.	11/12	12:13	a.m.	5:26	a.m.
T/W	Feb.	12/13	1:18	a.m.	5:25	a.m.
W/T	Feb.	13/14	2:26	a.m.	5:24	a.m.
T/F	Feb.	14/15	3:32	a.m.	5:23	a.m.
F/S	Feb.	15/16	4:36	a.m.	5:21	a.m.
S/S	Feb.	16/17	none			
S/M	Feb.	17/18	none			
M/T	Feb.	18/19	none			
T/W	Feb.	19/20	none			
W/T	Feb.	20/21	none			
T/F	Feb.	21/22	7:14	p.m.	8:24	p.m.
F/S	Feb.	22/23	7:15	p.m.	9:37	p.m.
S/S	Feb.	23/24	7:16	p.m.	10:48	p.m.
S/M	Feb.	24/25	7:17	p.m.	11:56	p.m.
M/T	Feb.	25/26	7:19	p.m.	1:01	a.m.
T/W	Feb.	26/27	7:20	p.m.	2:02	a.m.
W/T	Feb.	27/28	7:21	p.m.	2:59	a.m.
T/F	Feb.	28/1	7:22	p.m.	3:50	a.m.

Times listed are for Dodgeville, Wisconsin when
(1) Moon is below the horizon
(2) Sun is > 18° below the horizon
(astronomical twilight)

Please minimize your use of outdoor lighting during these times to give everyone the best possible view of the night sky.

Time Travel

conducted by David Oesper

TUTOR. The sun, the source of light and heat, has been considered a globe of fire, round which seven other spherical bodies revolve at different distances from him, and in different periods of time, from west by south to east. These are the planets[1].

PUPIL. Any round ball is a globe, is it not?

TUTOR. A sphere or globe is defined a round solid body, every part of whose surface is equally distant from a point within called its center; and a line drawn from one side through the center to the opposite side, is called its diameter.

PUPIL. You say the sun has been considered a globe of fire. Is he not now thought to be so?

TUTOR. [2]Doctor Herschell, from some late observations, is of a different opinion.—But what think you of his magnitude?

PUPIL. I really cannot conjecture.—This I know, that when I saw him through the fog the other day, he appeared about the size of a common plate.

TUTOR. You must not always judge by appearances. You will find that there is a material difference between his real and apparent magnitude, which I think you will be convinced of when I tell you, that he is no less than 95 millions of miles from our earth.

PUPIL. Ninety-five millions of miles! You astonish me.

TUTOR. You will, I dare say, be no less surprized at being told, that he is more than a million of times as large as our earth.

PUPIL. It is almost incredible! And what are the planets?

TUTOR. The planets are opaque, that is dark bodies, which receive their light from the sun; and, as I told you, revolve about him. The first, or that nearest the sun, is called Mercury, the next Venus, then the Earth, Mars, Jupiter, Saturn, and Georgian, or the Georgium Sidus. These are called primary planets.

PUPIL. Are there then any others?

TUTOR. Yes. There are fourteen others, which move round their respective primaries as their centers, and with them round the sun, and are called secondaries, satellites or moons.

PUPIL. Have all the primaries secondaries?

TUTOR. Only four of them have moons. The earth, I need not tell you, has one; Jupiter has four; Saturn seven, besides a stupendous ring which surrounds his body; and Georgian two.

PUPIL. In what time, and at what distances, from the sun, do the planets perform their periodical revolutions?

TUTOR. *Mercury* revolves about the sun in 88 days, at the distance of 36 millions of miles.

Venus, at the distance of 68 millions of miles, completes her revolution in 224 days.

1. From *Planeta*, roving or wandering.

2. See his letter read at the Royal Society, December 18th, 1794.

The Study of Astronomy, by John Stedman (1796)

To be continued next month...