
NOVEMBER MEETING

The November meeting will be held on Friday November 20 instead of the usual fourth Friday since the Phoenix College will be closed for the holidays. Our speaker was unable to be available so on short notice we are having a Show and Tell by members. If you have any new equipment, books, photos, or experiences to relate, here is your chance to enrich the knowledge of the other members of the club.

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DUES ARE DUE NOW

If you have not sent in your dues, do so immediately or better yet pay them at the November meeting so your Sky and Telescope will not be delayed.

PHOENIX ASTRONOMICAL SOCIETY MEETING OF OCTOBER 23, 1987

Those of you who did not attend missed one of the best presentations ever, given by Dr. Robert Strom of the Department of Planetary Sciences, University of Arizona. Dr. Strom is an internationally known astronomer.

Dr. Strom was preceded by interesting show and tell talks by Jerry Maurer and Stan Gorodenski. The meeting was conducted by our president, Dick Wasson.

Dr. Strom lectured and showed slides of discoveries made by Voyager I and II. Slides were shown of about 20 satellites, there being about 45 total in our solar system.

Slides were shown of changes made from the two Voyager observations. Neptune will be encountered in 1989 by Voyager II, where he expects more discoveries will be made. Titan, about the size of our moon will then be encountered.

Most satellites are heavily cratered. Titan is the only one with an atmosphere. Io is volcanic and active.

This wonderful meeting ended with an interesting question and answer period. We are grateful to Dr. Strom for a memorable evening.

By Harold Moorin

For Sale:

4 1/2" JASON Astronomical Catadioptric Telescope F-1000mm
with Tripod and Accessories, \$350.00 New. Will Take \$200.00
Call Raul after 6PM at 948-3617

For Sale:

Electra Focus with instructions for use on Meade 2080
Cas. \$40.00 Call Raul 9483617

PHOENIX ASTRONOMICAL SOCIETY

Membership Dues/Enrollment Form

Name _____

Address _____

City _____

State _____ Zip _____

Phone(s) _____

Telescope Size _____ Type _____

Membership Type:

Individual \$25 ☐

Sustaining \$30 ☐

Family \$27 ☐

Non Sky & Telescope \$15 ☐

Please make check payable to Phoenix Astronomical Society

Return this membership form by the
September meeting to:

Ann Curtiss

3733 W. Hidalgo Ave.

Phx, Az. 85041

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SUPERNOVA 1987L IN NGC 2336

G. M. Hurst, Basingstoke, England, communicates the following improved measurement for SN 1987L by B. Manning, Stakenbridge, which replaces the erroneous result on IAU 4445: $\alpha = 71^{\text{h}}50^{\text{m}}58^{\text{s}}.82$, $\delta = +80^{\circ}15'26''.72$ (equinox 1950.0); offsets from galaxy center: $60''.8$ east, $67''.8$ south.

COMET BRADFIELD (1987s)

Orbital elements from MPC 12440:

$T = 1987 \text{ Nov. } 7.2739 \text{ ET}$
 $\omega = 73^{\circ}90'85''$
 $e = 0.994811$
 $q = 0.863989 \text{ AU}$
 $i = 34.0897^{\circ}$
 $\Omega = 267.3835^{\circ}$
 1950.0

1987 ET	α_{1950}	δ_{1950}	Δ	r	m_1
Nov. 17	18 ^h 35 ^m 06 ^s	+7 [°] 36' ²	0.973	0.887	4.9
19	18 44 73	+8 41.4			
21	18 54 75	+9 47.4	0.938	0.905	4.9
23	19 05 15	+10 54.1			
25	19 15 93	+12 01.2	0.906	0.928	5.0
27	19 27 11	+13 08.5			
29	19 38 72	+14 15.6	0.879	0.955	5.0
Dec. 1	19 50 74	+15 22.1			
3	20 03 18	+16 27.7	0.857	0.987	5.1
5	20 16 04	+17 31.9			
7	20 29 30	+18 34.1	0.842	1.023	5.2
9	20 42 92	+19 33.8			
11	20 56 88	+20 30.5	0.835	1.061	5.4
13	21 11 12	+21 23.7			
15	21 25 58	+22 12.9	0.835	1.103	5.5
17	21 40 20	+22 57.8			
19	21 54 90	+23 38.0	0.845	1.146	5.7
21	22 09 61	+24 13.3			

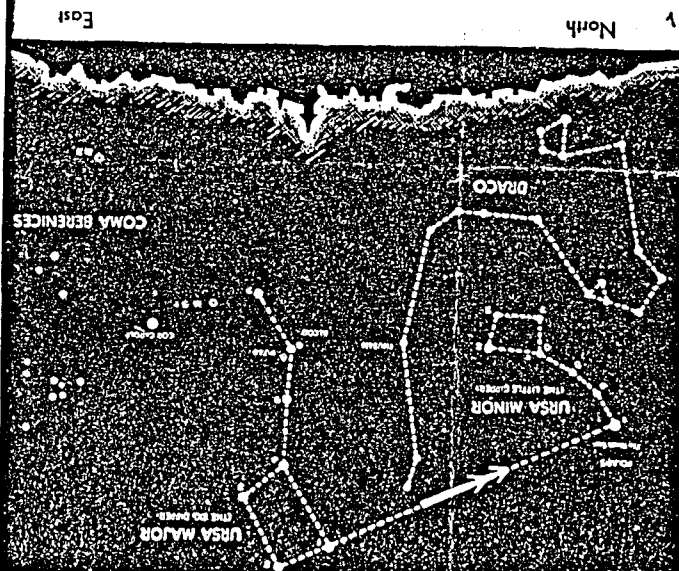
Total visual magnitude estimates (B = binocular): Oct. 27, 11 UT, 5.7 (C. Spratt, Victoria, BC, 11x80 B: 0.5 tail in p.a., 80°); 28.99, 5.8 (G. R. Chester, Arlington, VA, 7x50 B: 30.1, 5.5 (R. Royer, Wrightwood, CA, 7x50 B: 31.96, 5.6 (D. W. E. Green, Cambridge, MA, 20x80 B: Nov. 2, 0.7, 5.9 (J. V. Scotti, Tucson, AZ, 7x50 B: 3.10, 5.7 (R. A. Keen, Mt. Thorodin, CO, 8x40 B).

November 5

Daniel W. E. Green

Find the seven bright stars of the Big Dipper. Notice 6 or Mizar close beside it. An opera glass will show Alcor plainly.
 Localize Coma Berenices.
 Objects for 6-inch reflecting or 2-inch refracting telescope:
 Mizar—a double star (appears as one star to the unaided eye but as two stars in a telescope).
 M51—Whirlpool Nebula.

OBJECTS FOR OBSERVATION



The Two Bears

Agnes ago, says a legend, the bears were very foolish. They did not know enough to keep warm in winter. Thus, they were always freezing their paws or their noses and complaining to the Great Spirit. To keep them warm and snug, he taught them to make cozy dens and to crawl into them and go to sleep. So that all bears might know when to prepare for cold weather, he put a big bear and a little bear up in the sky, close to the North Star which is the hole of their den. Then he caused these sky bears to move around the North Star so that half of the year they are beneath it and half of the year they are above it. The Indians say that the sky bears are in their dens and that it is winter. When the sky bears are above, they are out of their dens and it is summer.



Stars number 1 and 2 of Ursa Major point to the North Star.