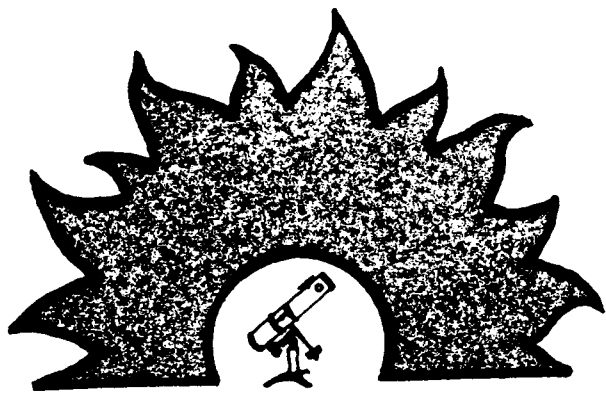




November, 1989

PASTIMES

PHOENIX ASTRONOMICAL SOCIETY -- FOUNDED 1948

**The Next Meeting is November 17th, at Brophy Prep.
(see map on the last page)**

Our meetings are at Brophy Prep. Brophy is located about a quarter mile south of Camelback Road, at the Highland Ave intersection. The meeting will be at **7:00 PM** in the Physics lab on the second floor.

Dr. Paul Schmidtke will give a talk on what's new in the research of Low Mass X-Ray Binaries.

The next Meeting will be on December 15th.

About the Speaker...

Dr. Paul Schmidtke has a Ph.D. in Astronomy from Ohio State. He with the ASU Faculty Research Association for 5 years. He has worked at Kitt Peak and still continues double star observations there.

A Planetarium for Phoenix

by Harold Moorin

The future of astronomy in Phoenix should be an astronomy center in conjunction with a planetarium.

Our area has been ready for this since are the astronomical center of our country with great interest being shown by the general public and its astronomy clubs.

Possibly we could start with a fund with donations by all who are interested. Eventually, we could get the backing of interested companies and persons who would donate major financial support. If there is a major donor, the center could be in this donor's name.

We should start now and dedicate the new decade to this purpose.

Editors Note: A committee has been formed for looking into doing exactly this and Harold Moorin is a member. He would probably appreciate any support we can give him. -Paul Dickson

For Sale / Want Ads

This space is available for the inclusion of Ads that are intended for buying or selling of Astronomical equipment. Send your Ads to Paul Dickson. The deadline is the meeting night.

From the Membership...

from Harold Moorin

Dan Heim is to be commended for his assistance in making the move to the new meeting location possible. The atmosphere is certainly more conducive to astronomy.

Members who have not attended our recent meetings are welcome to enjoy our new headquarters.

Renewing Memberships

For those of you who haven't renewed yet, this will be your last newsletter. If you already have a subscription to *Sky & Telescope*, you can receive a lower membership rate. Otherwise, your *Sky & Telescope* subscription will just be extended. The individual membership is \$29, while the family rate is slightly higher.

Please make checks payable to **PAS**. If you have any questions, please come to the meeting or mail them to Keith Parizek at: 3329 E Mescal St., Phoenix, Az 85028. Thank You.

What is this Life?

We are shaped by the Earth from which we grow.
The races of the world are the colors of the Earth.
Red, Black, Yellow, White, Brown, and many Shades between.
It is said, we come from the Earth and to the Earth We must return.
During that Time from what is called Birth to that time known as Death
We draw what is called Living from the Earth
We are of the Earth, We are sustained by the Earth
We become Earth, We Live because of Life.
Yet while we have Life, we are more than Earth.
What is Life? Where is it before and after living?
Where does It come from? Where does It go?
Where does It reside when It is of us?

Mildred Karch Moorin

Your 1989/1990 PAS officers:

President
Vice President
Secretary/Treasurer
Newsletter Editor
Director
Director
Director

Kai Staats	253-3077
Mark Johns	866-8311
Keith Parizek	996-1013
Paul Dickson	841-7044
Hermann Andreason	997-8759
Dan Heim	482-8133
Dick Wasson	279-0384

Items to be included in the newsletter should be sent to Paul Dickson, 7714 N 36th Ave, Phoenix, Az. 85051. I will try to get them included. -Paul

Planetary Positions

Planets	11/1/89		11/15/89		12/1/89	
	RA	DEC	RA	DEC	RA	DEC
Mercury	14h 01'	-11° 09'	15h 33'	-19° 40'	17h 18'	-25° 03'
Venus	17h 39'	-26° 44'	18h 44'	-26° 36'	19h 45'	-24° 13'
Mars	13h 43'	-10° 09'	14h 21'	-13° 37'	15h 04'	-17° 02'
Jupiter	06h 47'	+22° 46'	06h 45'	+22° 49'	06h 39'	+22° 57'
Saturn	18h 40'	-22° 44'	18h 45'	-22° 40'	18h 53'	-22° 33'
Uranus			18h 13'	-23° 40'		
Neptune			18h 45'	-22° 10'		

JUPITER SATELLITES

NOVEMBER 1989
COMPILED BY JERRY MAURER

Date	MST	EVENT
Wed 01	3:03 am	I.Ec.D.
	6:27 am	I.Oc.R.
Wed 01	10:47 pm	IV.Tr.I.
	11:32 pm	III.Sh.I.
	11:58 pm	II.Ec.D.
Thu 02	12:03 am	IV.Tr.E.
	12:19 am	I.Sh.I.
	1:26 am	I.Tr.I.
	2:32 am	III.Sh.E.
	2:31 am	I.Sh.E.
	3:38 am	I.Tr.E.
	4:06 am	III.Tr.I.
	4:51 am	II.Oc.R.
Thu 02	9:31 pm	I.Ec.D.
Fri 03	12:55 am	I.Oc.R.
Fri 03	10:05 pm	I.Tr.E.
	11:32 pm	II.Tr.E.
Wed 08	4:57 am	I.Ec.D.
Thu 09	2:12 am	I.Sh.I.
	2:32 am	II.Ec.D.
	3:14 am	I.Tr.I.
	3:30 am	III.Sh.I.
	4:24 am	I.Sh.E.
	5:26 am	I.Tr.E.
	6:22 am	III.Sh.E.
Thu 09	11:25 pm	I.Ec.D.
Fri 10	2:43 am	I.Oc.R.
	5:02 am	IV.Oc.D.
	6:24 am	IV.Oc.R.
Sat 11	1:56 am	II.Tr.E.
Sat 11	9:10 pm	I.Oc.R.
Sun 12	9:32 pm	III.Oc.D.
Mon 13	12:31 am	III.Oc.R.
Wed 15	6:51 am	I.Ec.D.
Thu 16	4:05 am	I.Sh.I.
	5:00 am	I.Tr.I.
	5:05 am	II.Ec.D.
	6:18 am	I.Sh.E.
	7:13 am	I.Tr.E.
	7:28 am	III.Sh.I.

Date	MST	EVENT
Fri 17	1:19 am	I.Ec.D.
	4:30 am	I.Oc.R.
Fri 17	10:33 pm	I.Sh.I.
	11:27 pm	I.Tr.I.
	11:50 pm	II.Sh.I.
Sat 18	12:46 am	I.Sh.E.
	1:39 am	II.Tr.I.
	1:40 am	I.Tr.E.
	2:27 am	II.Sh.E.
	4:19 am	II.Tr.E.
Sat 18	10:57 pm	I.Oc.R.
Sun 19	9:30 pm	III.Ec.D.
	10:43 pm	III.Oc.R.
Mon 20	12:26 am	III.Ec.R.
	1:02 am	III.Oc.D.
	4:00 am	III.Oc.R.
Thu 23	5:59 am	I.Sh.I.
	6:46 am	I.Tr.I.
	7:39 am	II.Ec.D.
Fri 24	4:14 am	I.Ec.D.
	6:16 am	I.Oc.R.
Sat 25	12:27 am	I.Sh.I.
	1:13 am	I.Tr.I.
	2:26 am	II.Sh.I.
	3:40 am	I.Sh.E.
	3:26 am	I.Tr.E.
	4:00 am	II.Tr.I.
	5:04 am	II.Sh.E.
	6:39 am	II.Tr.E.
Sat 25	9:42 pm	I.Ec.D.
Sun 26	12:43 am	I.Oc.R.

Date	MST	EVENT
Sun 26	7:34 pm	I.Tr.I.
	8:16 pm	IV.Oc.D.
	8:56 pm	II.Ec.D.
	9:08 pm	I.Sh.E.
	9:40 pm	IV.Oc.R.
	9:52 pm	I.Tr.E.
Mon 27	1:01 am	III.Oc.R.
	1:29 am	III.Ec.D.
	4:26 am	III.Ec.R.
	4:27 am	III.Oc.D.
	7:25 am	III.Oc.R.
Tue 28	7:29 pm	II.Tr.E.
Thu 30	9:00 pm	III.Tr.E.
Fri 01	5:08 am	I.Ec.D.

I=Io
II=Europa
III=Ganymede
IV=Callisto

Tr=Transit (In front of Jupiter)
Sh=Shadow (Shadow on Jupiter)
Oc=Occultation (Behind Jupiter)
Ec=Eclipse (In Jupiter's Shadow)

I=Ingress (Inter)
E=Egress (Exit)
D=Disappearance
R=Reappearance

II.Ec.D. ==> Europa disappears into Jupiter's shadow.

Sorry about October's mistake! JM

