

SEPTEMBER 1981 BULLETIN

LOS ANGELES ASTRONOMICAL SOCIETY

Circulation... Joe Addison

All correspondence should be sent to the Los Angeles Astronomical Society, 2800 E. Observatory Rd. Los Angeles, Ca. 90027. Please indicate on the envelope the nature of the correspondence or to whom it is being directed.



EDITOR'S COLUMN

Here is yet another fine mess issue of the L.A.A.S. BULLETIN.

We've cut down on pagination this time, but fear not; as soon as we start accepting paid advertising (subject to Board Approval) and can afford it, I will see to it that the content is increased.

In the meantime, don't hesitate to send me your articles for future publication. I can't do this alone.

And speaking of help, I could use some help with folding and labeling, as well as mailing the BULLETINS. Interested? See me!!

If you have any ideas for streamlining or otherwise improving the BULLETIN, don't keep them to yourself--TELL ME!!!!

Until next month,

Tom Harbo
Editor

GENERAL MEETING MONDAY

SEPTEMBER

14th, 1981

7:45 pm

at GRIFFITH OBSERVATORY

Our speaker for September is Howard Lanning of Mt. Wilson Observatory. Howard has worked as a night assistant operating the 100 inch telescope for the last four years. His topic will be "The pleasures and Pitfalls of Working at Mt. Wilson". This will be a general, non-technical talk, with plenty of slides, about how a big observatory operates, and what can go wrong. Plan to attend as this promises to be a very entertaining talk.

Attend or be quadrangular!!
(Be there or b²!)

The first August Star Party at Lockwood Valley was sparsely attended (Where WERE you??); but those in attendance saw a two-day old crescent moon, as well as several meteors (Delta Aquarids). Derek Reynolds operated the 16-inch Ernst Telescope.

LAAS OFFICERS AND BOARD for 1981

President:
Tom Wallace.....(213) 832-7784

Vice President:
Lu Rarogiewicz.....(213) 357-7831

Secretary:
Glenn Wheeler.....(213) 367-1534

Treasurer:
Steve Kufeld.....(714) 847-8903

Board of Directors:
Joe Addison.....(213) 789-2875
Bob Gardner.....(213) 554-1701
Gary Gibson.....(213) 761-2461
Marty Kapp.....(213) 795-6605

Howard Packer.....(213) 935-0547
Derek Reynolds.....(213) 848-1998
Mike Simmons.....(213) 884-7165

Alternate Board Members:
Roger Linnett.....(213) 396-3269
Herman Meyerdirks.(213) 276-4836
Hugh Rumball-Petre.(805) 527-0018

NEW MEMBERS

At the August 3rd meeting of the LAAS Board of Directors, two applications for membership in the LAAS were approved. These new members are:

Donald Dunbar
Jonathan Dunbar

We would like to officially welcome these people to the LAAS and hope to see them at future meetings and events.

STAR PARTY

The next two STAR PARTIES AT THE LOCKWOOD VALLEY SITE will be on Saturday, August 29th, and on Saturday, September 26th.

The last Star Party of the year will be on Saturday, October 24th.

Try to make them all!!!

The Treasury needs help!!
If you can, please pay your dues early!

662-LAAS

for current club events

ITEM... The Griffith Observatory resumes its Winter Schedule on September 14, 1981. Public shows will be offered Tues. - Fri. at 3:00 p.m. and 8:00 p.m. and on Saturdays and Sundays at 1:30 pm., 3:00 p.m. and 8:00 p.m.

ITEM... The LAAS BULLETIN will make an effort to publish letters to the Editor. Address them to Tom Hocking, Editor, LAAS BULLETIN, c/o Griffith Observatory, 2800 East Observatory Road, Los Angeles, CA 90027.

ITEM... The club's answering machine (213) 662-LAAS is being regularly updated. Call it to keep informed!

ITEM... The Sky Calendars published last issue can be subscribed to on a yearly basis from Abram's Planetarium, Michigan State University, East Lansing, MI 48824. The cost is only \$3.50 per year.

ITEM... For 24-hour per day current SKY INFORMATION, call the Griffith Observatory's SKY REPORT LINE at (213) 663-8171.

For SEPTEMBER 1981:

Magnitudes of Planets:

Venus:	-3.5 to -3.7
Jupiter:	-1.3 to -1.2
Mercury:	-0.1 to +0.5
Saturn:	+1.2 to +1.1
Mars:	+1.8 to +1.9
Uranus:	5.9
Neptune:	7.8
Pluto:	14

LETTER to the EDITOR

Some years ago I tinkered together some formulas which might bear on a possible minimum mass and radius for black-holes forming after gravitational collapse of a dying star, and also the mass and radius of the universe. If true, they hint at a relationship between the very large and the very small scales of physics. Of course they may simply be a fantastic coincidence with no connection with reality. The relations are:

Mass of Black-Hole=

$$\frac{\hbar^2 c^2}{G^2 M_p^2 M^*} = \sqrt{\frac{\hbar^3 c^3}{G^3 M_p^4}} = 3.69 \times 10^{30} \text{ kg.} = 1.85 \text{ solar masses}$$

2) Radius of Black-Hole=

$$\frac{2\hbar^2}{GM_p^2 M^*} = 2 \sqrt{\frac{\hbar^3}{GM_p^4 c}} = 5.64 \text{ kilometers}$$

3) Mass of Universe=

$$\frac{\hbar^2 c^2}{G^2 M_p^2 M_e} = 8.816 \times 10^{52} \text{ kg.}$$

4) Radius of Universe=

$$\frac{2\hbar^2}{GM_p^2 M_e} = 1.31 \times 10^{26} \text{ meters} = 13.85 \text{ billion ly.}$$

The symbols used are: \hbar =Planck's constant divided by 2π , c =velocity of light, G =gravitational constant, M_p =mass of proton, M_e =mass of electron, M^* =Planck's mass.

The formulas give values close to published estimates in the literature, with the exception of 3), which predicts a universe mass from 5 to 10 times larger than current estimates.

Note if the universe is expanding (or contracting) and 4) is true, this demands that one or more of the fundamental constants must change with time. I've considered several possibilities.

The formulas actually have a physical rationale in that 2) and 4) represent the special case where a proton is in circular gravitational orbit with another particle (M^* in the black-hole case, M_e in the case of the universe). This constraint is that the proton has an angular momentum of \hbar with regard to the other particle. This yields a unique distance (2 and 4 respectively) between the proton and the center of mass of the system.

ie: angular momentum = $\hbar = M_p \sqrt{GMpR}$

I thought this might interest some of you. I would appreciate any comments or criticism.

---Gene Partlow
1840 LeEdell Pl.
L.A., Ca. 90026

**1981 STAR PARTY SEASON
at Lockwood Valley**

April 4	August 1
May 2	August 29
May 30	September 26
July 4	October 24

**LOS ANGELES
ASTRONOMI-
CAL SOCIETY**

2800 E. Observatory Rd.
Los Angeles, Calif. 90027



**Over 50 Years
of Amateur Astronomy
in Los Angeles**

NON-PROFIT ORG.

U.S. POSTAGE
PAID

Los Angeles, CA
Permit No. 35784

DEREK S. REYNOLDS
1008 GROTON DR.
BURBANK CALIF. 91504

9.00
285