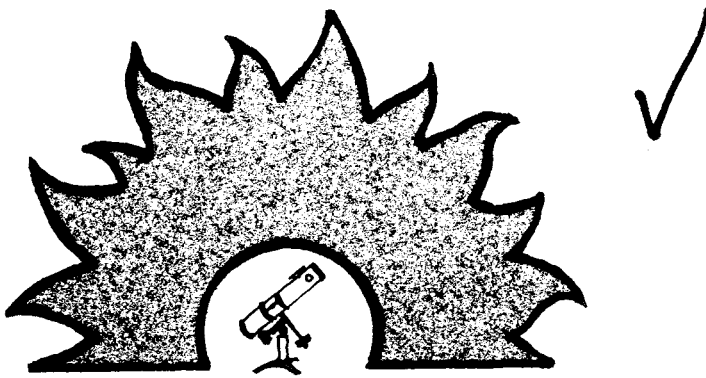




D E C E M B E R

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PASTIMES

P H O E N I X A S T R O N O M I C A L S O C I E T Y -- F O U N D E D 1 9 4 8

DECEMBER MEETING DECEMBER MEETING DECEMBER MEETING DECEMBER MEETING DECEMBER

In welcome relief from the Halley madness, our December meeting will provide us with some great hands-on instruction for those bitten by the astrophotography bug. If you've ever been frustrated by commercial film processing errors (i.e. cuts between frames, push processing improperly done, etc.), don't miss this meeting. Our president, Bill Krist, will "show and tell" how to develop your own slide film -- without a darkroom! Bill will take pictures at the meeting using 400 film, push process it to 1000 ASA and show how this can be done in your own kitchen, or while watching TV, or in front of a supernova.

This month's meeting will be held on Friday, December 20th, at Phoenix College, Room C-102 at 8:00 p.m. (see map on back of newsletter).

NOTES FROM OUR SECRETARY

Thanks go to our November speaker, Dr. Uri Carsenty, for his slide show and talk on comets, spectroscopy, and the composition of our solar system.

Dr. Carsenty gave a concise explanation of how temperature and pressure determined the makeup and distribution of metals and gases in the solar system and how a spectral analysis of comets (from the outer Oort Cloud) provides us with more clues to our solar system's origin. Scientists are eagerly awaiting Halley's approach to the sun for more complete spectroscopic studies.

Helen Lines proposed a motion designed to coordinate PAS meetings and those of the Saguaro Astronomy Club in order to avoid same date occurrences. This motion was seconded and passed, not only at our meeting but also at SAC's November 22nd meeting. The resolution should foster

-- Notes p2

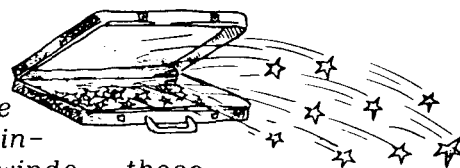
ASTROBRIEFS

Hot Stuff!

"Ulysses" will be sent in May to investigate solar winds, those scorching blasts of electrically charged particles that blow at nearly one million miles per hour. Ulysses is about the size of a small car, weighs 800 pounds, and will be launched from the space shuttle and then use Jupiter's gravity as a slingshot to propel it within 130 million miles of the sun, circling the solar poles in an orbit perpendicular to the ecliptic plane. The probe is a \$40 million, five year project to solve some mysteries concerning the differences between the sun's polar regions and equator and the structure of the sun's magnetic field.

Your Fantasy Come True? Would you like to go on vacation to a resort with tennis courts, swimming pool, jogging/nature

-- Briefs p2



Notes -- continued

close communication between club presidents and will allow those who belong to both clubs the opportunity to attend all club meetings.

A surprise announcement capped off the evening. Mark Noble, speaking on behalf of "the project"'s movers and shakers, disclosed intentions to create the **Phoenix Observatory & Planetary Society**. Conceived to foster an understanding of our place in the cosmos, a planetarium and observatory (24" telescope) funded by private donations and situated on city donated land would form the nucleus of this noble endeavor. Details are sketchy at present but more information is sure to come. Stay tuned.

-- Harold Moorin

Briefs -- continued

trails, steam baths, gourmet restaurant and . . . watch astronomers at work? Then return by tramway to your own hotel room complete with wet bar, stereo, TV and . . . telescope! Fantastic? Maybe, but Phoenix businessman Thomas P. Kelly wants to build such a "disneyland". Among his research statistics: a potential 28 million highly educated, technologically curious Americans would love a three day weekend at a resort with astronomy as its focal point; and there are 500 amateur astronomy clubs in America. Mr. Kelly envisions a mountaintop radio and optical telescope observatory of at least 3 "world class" telescopes to allow serious scientists to do up to 80% of the type of work being done at Kitt Peak. The site: Granite Peak in the Hualapai Mountains (30 miles south of Kingman). In 1958 Kitt Peak was chosen over Granite Peak because jet contrails created cirrus clouds in the Kingman skies (as they now also do over Kitt Peak). It was also assumed that

without water Tucson couldn't grow. Granite Peak can offer 280 days of clear skies per year. Hilton Inns, Inc. and Mohave County Supervisors call the idea interesting -- fantastic -- but very interesting. Kitt Peak admits to being heavily over subscribed, able to meet only 1/3 of the demand for telescope time. So far, nobody's laughing at Mr. Kelly's "Observation Point" Resort.

HALLEY HOTLINES

965-2345 A.S.U.
628-7023 Smithsonian's Whipple Observatory
(202) 653-0258 U.S. Naval Observatory in Washington, D.C.
(900) 410-8766 American Astronomical Society (50¢/35¢ per minute)

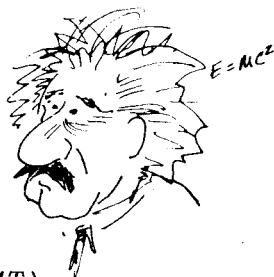
WELCOME NEW PAS MEMBERS!!

Ronald M. Bang
Howard Gerber
Hazel Hare
Kristen A. Loechell
William & Gloria Robinson
James V. Wright

FOR SALE: Mint condition 6" Ad-Astra Catadioptric built by Max Bray. Includes clock drive, 9mm & 25mm orthoscopic eye-pieces. \$1000 or best offer. Carl Stalcup 248-8056.

*		*
*		*
*	PRESIDENT	Bill Krist 254-4057
*	VICE PRESIDENT	Richard Wasson 279-0384
*	SECRETARY/TREASURER	Harold Moorin 933-8896
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*		Phoenix, AZ 85008
*		*
*		*

WISE SKIES



Louis Boyd -- Another Giant Star? In case you're wondering what happened to member Louis Boyd, you just might want to look towards Mt. Hopkins (home of the MMT). Louis has had to low key his PAS involvement due to his ambitious new project, The Automatic Photoelectric Telescope Service.

Louis and Russell Genet (dba Fairborn Observatory) have spent all available spare time on Hopkins preparing to meet a January 1st deadline to get at least one Automatic Photoelectric Telescope operational. A Meade 10" on a DFM mount is in place at this time. According to Louis, his 10" newtonian -- a well seasoned APT scope familiar to most PAS members -- will be moved to the mountain site, as well as a 16" DFM on order. A total of ten scopes, including four 1 Meter biggies will hopefully round out the project.

The purpose of the project is to measure the rotation periods of giant stars by studying the Calcium K Line emissions of the giant star spots. This is best done automatically over long periods of time -- which has been a very costly and time consuming spectroscopic process at Mt. Wilson up til now. The Hopkins project should be able to replicate these studies at less expense.

Louis promises to talk to PAS next fall about the APTS project and even hopes to devote his full time to it once the 1 Meter scopes are funded and built.

Between The Lines. Thanks to the detailed efforts of members Richard and Helen Lines, A.C. Theokas & E.F. Guinan of Villanova University were able to present a scientific abstract on "The Massive Binary System DH Cephei" to the American Astronomical Society.

DH Cephei is a double-lined massive, spectroscopic binary consisting of a pair of stars moving in an apparently eccentric orbit with a period of 2.111 days. The system is important because it could be the most massive binary known and if the noted eccentricity is real then DH Cep could provide a critical test of general relativity through its possibly very large apsidal motion. In addition, DH Cep is a

member of the very young open cluster NGC 7380 which permits its distance, luminosity and age to be determined. Photoelectric B and V light curves of DH Cep were obtained at Lines Observatory in Mayer by Richard and Helen over 24 nights during August and September 1985. The light curves are well defined and have light amplitudes of 0.048 mag and 0.045 mag at blue and yellow respectively. No eclipses occur and the observed light variations are assumed to arise from the distorted figures of the components. Analysis of the light curves are being carried out in order to determine (or at least constrain) the orbital and physical properties of the system and its component stars.

Espinoza Knows. Ever wonder how often you should clean your Schmidt Cassegrain? Member Raul Espinoza wants you to know that perhaps the most common telescope maintenance error is cleaning the optics too often. A little dust on the surface of the correcting plate causes negligible visual interference. Do not clean the outside surface of this lens unless really necessary. Dust particles on the corrector lens can usually be removed by gently brushing with a camel's hair brush or by blowing with a common ear syringe (from your local pharmacy). **NEVER** clean the correcting plate with strong circular wipes of a cloth or other material.

For cleaning of grease or other organic materials on the correcting plate, a homemade cleaning solution of two parts distilled water, one part isopropyl alcohol and one drop of biodegradable liquid dishwashing detergent may be applied sparingly with a white "Kleenex"-type tissue making short gentle radial wipes (from the center outward). Change tissues frequently and take special care to avoid scratches on correctors with special coatings.

According to Raul, the interior primary mirror should never need maintenance if you are careful to replace the dust cap at the eye end of the scope. In any case, unless you are an expert, **NEVER** remove the correcting plate from its machined housing!