THE NOVEMBER MEETING

In the past, members have enjoyed a wide variety of social events such as “amateur night”, potluck dinners, barbecue’s and more. In September, the board members and I thought it might be a good idea to have such an event...a sort of “show and tell.”

With the holiday season upon us, we figured members would enjoy seeing accessories available from the many vendors. We were right. Members showed up with all types of goodies. I got to see a calendar I had never seen before...not even in any of the magazines or catalogs I have so many of.

And the cookies! The cookies are getting better all the time. Many thanks to the bakers in our society. I hope our potluck is blessed with the same outstanding culinary talents.

George Pellegrino, President

DECEMBER MEETING—TAAS ANNUAL POTLUCK DINNER

In place of our monthly meeting in December, there will be a Gastronomically significant potluck dinner event! All are invited to attend this annual event on Saturday, December 19, starting at 6:00 p.m. The dinner will be held in Chapman Hall at St. Paul’s United Methodist Church—9500 Constitution NE (see map).

Paper plates, cups, napkins, plastic utensils, soft drinks, and coffee will be provided. Last year’s potluck was a “celestial” success and a gourmet’s delight. We’re asking you again to claim “bragging rights” to your favorite dish for your group and a smidgen more for one or two...
more people. And, if your culinary skills are stretched at boiling water, the Colonel or Ronald McD are more than willing to lend a hand. Chapman Hall has kitchen facilities, so we can keep your creations hot or cold until it's time to consume.

Chapman Hall is spacious enough to house all our members and more. So, please try to come, bring family and friends, and socialize with some other "stellar" people. You're invited to bring any astronomy-related items you may have to show—and—tell, to swap, or to sell. The AAS librarian will bring our collection of books, charts, video tapes, and there will also be Society items for sale, such as T-shirts and planetarium. A few telescopes will also be on display.

I hope you can come and join in the fun and socializing. If there are any questions, you can call me at 293-5133. See you there!!

John Hockemeier

SUMMARY OF THE THURSDAY, NOVEMBER 12, 1992 BOARD MEETING

The meeting was called to order at 7:06 p.m. The Secretary and Treasurer's reports were given. The Observatory Fund has a balance of $2,045.14 and the General Fund balance is $361.85.

President George Pellegrino expressed concern over the lack of success our society has had in drawing more member participation in our upcoming society staff elections. We are still looking for interested members willing to fill the offices of President and Vice President.

Helen Brasfield was selected to become our newest Board member. Congratulations Helen!

Mac Morgan suggested a donor ap-
the telescope. Joe said that it took him two years to build both the observatory and the telescope. Joe showed us various objects including Saturn, M15, and the Dumbell Nebula. I was impressed by the size of the image of the Dumbell in the 2-inch eyepiece and one could even see individual stars in it. Photos and the story of the telescope's construction can be found in an article by Joe in the October 1984 issue of Sky & Telescope.

After our observing session, we were treated to some of Lisette's homemade pumpkin pie and coffee, plus some of their experiences in France during World War II. Mac and I really enjoyed the Horvath's hospitality.

Wilfred Pedroncelli

BOOK REVIEW

The Glorious Constellations: History and Mythology

Whenever the weather doesn't permit observing or I'm too tired to lug out my telescope, I enjoy sitting in my recliner and reading a good astronomy book. Recently The Glorious Constellations: History and Mythology by Giuseppe Maria Sesti became available in this country. George Lovi reviewed the book in the March 1992 issue of Sky & Telescope and he neither gave it a thumbs up nor a thumbs down. In spite of Lovi's cool review, I had the opportunity to get a copy through the Astronomy Book Club and it is well worth having.

Sesti begins with a historical account of the evolution of human awareness of the sky; from the time of the Sumerians through the Renaissance. He indicates how various cultures used the Zodiac for practical purposes. He concentrates on the area around the Mediterranean since these cultures influenced our current mythological figures of the celestial sphere.

The centerpiece of the book is the fresco of the celestial sphere painted by an unknown artist in 1575 at the Villa Farnese in Caprarola, Italy. Sesti divides the fresco into 45 full page plates, each showing a constellation. On the facing page of each plate is a paragraph describing the constellation. Most of the paragraphs are from the classical works of Greek and Roman poets. Sesti then takes 49 of the current constellations and covers the history and mythology of each one. On the facing page for each constellation is a full page engraving of that constellation from Johannes Hevelius' Uranographia totum coelum stellatum (1690). I've always admired the engravings from Hevelius' star atlas and I've tried to find reprints with no success. Yet here in this book are 49 excellent reproductions.

Those amateur astronomers, who appreciate Italian art, Hevelius' art, or the history of our concept of the constellations, will find this an excellent book. It is an expensive book: $90 through the Astronomy Book Club or $95 from Sky Publishing Corporation. I fortunately had a bonus book certificate from the Club, so I was able to get it for about $57.

Wilfred Pedroncelli

ACCLAIMED STEPHEN HAWKING FILM COMES TO ALBUQUERQUE

A Brief History of Time will begin November 27 and run for at least one week, two weeks at the most, at The Guild Theatre (255-1848), 3405 Central, NE. The film centers on Hawking's life and works, especially his best-selling book of the same name, which has sold 5.5 million copies in 30 languages around the world since its 1988 publication.

Did time really have a beginning? Does it have a history? If so, can it be briefly told? And can it be filmed so that general audiences—not just the theoretical physicists who think about such things for a living—can understand and appreciate it? Yes! This joyous and brilliant work of visual art from accomplished film maker Errol Morris won two awards at this year's Sundance Film Festival, a major showcase for independent cinema, and has indeed crystallized Hawking's main issues of time, relativity, and quantum mechanics into a concise and accessible presentation full of information on black holes, which aren't completely black; on the direction of time, which isn't reversible despite Hawking's years of effort to prove the contrary; and on a fascinating bestiary that includes quarks, gluons, gravitons, virtual particles, wormholes, naked singularities, and other such exoticia.

Born on the anniversary of Galileo's death, Stephen Hawking occupies Newton's chair as Lucasian Professor of Mathematics at Cambridge University, where he heads a group of the world's brightest young cosmologists. Colleagues have called him the inheritor of Einstein's mantle, the leading theoretical physicist of our time, and one of the most imaginative and influential thinkers of our age. His pioneering studies of black holes have established him as a leader in the worldwide effort to combine quantum mechanics, which governs the extraordinarily tiny, with general relativity, which governs the extraordinarily vast, into a single unified quantum theory of gravity, a holy grail of physics that hopefully will sufficiently describe our Universe to answer finally our deepest questions, why is there something instead of nothing, how was the Universe created ex nihilo, and where is it going as it careens along its path from the big bang to a possible big crunch?

As you will see, Hawking's vision far outreaches the seemingly limited vantage point of the wheelchair in which his body has been trapped the last 26 years by ALS, Lou Gehrig's disease. He actually leads a spirited, transcendent, and even joyful life as his unflittered thought voyages into uncharted realms beyond the outer reaches of human astrophysical knowledge. Having totally lost his ability to speak as a result of a tracheostomy operation after catching pneumonia in 1985, he can now communicate and speak only by using a PC and voice synthesizer mounted on his motorized wheelchair. But what a story he has to tell!

Norman Van Gulick

ASTRONOMICAL CLASSIFIEDS

5 inch Astrophysics f/6 refractor, complete with Byers mount, 1.5" polar shaft. $2250 total—willing to break up into 3 parts. Call Larry @ 256-7611.

For Sale: 80mm Refractor, 1200mm f.f., equatorial mount, 5 eyepieces, diagonal, barlow, image erecter and sun projection screen. $250 Call Jack Dyer @ 281-4642
EL CIELO ESTRELLADO
Northern Delights

Perseus occupies a special place along the gossamer band of the Milky Way. As one might expect, the star-spangled fields in this portion of sky offer the deep-sky viewer a nice selection of galactic treats—planetary nebulae, multiple stars and open clusters of all types. In addition, galactic absorption is low enough in parts of this region that some fine galaxies can be observed as well. This accessible collection of galaxies even includes brighter members of a distant galaxy cluster. The diligent and well-equipped amateur can spend many pleasant nights exploring Perseus and its immediate surroundings; however, a huge "light bucket" is not required. In fact, a modest pair of binoculars can reveal many of the more spectacular celestial delights in this area.

Perseus owes a good part of its splendor to the three OB associations that lie within the constellation. The brightest of these stellar groupings is the Perseus association, also known as the Alpha Persei Moving Group. Perseus III contains approximately 100 stars scattered over a field of six square degrees. This field includes the prominent stars Alpha (α) and Delta (δ) Persei. At a distance of 170 parsecs, Perseus III is one of the nearest OB associations. Like other associations, this loose group of physically connected stars exhibits a common transverse motion coupled with radial expansion. Considering the effects of its radial motion, Hans Vehrenberg offers the intriguing thought that "4 million years ago Perseus III appeared as a star cluster resembling the Pleiades today" (Atlas of Deep-Sky Splendors, 4th edition, Sky Publishing Corp., p. 49). Interestingly, Alpha Per is neither an O nor B star. Rather, it is a spectral-type F5 supergiant. Over the years, this star has been given several names, including Mirfak (meaning "elbow") and Algenib (meaning "side"). The Alpha Persei group is an outstanding sight in binoculars—a collection of blue and white gems on a shimmering Milky Way backdrop.

Scanning northwest to the top of Perseus' elevated arm, one arrives at the famous Double Cluster (NGC 869 and NGC 884). In contrast to the “nearby” Alpha Persei association, this double grouping (Persei I) shines across a distance of 2300 parsecs. The appearance of the Double Cluster as a nebulus naked-eye object is due to the collective effect of a horde of O and B luminaries (65 in all). According to Julius Staal (The New Patterns in the Sky, McDonald and Woodward Publishing Co., Blacksburg, VA, 1988, p. 26), the Double Cluster was known to Tsung-k’ang, the fourth reigning monarch of the Hsia Dynasty of ancient China (earlier than 2100 B.C.). And yet, the pair is not included in Messier’s famous catalogue of nebulous objects. Binoculars afford a good view of NGC 869 and NGC 884, but a rich-field telescope is the ideal instrument for observing these objects. Several reddish, M-type supergiant stars contribute to the charm of the Double Cluster. The visual effect is striking—an extravagant display of stellar rubies and sapphires.

Not to be ignored are the two Messier objects in Perseus. The planetary nebula M76 (2000.0 Coordinates: R.A. 1 hr, 42.4', Dec. +51° 34') lies northwest of Phi (φ) Persei. At visual magnitude 10.1, M76 is one of the faintest objects in Messier's catalogue; however, this planetary bears magnification well. Use high power to bring out detail in the nebula. The elongated appearance of M76 has inspired several popular names, including the "Little Dumbbell," the "Barbell," and the "Cork Nebula." M76 lies 1100 parsecs away, approximately 4X more distant than the larger "Dumbbell Nebula" (M27) in Vulpecula. The moderately rich open cluster M34 (2 hr. 42.0', +42° 47') can be found a few degrees north of 12 Persei. This stellar group consists of 60-80 stars scattered over an angular diameter of 35'. Many observers have commented on noticeable geometric patterns in this cluster. What do you see?

Many of the interesting galaxies in this region are scattered around M34 and the prototype eclipsing variable Algol. NGC 891 (2 hr. 22.6', +42° 21') in Andromeda, NGC 1003 (2 hr. 39.3', +40° 52') and NGC 1023 (2 hr. 40.4', +39° 04') belong to a Triangulum Spur galaxy group that lies approximately 10 megaparsecs away. NGC 891 is a fine edge-on spiral galaxy (visual mag. 10.0). At visual mag. 9.2, NGC 1023 is easily visible in small aperture scopes. This system is listed as a Seyfert galaxy in Sky Catalogue 2000.0, Vol. 2. Another Seyfert galaxy, NGC 1275 (3 hr. 19.8', +41° 31'), lies a few degrees ENE of Algol. This object is the most prominent member of the rich Perseus I galaxy cluster (Abell 426). At mag. 11.6, NGC 1275 is certainly not the most visually impressive galaxy you'll ever see. The interest lies in the fact that this system shines so brightly across 80-100 megaparsecs of space as well as through the (normally optically dense) disk of our own galaxy. Users of 12" and larger telescopes can spot 30 or more additional galaxies in the Abell 426 cluster.

Wayne Trott
Reprinted with permission of The Albuquerque Astronomical Society
January 1993 Lunar Almanac

Albuquerque, NM
Time Zone: MST
Latitude: 35.08
Longitude: 106.65

MR = Moonrise, upper limb on horizon
TR = Transit, moon is due south and highest in the sky.
MS = Moonset, upper limb on horizon.
TR = Transit, sun is due south and also highest in the sky.
RA = Azimuth of rising moon.
TA = Altitude of moon at transit.
SA = Azimuth of setting moon.
Altitudes and azimuths are in degrees.

Moon phase is shown each day at 12:00 noon in the time zone indicated.

Calendar by Roy Sterner
Johns Hopkins Applied Physics Lab.
Laurel, MD 20707

January 1993 Solar Almanac

Albuquerque, NM
Time Zone: MST
Latitude: 35.08
Longitude: 106.65

MA = Morning astronomical twilight,
sun is at -18 degrees altitude.
MW = Morning nautical twilight,
sun is at -6 degrees altitude.
MC = Morning civil twilight,
sun is at -6 degrees altitude.
SR = Sunrise, upper limb on horizon.
EC = Evening civil twilight,
sun is at -18 degrees altitude.
EH = Evening nautical twilight,
sun is at -12 degrees altitude.
EA = Evening astronomical twilight,
sun is at -12 degrees altitude.

Times are rounded to nearest minute.

Calendar by Roy Sterner
Johns Hopkins Applied Physics Lab.
Laurel, MD 20707

January 1993
**DUES:** Please note the expiration date on your mailing label. If you are due for membership renewal, you may send your dues by mail to our newsletter return address with your check written out to **The Albuquerque Astronomical Society** or give your check to the Treasurer at the next meeting. Please include the membership application that is sent with your newsletter when it is time to renew. Discount subscriptions to *Sky and Telescope* ($20/12 issues), *Astronomy* ($16/12 issues) and *Odyssey* ($16.95/12 issues) magazines, and books through Sky Publishing Corporation are available at a reduced cost when purchased by The Albuquerque Astronomical Society members through our Society. Include any of the above magazine renewal mailers and subscription payment as part of your renewal check. Membership dues are $20.00 per year and $3.00 per additional family member. Membership Packets cost $1.75 each for new members or renewing members without the Packet. Contact the Treasurer for more information.

**NEWSLETTER ARTICLES:** Personal astronomical classified advertisements and articles can be submitted within 5 days after the latest Society meeting in order to make it into the next newsletter. Business card size advertisements for businesses related to astronomy are accepted with the same deadline as articles and personal classified advertisements. Rates for business card size ads are $10/ad per issue of the *Sidereal Times*, $7/ad per issue for six continuous issues, and $5/ad per issue for twelve continuous issues. The Newsletter Editor reserves the right to include and/or edit any article or personal classified or business card size advertisement. Computer files in ASCII format are preferred. Contact the Newsletter Editor for more information. Since August, 1989, the *Sidereal Times* has been typeset on an Atari Mega ST4 and an Atari SLM804 postscript-compatible laser printer, using Pagestream and Ultrascript.

**CHANGE OF ADDRESS:** Note that the *Sidereal Times* is mailed out at non-profit bulk rate. The newsletter will not be forwarded to your new address if you move! Please provide the Secretary with your new mailing address to insure that you receive your newsletter.

---

**The Albuquerque Astronomical Society**

P.O. Box 54072
Albuquerque, NM 87153
Address Correction Requested

---

**- Society Staff -**

<table>
<thead>
<tr>
<th>Board Members</th>
<th>821-8516 (home)</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Pellegino</td>
<td>293-7994 (home)</td>
</tr>
<tr>
<td>George Dulleck</td>
<td>299-0891 (home)</td>
</tr>
<tr>
<td>Bruce Levin</td>
<td>842-5281 (home)</td>
</tr>
<tr>
<td>Bob Stetz</td>
<td>296-3983 (home)</td>
</tr>
<tr>
<td>Mac Morgan</td>
<td>892-1596 (home)</td>
</tr>
<tr>
<td>Douglas Ray</td>
<td>268-4885 (home)</td>
</tr>
<tr>
<td>Art Jacobs</td>
<td>344-4985 (home)</td>
</tr>
<tr>
<td>Blair Johanson</td>
<td>296-9320 (home)</td>
</tr>
<tr>
<td>Wilfred Pedroncelli</td>
<td>344-7683 (home)</td>
</tr>
</tbody>
</table>

**Non-Board Members**

| Michael Fisk | 268-4885 (home) |
| Lee Mesibov  | 898-3725 (home) |
| John Hockemeier | 293-5133 (home) |
| Steve Williams | 898-4885 (home) |