

Detroit Astronomical Society Newsletter

42°29'20.3"
N Latitude

Southfield Rec. Cen.



83°14'32.7"
W Longitude

JANUARY/FEBRUARY/1992

FROM THE PRESIDENT

Well, as the year starts, we have some great lectures lined up for January and February. If you received a telescope recently or during Christmas and/or thinking of buying one, the January lecture will be an interesting lecture for you! We will also have various types of telescopes on display that you can ask questions about.

February brings us another interesting lecture by Professor Kauppila from Wayne State University. Professor Kauppila is a noted authority in the area of antimatter research and gamma ray astronomy. The lecture will be designed for the general audience but if you want to ask a technical question during the question and answer period, feel free to do so!

The thumb area astronomers are hosting another observing session tentatively scheduled for February 8, 1992 - more details will be announced at meetings and Skywatchers Hotline (837-0130).

We will continue to hold some observing sessions at Camp Dearborn but on a limited basis.

Clear Skies!

Jack Brisbin 455-7827

SCHEDULE OF EVENTS

- | | |
|---------------------|--|
| January 3, Friday | Board of Directors meeting, 7:00 pm. Elections - workshop activities, 8:15 pm. |
| January 17, Friday | 8:15 pm; General meeting and lecture: A Telescope, choosing and buying, by Pat Lowery, an instructor at the Highland Park Community College.
If you are thinking of buying a telescope or you have already bought a telescope.
This lecture is designed for the general public. Different types of telescopes will be displayed. |
| February 7, Friday | Board of Directors, 7:00 pm.
Workshop activities, 8:15 pm. |
| February 21, Friday | General meeting and lecture;
Antimatter and Gamma Ray Astronomy: by Professor Walter Kauppila, Physics and Astronomy Dept. Wayne State University.
Lecture is specially designed for a non-technical audience. General public welcome. Question and answer session follows. |

Both lectures are at the Southfield Civic Center Complex located on Evergreen between 10 and 11 mile roads in the Parks and Recreation bldg., room 224.

MEMBERSHIP INTEREST

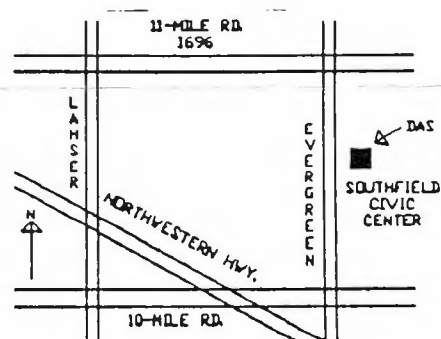
We had good attendance for the last lecture by Professor Jim Scherz on the subject of archeo-astronomy. His talk and the data he handed out was informative.

Members can gather a little data of their own on the next two lectures scheduled for January and February. The January issue of S & T has an article on some innovative ideas for telescopes while another article entitled "Subatomic Astronomy" provides some data regarding the February lecture.

With all the telescopes operating at present, we have an entire view of the electro-magnetic spectrum from gamma rays to radio waves and there are still a lot on the drawing boards that will eventually be put into operation to supplement those now in operation. We can look forward to seeing the results of some of this present and future research.

Whenever attending one of these lectures, check the room number on the directory inside the Parks and Recreation Building by the entrance because occasionally the lecture may be held in some room other than 224.

To the immediate right is a map of the location of the Southfield Civic Center. the Parks and Recreation Bldg. is at the northern end of the complex. Entrance to the complex is via the Civic Center Dr.



The same issue of S & T has also featured the occultations for the year. However, there may be only about a half a dozen star occultations visible in the Detroit area.

Anyone interested in occultations of stars by planets, minor planets and satellites can also refer to the "Handbook of the British Astronomical Society".

News item from NASA'S STAR publication:

A new reactor concept which has the potential for an extremely energetic rocket propulsion mission into interstellar space is planned. Fission fragments are directly used as the propellant by guiding them out of a very low density core using magnetic fields. The very high fission fragment velocities correspond to specific impulses of about 10 million meters per second. With 30% efficiency expected, the resulting impulse would be 3 million meters per second. Results of scientific feasibility assessments have been reported. Comparisons of engine performance potential and requirements for Alpha Centauri and TAU (thousand astronomical units) missions are presented.

A following article also informs us of research into advanced electric propulsion for rocket engines.

Editors note:

These news items are certainly looking well into the future of space travel and it could be accomplished within the next twenty five years. I certainly wish them good luck in this endeavor.

I'd like to add some additional information to the directions to Camp Dearborn. When heading north on Milford road to the General Motors Drive, that intersection is well lit and just inside the Milford City Limits. After the left turn, the entrance to the camp is just across the bridge over the Huron River which is about half ways between Milford road and Garner Road. Add this information to the map and directions supplied in the Nov-Dec newsletter.

Another news item from NASA courtesy of WASP editor Doug Goudie: On October 10, 1992, NASA will begin the most comprehensive search ever conducted for evidence of intelligent life elsewhere in the Universe. Over the past few decades, scientific opinion has increasingly supported the theory that complex life has evolved on planets orbiting other stars.

The SETI (search for extra terrestrial intelligence) project consists of two parts: a targeted search and a sky survey.

The SETI project is managed for NASA's Office of Space Science and Applications by the Ames Research Center.

OBSERVATIONAL HIGHLIGHTS

January

1 12UT Moon 5° S of Uranus
 2 02 Moon 1.9° N of Antares
 3 01 Moon 3° S of Mercury
 10 Moon 0.8° S of Mars
 4 Quadrantid Meteors peak*
 23 New Moon
 6 23 Moon 3° N of Saturn
 7 19 Venus 7° N of Antares
 23 Moon 0.2° N of Juno
 10 20 Mercury 0.6° N of Mars at m -0.3 + 1.4, also look for Ceres at m 9 within 1°
 15 21 Moon 0.65° S of Alcyone in the Pleiades
 16 16 Moon 8.1° N of Aldebaran
 19 21 Full Moon
 20 03 Mercury 0.6° S of Uranus at m -0.4 + 5.8
 10 Mars 0.06° N of M22
 21 11 Mercury 1.9° S of Neptune
 22 01 Moon 4.9° S of Regulus
 23 01 Moon 7° S of Jupiter
 25 19 Moon 3.2° S of Spica
 29 08 Moon 1.9° N of Antares
 20 Vesta stationary in R.A. at approx coor 11h58m+9.6°
 21 Mars 0.4° S of Uranus at m 1.4 + 5.8
 31 17 Moon 1.0° S of Venus

February

1 08UT Mars 1.5° S of Neptune, m 1.4+8
 09 Moon 0.9° N of Uranus
 12 Moon 0.03° S of Neptune
 13 Moon 1.5° N of Mars
 2 Groundhog Day
 3 19 New Moon
 6 Venus 0.18' S (o) Sag. m -4+3.9
 7 07 Venus 0.9° N of Uranus at m -4 + 5.8
 8 15 Venus 0.3° S of Neptune at m -4 + 8
 12 06 Moon 0.8° S of Pleiades
 13 01 Moon 8° N of Aldebaran
 16 02 Moon 8° S of Pollux
 18 08 Full Moon
 12 Moon 4.8° S of Regulus
 19 07 Moon 6° S of Jupiter
 22 Venus 0.9° N of Mars at m m 3.9 + 1.3
 22 04 Moon 3.1° S of Spica
 27 14 Venus 0.2' N of 19 Capricorni at m -3.9 + 5.9
 28 02 Pluto stationary at approx coor 15h35m-3.85° at m 14
 18 Moon 1.2° N of Uranus
 21 Moon 0.2° N of Neptune
 29 Leap Day, 1992 is a leap year
 02 Venus 0.1° N of Saturn at m -3.9 + .8, Mars is nearby
 19 Venus 0.2' N of Theta Capricorni at m -3.9 +4.2

* Quadrantid Meteors:

From Jan 1-6, have favorable viewing because of the new moon. Radiant coor 15h26m+50° in NE Bootes, for latitude 40° N radiant is low till about midnight, highest at 60° toward dawn. Medium speed at 41 km/s. Usually blue, fine long spreading silver trains. Rate averages out to about 100 p/hr.

Planets:

Mercury Visible in mornings between January 1 to 30. Visible in evenings after February 23.
 Venus Brilliant object in morning sky throughout January and February
 Mars In morning sky in Ophiuchus at beginning of January and throughout February.
 Jupiter In morning sky throughout January and February in Leo. On January 10 near Chi Leonis.

Saturn In evening sky until mid January. Reappears in morning sky after February 16.
 Uranus Too close to sun for observation until late January when it appears in morning sky in Sagittarius.
 Neptune Same as Uranus.

Multiple Stars:

♁ Aurigae is a triple system with the C component not gravitationally bound. A&B are 3.5" apart while AB and C are 52" apart. Magnitudes are 2.6, 7.1 and 10.6. Available spectrums are B9V+G2V. Coordinates are 6h0m+37°.

♁ Cassiopeiae is also a triple with the C component also being an optical. A & B are 3" apart while AB & C are 110" apart. Magnitudes are 5, 7.1 and 10.6. Available Spectrums are B1+B3. Coordinates are 23h59m+56°.

Short Period Variables:

RW Tauri has a period of 2.8 days and is an eclipsing binary. Magnitudes are 7.6 and 12. Spectrums are B8+K0V. Coordinates are 4h0m+28° which is 1° NW of 41 Tauri.

SV Tauri has a period of 2.2 days and is also an eclipsing binary. Magnitudes are 9.5 and 11. Spectrums are B9+A0. Coordinates are 5h49m+28°.

Red Stars:

TU Geminorum has a N3 spectrum and a variable magnitude from 7.5-8.4. Coordinates are 6h8m+26°.

R Leporis is "Hind's Crimson Star" with an intense smoky red color. Its spectrum is N6. Magnitude is variable from 5.5 to 10.5. Its coordinates are 4h57m-15° which is about 7° SSW of Rigel.

Color Stars:

♁ Cephei. Although this star has acquired its fame as the prototype variable of the Cepheids which are used for measuring distances, it is also a color contrast double star. The primary is an orange yellow while the companion is green blue. Spectrums are F5Ib+B7. Magnitudes are 3.6 and 6.3 and the separation is 41". A third companion of 13 magnitude is only 21" apart but is not a part of the system. Coordinates are 22h27m+58°.

♁ 2883 Cephei is a yellow green and orange color. The only available spectrum is dF2. Magnitudes are 6 and 8. Coordinates are 22h10m+70°.

M35 in Gemini is a rich galactic cluster of stars that appear bluish on a photograph of same, (refer to Sanford's Obs. the Const., p99) even though there is a good mix of B,G and K stars. Its angular diameter is 30' with about 120 stars that average out to magnitude 8 while its total magnitude is 5.5. Coordinates are 6h6m+24°. About ½° SW of M35 is the rich little galactic cluster NGC 2158 but this will require a much larger scope to resolve.

Notice directly below M35 the beautiful red nebula with an 8 magnitude star in its center. This is NGC 2174 in the constellation of Orion. Its diameter is 25' and it is about 3.5° south of M35.

The two stars in the field are ♁ Geminorum which is about 5.5° SE of M35 and ♁ Geminorum which is about 3° W of ♁ Geminorum. The small arced red nebula NEE of ♁ Geminorum appears to have been ejected from that star (a supernova remnant?).

In Canis Major, there is the open cluster M41 which is 35' in diameter and contains about 100 stars. Its magnitude is 4.5 and visible to the naked eye. Easily located 4° S of Sirius at coordinates 6h45m-21°. This cluster also has a mix of blue giant, yellow and red stars.

Sources: Ast. Almanac, USNO; The Const., L. Motz & C. Nathanson; Ast. Calendar, G. Ottewell; Burnhams Handbooks and Obs. the Const. by J. Sanford.

DETROIT ASTRONOMICAL SOCIETY
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Membership dues are used to finance the SKYWATCHERS HOTLINE and
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