

sjaa

Jack M. Zeiders
Editor
292-0107

february '77

WHAT'S GOING ON IN THE CLUB:

February 4: Olinder Center, 7:30 P.M. General Membership Meeting

This month will complete the second of Allan Meyers two part presentation on "DEMON STARS". Those of you who were at last months meeting may wish to know that Mr. Matthews is home from the hospital and suffers no permanent damage. I'm sure we all wish him well.

February 11: Board Meeting, Allen Meyer's 8:00 P.M.

February 12: Los Gatos Red Cross, 8:00 P.M.

If there is enough interest perhaps the members who have made mirrors and built telescopes would be willing to help those who would like to.

February 19: Henry Coe State Park, dusk-dawn, F.E.A.O.

February 26: Los Gatos Red Cross, 8:00 P.M.

March 4: Olinder Center, 7:30 P.M. General Membership Meeting

Gerry Rattley will present chart 4 of the Scalnate Pleiso field set for the observationally oriented members. This will also be the spring equipment nite. If you intend to bring something please inform Gerry ahead of time.

March 9: Los Gatos Red Cross, 8:00 P.M.

March 11: Board Meeting, Dr. Gregory's home, 8:00 P.M.
5480 Fairway Dr. San Jose

March 12: Los Gatos Red Cross, 8:00 P.M.

March 19: F.E.A.O. Location ?

March 23: Los Gatos Red Cross, 8:00 P.M.

Dr. Gregory is currently teaching two nite classes in astronomy. One is oriented for the novice, the newer members which are as yet unfamiliar with the constellations and telescopes may well enjoy attending. The second class is somewhat more for the experienced amateur that could be interested in astro-photography. I attended the class several years ago and found it very helpfull.

-For Your Information-

The A.A.N.C. has elected new officers, they are; Doug Berger president, Frank Miller vice president, Deni Frerichs secretery, and Debbie Moore treasurer.

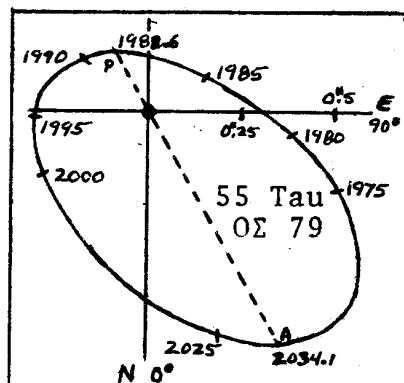
*newz notz provided by Ed Schell

- The age of the universe extended to 20 billion years.
 - Radio waves emitted by the planet Uranus were detected.
 - X-ray pulses were discovered coming from globular clusters.
 - Methane ice detected on Pluto. Potassium detected in clouds of Io.
 - The Crab nebula pulsar emits coherent gamma-ray radiation.
- Sceince News, Year-end review
Martin Leventhal, Bell Laboratories, in
Sceince News, Dec. 18

The Orbits of Visual Binary Stars . . contributed by Gerald W. Rattley

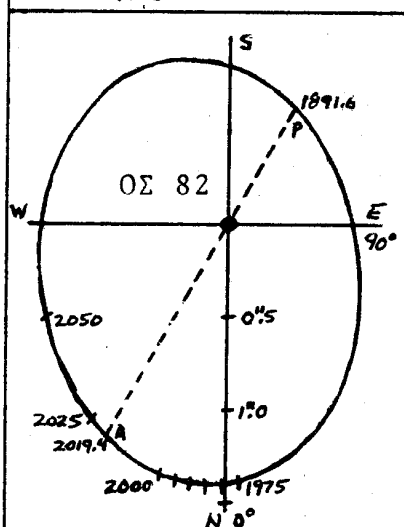
Elements of the orbits as listed in the Third Catalogue of the Orbits of Visual Binary Stars by W. S. Finsen and C. E. Worley, 1970.

star name	1975 pos RA dec	P yrs	T yr	e	a "	i °	ω °	Ω °
55 Tau	04 18.4 +16 28	91.044	1897.58	0.604	0.561	52.86	131.28	64.28
OΣ 82	04 21.3 +15 00	255.5	1891.6	0.29	1.185	138.0	230.3	12.0
Hu1080	04 27.5 +16 06	40.4	1958.2	0.41	0.425	92.6	297.4	77.7
80 Tau	04 28.7 +15 35	170	1890	0.82	1.029	110.5	161.8	10.6



Each of the binary systems in this article is a member of the Hyades open star cluster in Taurus. 55 Tauri; OΣ 79 (ADS 3135); has component magnitudes of 7.2 and 8.3 with a system spectra of F6. The orbit is a reliable one computed by St. Wierzbinski in 1958. Presently the system is closing to a minimum of 0".15 in 1986 and will pass periastron in 1988. The next maximum, 0".77 is not due until 2045. This system is 47 parsecs distant from the Sun and has a true mean separation in orbit of 26 a.u. Ephemeris for 55 Tauri:

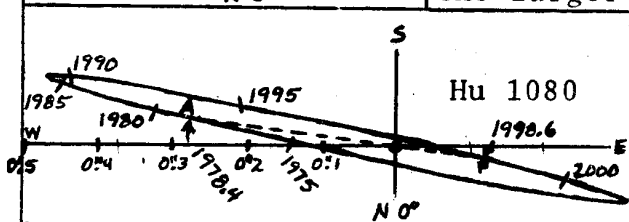
1975	67.5	0".55	1985	122.0	0".19	1995	272.1	0".30
1980	81.0	0.39	1990	230.7	0.22	2000	301.9	0.33



OΣ 82 (ADS 3169) in Taurus; has component magnitudes of 7.4 and 8.6 with a system spectra of F8. The orbit is a preliminary one computed by W. D. Heintz in 1969. According to this orbit, the system is approaching a maximum of 1".41 in 1987 after which it will pass apastron in 2019. At a distance of 43 parsecs from the Sun the true mean separation in orbit is 51 a.u. The primary is a spectroscopic binary with a period of 4 days, making this a triple system. Ephemeris for OΣ82:

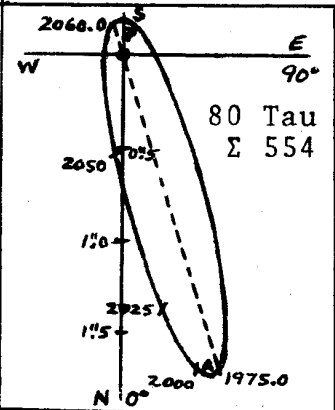
1975	2.8	1".39	1985	355.7	1".41	1995	348.6	1".40
1980	359.2	1.40	1990	352.1	1.41	2000	345.0	1.39

Hu 1080 (ADS 3248) in Taurus; has component magnitudes of 7.2 and 7.5 with a system spectra of F8. The orbit is a reliable one by W. H. Van Den Bos in 1956. This is a close rapid binary with a highly inclined orbit. There are two maxima in each revolution, with the larger of the two maxima, 0".48, next due to occur



in 1987. This system is 38½ parsecs from the Sun and has a true mean separation in orbit of 16 a.u. Ephemeris for Hu 1080:

1975	268.6	0".14	1990	257.9	0".45
1980	261.6	0.33	1995	255.0	0.22
1985	259.5	0.46	2000	79.3	0.23



80 Tauri; Σ 554 (ADS 3264); has component magnitudes of 5.9 and 7.9 with the system spectra being A6n. The orbit is a preliminary one computed by G. P. Kuiper in 1937. According to this orbit, apastron passage took place in 1975 and a maximum, 1".80, is due in 1983, after which the companion will close to a minimum of 0".1 in 2057. This system is about 41 parsecs distant from the Sun and has a true mean separation in orbit of about 43 a.u. Ephemeris for 80 Tauri:

1975	17.2	1".79	1985	15.8	1".80	1995	14.4	1".77
1980	16.5	1.80	1990	15.1	1.79	2000	13.7	1.74

occulting zone

LUNAR OCCULTATIONS

Feb	PST*	Mag	Ill	El	CA	PA	Star, Notes
21	8:35:18D	8.6	16+	12	62S	96	
22	8:49:01D	8.6	23+	20	52S	109	SAO092767
23	9:09:59D	8.6	32+	27	41N	25	
	9:25:09D	8.7	32+	24	54S	110	
	10:42:24D	7.8	33+	9	30S	134	
24	6:24:13D	7.8	41+	65	75N	62	Twilight
	8:45:44D	6.3	41+	42	87N	74	SAO093536
	9:11:40D	8.3	41+	36	47S	120	
	11:03:55D	8.1	42+	15	51S	117	
25	6:01:20D	4.2	50+	71	83N	74	68 Tau At sunset
	7:35:45R			63-	78N	273	
	8:59:05D	7.1	51+	49	64S	107	
	11:24:07D	6.2	52+	21	76N	67	ADS3297
26	0:04:23D	7.8	52+	13	41S	130	A.M. time
26	6:28:51D	7.5	60+	70	48S	126	Twilight
	11:03:32D	7.5	61+	34	74N	69	
27	8:46:06D	6.4	69+	67	20S	159	
	11:27:32D	6.8	70+	39	67N	67	
28	2:28:02D	6.5	71+	5	49S	131	A.M. time
March							
3	0:56:37D	5.7	93+	46	78S	108	60 Cnc A.M. time
6	1:59:02R	4.5	99-	49	64N	338	92 Leo A.M. time

* Times are PM except as noted.

Double star notes:

68 Taurii: 4.3, 8.3 mags, 1.5" @ 325 deg. The secondary will be lost in the bright sky at disappearance, and in the glare of the bright limb at reappearance. Sorry I mentioned it. Primary will be nice.
 ADS3297: 7.0, 7.1 mags, 3" @ 277 deg. This step will take 5 sec. or so. This is bright enough to see in small scopes, don't miss a splendid sight.
 SAO stars: I have no data on these visual double stars.

GREAT RED SPOT OF JUPITER

The spot has faded to near-invisibility. It can be found by looking for a sharp dark belt north-preceding. Looking west to east, the belt narrows and curves northward around the spot. A fine sight during good seeing. The spot appears as a faint pink cloud.

The white spot continues; look for it as a gap or dent in the dark belt in which it lies.

Watch for Mercury 0.1 deg. S. of Mars Feb 12 morning. Uranus is not occulted by the moon in our area (Feb. 10).

Jim Van Nuland

Red Spot times				
da	mo	d	h	m
M	2	7	7	41 PM
W	2	9	9	20 PM
F	2	11	10	59 PM
Sa	2	12	6	51 PM
M	2	14	8	30 PM
W	2	16	10	9 PM
Sa	2	19	7	39 PM
M	2	21	9	18 PM
Sa	2	26	8	28 PM
M	2	28	10	7 PM
Th	3	3	7	38 PM
White spot				
da	mo	d	h	m
Su	2	6	7	43 PM
Tu	2	8	9	20 PM
Th	2	10	10	57 PM
F	2	11	6	48 PM
Su	2	13	8	24 PM
Tu	2	15	10	1 PM
F	2	18	7	29 PM
Su	2	20	9	6 PM
Tu	2	22	10	43 PM
F	2	25	8	10 PM
Su	2	27	9	47 PM
W	3	2	7	15 PM
F	3	4	8	52 PM