Late Feb., 1977

QUEEN'S UNIVERSITY ASTRONOMY CLUB
AND THE
ROYAL ASTRONOMICAL SOCIETY OF CANADA, KINGSTON

still T-shirts and Handbooks available!

NEWSLETTER

The first Astro. column in the "Whig-Standard" will be on Mar. 19. Watch for it!

NEXT MEETING: TUES. MAR. 1, 1977 8:00 pm
Rm. 220 ELLIS HALL

THE 1977 GENERAL ~~MEETING~~ ASSEMBLY of the R.A.S.C. will be held in Toronto July 1 and 2. This note is from an organisor:

"There will be two [papers] sessions, on Friday and Saturday morning, ..., Original papers on all aspects of astronomy - historical, theoretical, observational and instrumental - will be considered for inclusion in the sessions." Any member interested in presenting a paper at the General Assembly should see Sue McDougall for details on how to submit it.

THE SKY FOR MARCH

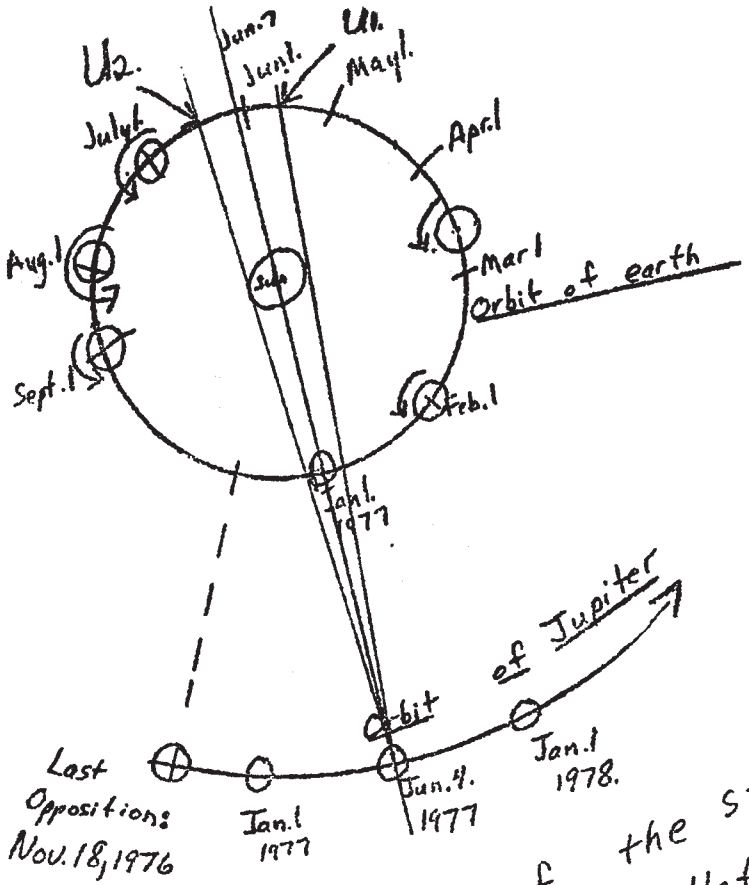
	d.	h.	m	
Thurs	3	04		Saturn 6° N. of Moon
Sat.	5	12	13	Full Moon
Sun.	6			Mercury at greatest hel. lat. S.
Tues.	8	18		Moon at perigee (366,450 km)
Wed.	9	10		Uranus 1° S. of Moon. Occn (not visible h
Thurs.	10	15	55	Appulse: SAO 158687 + Uranus
Fri.	11	02		Pallas stationary
		21		Neptune 3° S. of Moon
Sat.	12	06	35	Last Quater Moon
Mon.	14.	14		Venus stationary

"Rationalizing" The Position Of A Planet For The Year – Jupiter.

How often have you read in the Handbook that a certain planet is at conjunction or opposition on a certain date, that it is very bright or less bright than usual, or that it "moves into the morning sky", without any of these statements having very much real effect upon your understanding of where the planet is in respect to the earth? Of course, we know what "conjunction," "syzygy," "opposition", "greatest eastern (and western) elongation" and such terms mean, but how often do we sit down to explain to ourselves in diagramatic terms (i.e. to do what I call "rationalizing") what is the orbit of that planet, and the earth's, over the course of a year?

I have done it for most of the planets for this year, and in future newsletters, hoping that it may be helpful for some people, I may "write up" my "sketchings" for some of the planets. For the present, I would like to consider Jupiter. Turn, please, to the accompanying sketch on the next page.

We can see that Jupiter in its orbit, taking 11.86 years to complete it, appears to move very slowly across the sky. We can see why now in the early part of 1977, being roughly in the opposite direction of the sky from the sun, it is easy to see most of the night. The direction of the earth's rotation is shown, and notice that, if you put yourself on one spot on the rotating earth, you can



A ROUGH DIAGRAM OF THE RELATIVE POSITIONS OF THE EARTH AND JUPITER IN 1977.

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why, as the year advances, it is further and further above the horizon as the sun sets each day. By April it is appearing more and more in the direction of the sun and it will be setting within a few hours after the sun, as we picture the earth rotating. On June 4th, it is in conjunction with the sun and the diagram shows why Jupiter is <u>unseen</u> in the sky from mid-May until mid-June (the positions marked U1 and U2) — it is too close to the direction of the sun to be seen. If again from July until the end of the year, we picture ourselves on the rotating earth in the diagram, we see why Jupiter appears above the horizon, at first only a short period of time, and later a longer period of time before the sun appears above the horizon. Therefore it is seen in the morning sky in July and August and later it "rises" earlier and earlier.

Under The Dome

On the occasion of our last centre meeting on the feast of the Lupercal (Feb. 15, to some people) a small group of very dedicated (but sometimes misguided) observers took to the dome and roof of Ellis Hall. (One reason that could be given for using the word "misguided" could be that the drive did not work, and so the telescope was unguided and therefore... oh! you finish the conclusion). Anyway, it seemed that the only two things working were the dome and the electric lights in the surrounding city. The group saw such objects as Venus, Jupiter, Saturn, Praesepe (M44), M42, and KGH. How many of you are not quite sure whether all of these are truly celestial objects?

Cold Night Contest.

Keep those entries coming in. Remember the deadline is noon on the Nones of March

The Compendium Of Esoteric Facts Columns

This week in our column we ask you:

Did you know that:

Halley's Comet, predicted next to pass perihelion point, on its 25th recorded apparition, on Feb. 9th 1986, may actually be seen by professional astronomers long before that date. Using the very best telescopes in the world it may be possible for it to be seen several years before that date. Halley's Comet is expected to reach 21st magnitude by January, 1982 and slowly become brighter until it is a second magnitude object on the date of perihelion passage.

Instruments Of Time.

I have secured and presently am in the process of assembling the set of astronomical instruments called the Trilogy Of Time set which was advertised and favourably reviewed in Sky and Telescope January, 1977. One is a perpetual calendar; one is a sundial; and the most interesting is actually two-in-one — (1) a clinometer or altitude scale and (2) a horologium nocta or night-time clock based on the sighting of the position of the circumpolar constellations. They are authentic reproductions and