JOURNAL OF THE ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

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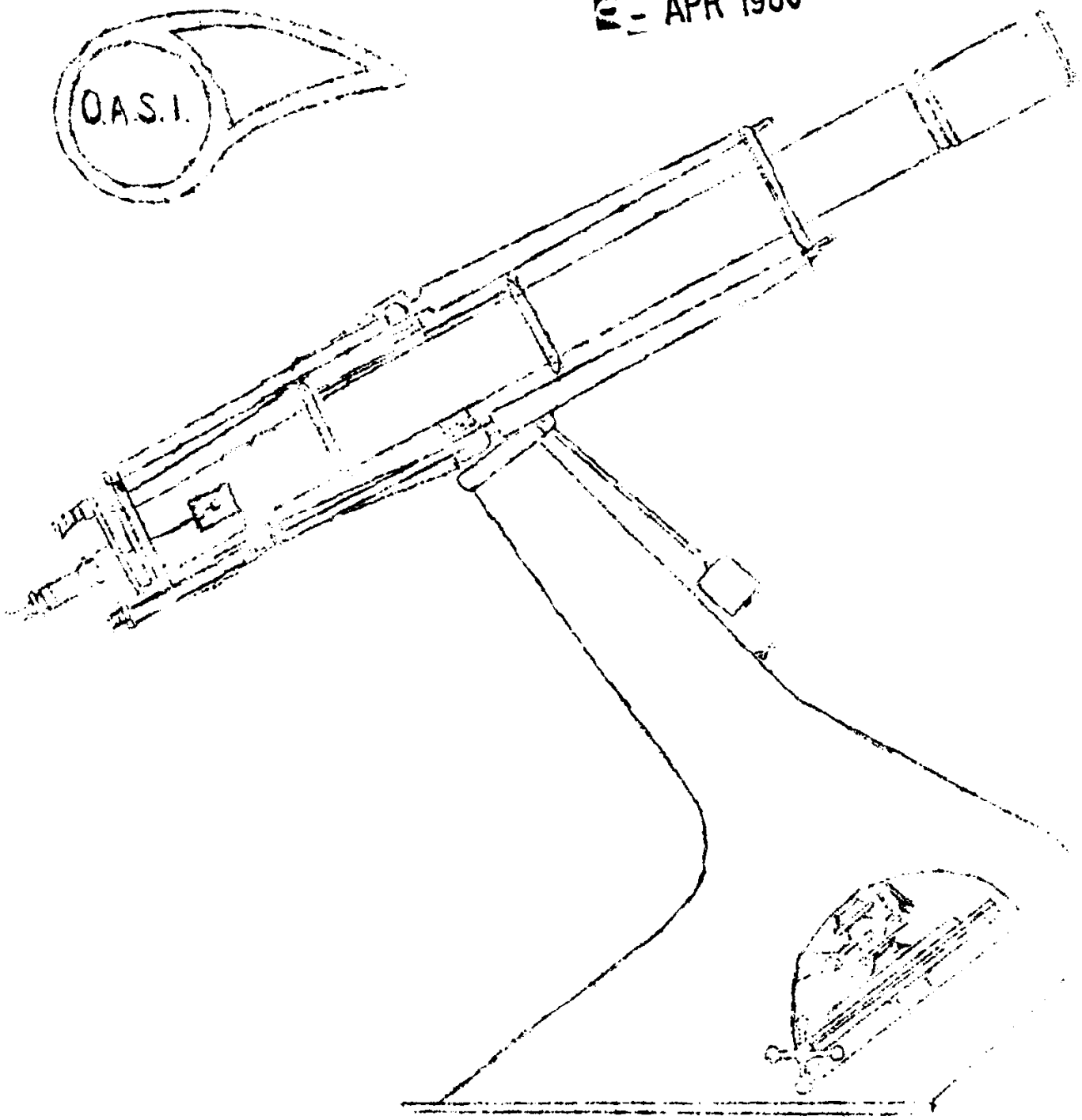

The Orwell Park 16 inch Astronomical Telescope
at Nacton near Ipswich.

THE NIGHT SKY AS SEEN FROM CROWELL PARK IN APRIL:

The zenith area is occupied by the Plough during late evenings this month. To the east, Hercules is now fully visible before mid-night, and Bootes is well up in the sky. Between these two constellations lies Corona Borealis, the small but very characteristic Northern Crown. Two other constellations, Canes Venatici and Coma Berenices, can be found on the meridian at mid-night at the beginning of the month, directly below Ursa Major. Also visible to the south are Virgo and Leo, and below them, Corvus and Crater. Sweeping below all of these constellations is Hydra, fully visible this month. To the west, Cancer, Gemini and Auriga are still prominent.

THE SUN.

Sunrise is at 05h 40m at the beginning of the month, changing to 04h 50m at month-end. Sunset changes from 18h 30m to 19h 30m. The Sun moves from Pisces to Aries during the month.

THE MOON - Phases:

Last Quarter	8d 12h 06m	First Quarter	22d 02h 59m
New Moon	15d 03h 46m	Full Moon	30d 07h 35m

Occultations:

Star	Phase	Mag.	Times		
626	D	6.4	17d	20h	03.1m
943	D	6.2	19	20	58.5
1207	D	5.8	21	19	49.2
1336	D	5.2	22	22	43.2
*1448	D	6.7	24	01	29.8
1547	D	3.8	24	22	06.2

D = Disappearance. Stars listed according to Zodiacal Catalog (ZC) numbers. * Denotes double star

THE PLANETS:

MERCURY is a morning star reaching greatest elongation of 28° on the 2nd, at mag. +0.6, but rising only 40 minutes before the Sun.

VENUS is an evening star reaching greatest elongation of 45° on the 5th, at mag. -4.0, setting 4¼ hours after the Sun.

MARS, in Leo, reaches it's stationary point on the 7th, after which it's motion will be direct. Mars's magnitude decreases from +0.3 to -0.4 during the month.

JUPITER, also in Leo, is at mag. -1.9, and like Mars, is visible until the early hours of the morning. It is stationary on the 26th, when it reverts back to direct motion.

SATURN, the third planetary guest of Leo, and also visible for most of the night, is at mag. +0.9.

Source: B.A.A. Handbook 1980. All times are U.T.
(= B.S.T. minus 1 hour)

FROM OTHER JOURNALS:

Feeling Groovy - Two astronomers from Cornell University's Laboratory for Planetary Studies, P. Thomas and J. Veverka, have predicted that up to a quarter of all asteroids smaller than 100km in diameter will be found to have their surface covered with long trough-like grooves. Their prediction is the result of the analysis of the grooves found on Phobos by Viking Orbiter I. These grooves, 150 metres wide and 15metres deep, were initially thought to be caused by tidal stresses pulling Phobos apart, or that they were formed when Mars captured it. Later investigations then showed that they were associated with Stickney, the largest crater on the Martian satellite, and it is now believed that they were formed by expanding on this theory, the astronomers have speculated about the effects that impacts of various magnitudes would have on asteroids. Below a certain impact strength a simple crater would be formed, and above it, grooves would result.

The actual appearance of the grooves will depend on the thickness of the asteroids' regolith (the loose material between the surface and the bed-rock). The metallic M-type asteroids, thought to have very little regolith, will have sharp fractures, while the stony S-type asteroids, with a deep regolith, will have rounded fractures, caused by the regolith material draining into them.

- New Scientist

ARTICLES TO READ:

'Cosmic Disaster Shock' - New Scientist 6th March, 1980.

Written by Dr. John Gribbin, who sets out to show that scientific fact is continually ignored in unravelling the mysteries of cosmic catastrophies arriving at Earth.(e.g. Tunguska, and the recent throry that an asteroid impact wiped out the dinosaurs).

'The Age of the Universe' - New Scientist 13th March, 1980.

Also written by Dr. Gribbin, who in this article describes how the age of the universe has been arrived at (between 10 and 20 billion years), and how the latest advances in observing distant galaxies could tie this figure down more accurately.

METEOR NOTES:

This month sees one of the best known meteor showers, the APRIL LYRIDS with the normal limits of this shower falling between April 19th to the 24th and the maximum being on the 22nd. The Zenith Hourly Rating is about 12. This shower producers bright blue meteors.

The Moon for this shower will be a crescent one setting in the late evening so it should not interfere with the observing of this year's shower. As twilight is now quite late we will start this meteor count at 9.30p.m.

Meet OUTSIDE the 'Levington Ship' public house at 9.30 p.m. irrespective of weather conditions. As we now use a different site for observing the meteor showers please be on time otherwise you will not be able to find us and join us in this meteor count on SATURDAY 19th APRIL.

See you on Saturday 19th April at 9.30p.m. outside the Levington Ship.

David Barnard,
[redacted],
Ipswich,
Telephone Ipswich [redacted].

NOTABLE ASTRONOMICAL ANNIVERSARIES

GIOVANNI SCHIAPARELLI

report by Roy Gooding.

Giovannia Schiaparelli was born on March 14th 1835 at Savigliano, Italy. He gained a degree from Turin University in 1854 and on leaving university he went to study under Encke at the Berlin Observatory and then went on to study under Struve (see April 1979 Journal) at Pulkove Observatory in Russia in 1859.

Five years later Schiaparelli was appointed Director of Milan Observatory and maintained this position until his retirement in 1900. The majority of his work was to do with the solar system. John Adams, an English astronomer, had calculated the orbit of the Leonid meteor swarm, demonstating that it was comet-like. During the 1860's Schiaparelli discovered a connection between the Comet 1862III and the Perseid meteor shower.

In 1877 Mars was at a favourable opposition being at it's maximum distance of 35,000,000 miles. From observations at this and subsequent oppositions, Schiaparelli inadvertently instigated one of the biggest astronomical hoaxes of all time. Through careful micrometer measurements he convinced himself that some features on Mars included straight lines, arranged into a complicated pattern. Reports he had published called these lines 'canals' which translated into English means 'channels'. Unfortunately the word was mistranslated into 'canal'. The idea of canals implies that they were artificial structures and that life existed on Mars. This was given much publicity in the popular press of the time. Several astronomers carried the idea of canals on Mars far beyond Schiaparelli's original drawings. The most notable exponent of the canals of Mars, was Percival Lowell, who claimed to have observed over 500 of them!! These canals were probably an optical illusion together with an over imaginative mind. Many other astronomers of the time reported seeing no such markings.

Schiaparelli retired from the Milan Observatory in 1900. Up until his death in 1910 he compiled an extensive survey of early astronomical history concentrating in particular, on Babylonian astronomy.

THE AURORA BOREALIS DISPLAY OF 1938.

A few weeks ago I was giving a talk to the Ipswich and District Natural History Society and the subject of the Aurora Borealis came up and two of their members, Mr. Walker and Mr. Maxim recalled that they had seen this sky phenomenon in Ipswich just before the Great War and it prompted me into investigating various reports made during that period and thought that you might find it of interest and perhaps hope that we will be able to this this Aurora this far south in not the to far distant future:-

The most magnificent sky spectable of all if the Aurora Borealis, sometimes called the Northern Lights. It is vary rarely seen in southern Europe, but is a phenomenon more common to the northern climates, and the farther north one goes the more brilliant it becomes. It is seen not infrequently in Scotland, and every one of the present generation will remember the outstanding display, such as has probably never before seen in Britain that occurred during the night of January 25th-26th 1938. This was the greatest auroral display within living memory, and was seen over nearly the whole of Europe, and even far south as Madeira and Bemuda, which was unprecedented. The Aurora in this instance was accompanied by a magnetic storm of unusual intensity, and was first seen in south-east England about 6.15 in the evening, and continued until 1a.m. Meteorologists noted that the chief features of this display were the continual and rapid changes, the variety of auroral types, and the splendour of the colour effects.

Just before 7 p.m. there was a developement of brilliant red rays, which people all over Britain at first mistook for some great fire. Later, these red rays reached a great altitude above the horizon, radiating from all parts of the auroral arc. At another period of the evening - which was starlit nearly all the time - the red colour gave place to a greenish-white and greenish-yellow, which brightened the heavens almost like dawn.

The rays showed a remarkable variety of length, shape and width, and changed in form from defined isolated rays to great bundles of different colours. Shortly after 7 p.m. an even

more spectacular phenomenon occurred. From the upper edge of the lower arc there suddenly flashed out in quick succession from east to west electrical discharges similar to brush charges, which continued for a quarter of an hour, culminating in a sort of mighty-flame-lit canopy that hung nearly vertically from the heavens like a huge curtain.

The height to which the aurora extended has never been established although it is known that it is rarely less than fifty miles, and at times several hundred miles upwards

There is no way of predicting the occurrance of such displays, which will appear suddenly for no particular reason, but it has been noticed that on the whole they tend to appear during periods of high sun spot activity.

R.M. Cheesman.

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WANTED:

Star Globe (Admiralty pattern) in box approximately 10" x 10" x 10". Any reasonable price paid, please contact

Mr. H.J. Marcoolyn

[redacted]

Woodbridge, Suffolk.

Telephone SHOTTISHAM [redacted]

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MAY'S JOURNAL:

If you have any articles for publication in the May Journal please send them to Mr. R.M. Cheesman [redacted], [redacted], WEST HANNINGFIELD, Chelmsford, Essex to reach him no later than Monday 21st April.

ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

MEETINGS FOR APRIL.

AT OBSERVATORY, Orwell Park School, Nacton near Ipswich.

TUESDAYS: from 7 p.m. Solar, Lunar & Planetary Sections:

Directors: Mr. J. Hood, [redacted], Ipswich.
and Mr. J. Ranson, [redacted], Ipswich
Tel. Ipswich [redacted]
Mr. M. Barritt, [redacted], Ipswich

April 1st 8th 15th 22nd & 29th

WEDNESDAYS: from 8p.m. Nebulae & Faint Objects Section.

Directors: Mr. D. Payne [redacted],
Wickham Market, Tel Wickham Market [redacted]
and Mr. M. Cook, [redacted], Ipswich
Tel. Ipswich [redacted]

April 2nd 9th 23rd & 30th

WEDNESDAY 16th April at 7.30pm.
Visit to Observatory by the 'Watch' Society.

FRIDAY: 18th April at 7.30p.m.
Visit to Observatory by Ipswich 'Holiday Club'

SATURDAYS: from 8p.m. General Observations Section
Directors: Mr. M. Barriskill, [redacted], Ipswich.
and Mr. R. Adams, [redacted], Ipswich
Tel. Ipswich [redacted]

April 5th and 26th.

SATURDAY 12th April at 8p.m.
Visit to Observatory by Chelmsford Astronomical Society.
(weather permitting)

SATURDAY 19th April. Meteor Section. April Lyrids
Director Mr. D. Barnard, [redacted], Ipswich
Telephone Ipswich [redacted]
Meet OUTSIDE the 'Levington Ship public House
at 9.30p.m. irrespective of weather