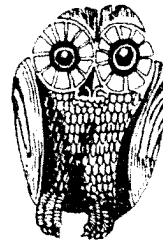


XVIIIth GENERAL ASSEMBLY

ASTROKOSMOS



August 23
Number 7

Patras: Greece 1982

Le 23 Août
Numéro 7

Editorial Office: T-block

Editor: ARCHIE E. ROY

Telephone: 991465

Major international observatory to open next year

Nigel Henbest, Press Consultant, Royal Greenwich Observatory

On a high peak in the Canary Islands, workmen and skilled technicians are putting the finishing touches to the world's newest major observatory — the Observatorio del Roque de los Muchachos. The first large telescopes will open their eyes to the sky next year. By the end of 1983, they will be operated by remote control from over 2000 kilometres away. And in five years' time, the world's third-largest single-mirror optical telescope will join them. Although this 4.2 metre telescope is rather smaller than the Soviet 6 metre and the American 5 metre at Palomar Observatory, the clear dark skies of La Palma will make it their equal in our joint quest to understand the Universe.

The observatory is perched on the lip of the great extinct volcanic caldera which forms the mass of La Palma, most westerly of the Canary Islands (and confusingly similar in name to the town of Las Palmas, which is on another island). The rugged mountain towers to 2,400 metres, peaking in a distinct formation of small rock pillars — the Muchachos, or «buddies». By choosing the name Observatorio del Roque de los Muchachos, the Spanish are not only following the tradition of naming an observatory after its mountain perch, but also symbolising the observatory's theme of international collaboration. Three years ago, Spain, the United Kingdom, Sweden and Denmark signed the initial agreement, and the observatory has grown speedily since, with Dutch and Irish involvement in the largest group of telescopes and other European countries expressing interest in providing more.

The Spanish are providing the essential services to the observatory, including electrical power and telephone lines. They are blasting and bulldozing a new road from the main town of Santa Cruz to the mountain peak, and are also building there the Residencia for astronomers and other staff to sleep on their few hours away from the telescopes. In return, Spanish astronomers will have 20 per cent of the observing time on the telescopes at the observatory.

The countries participating have a variety of plans to use this superb viewpoint on the heavens. Here I shall concentrate on those which involve the United Kingdom. The Royal Greenwich Observatory will be running these for use by the whole community of British astronomers and their international collaborators.

Together with the Danes, the British are building on La Palma the most advanced ground-based telescope designed specifically for measuring star positions. The Carlsberg Automatic Transit Circle is basically a telescope swinging up and down the north-south line — in the centuries-old tradition of transit instruments. But no astronomer will have to peer through this telescope and wait poised to record the exact moment a star crosses a fine crosswire. The Carlsberg instrument is fully automated. As well as measuring the moment of meridian passage impersonally, it can be programmed with a list of stars and spend all

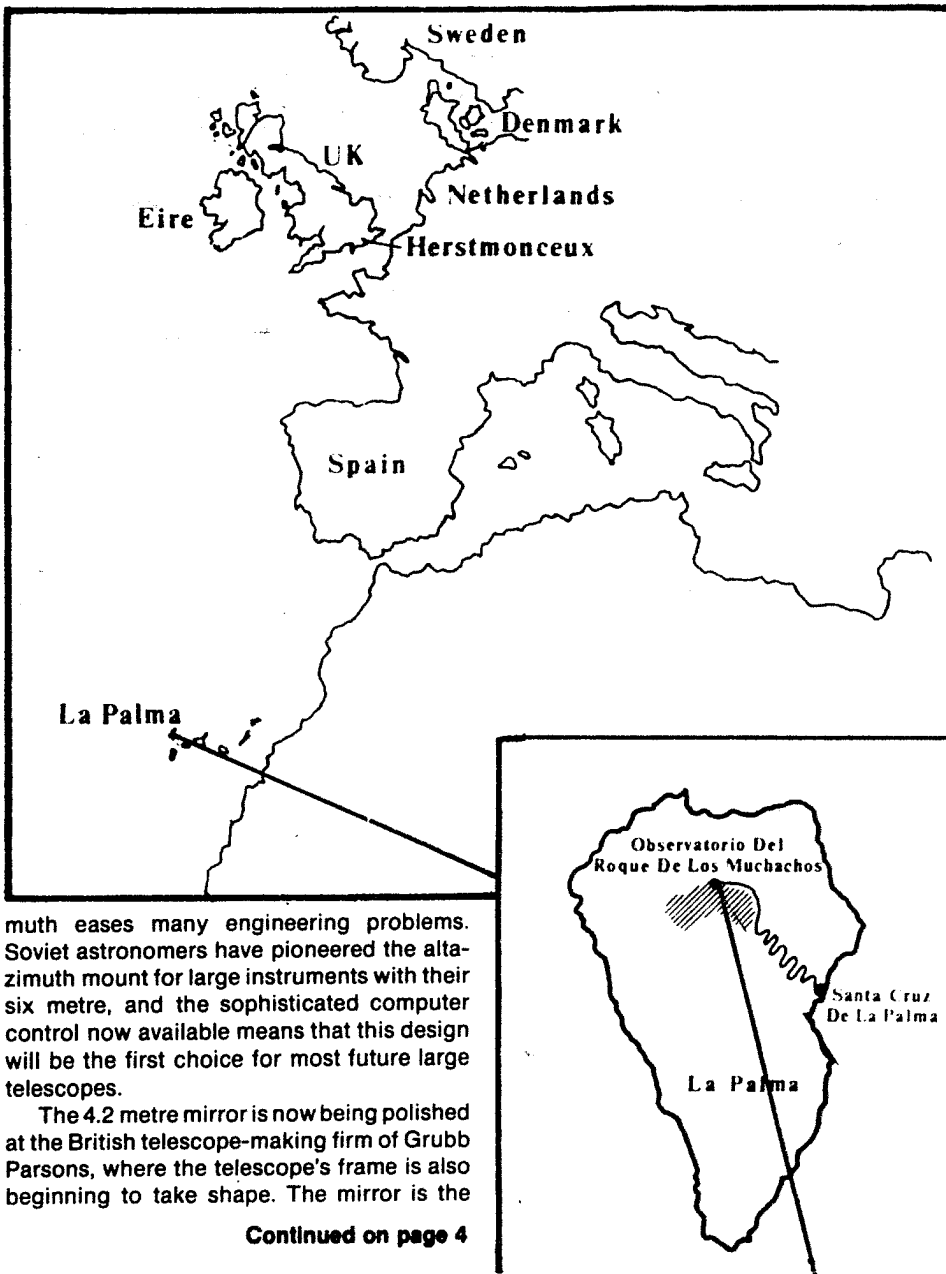
night by itself to nod up and down and find one star after another.

The Observatory's biggest guns will be a trio of British telescopes. The Netherlands is contributing to the cost of these telescopes and is participating in the provision of instruments in return for a proportion of the observing time. (The agreement also covers a 15 metre submillimetre wave telescope — to explore the wavelengths between infrared and radio — which was intended for La Palma but which will now go the higher peak of Mauna Kea in Hawaii).

The smallest of the three is a one metre reflector. It is a dual-purpose telescope. Astronomers can use it for normal spectrographic observations «on-axis». But the telescope is particularly designed to photograph a wide field (1 1/2 degrees) without distortion, and with this aperture it can include a vast number of faint objects. On a single plate it can record several bright stars whose positions have been well-determined with instruments like the Carlsberg circle or the Hipparcos satellite (described in the first issue of *Astrocosmos*), and using these as a reference framework, astronomers will be able to locate accurately the thousands of fainter stars, quasars and galaxies which appear on the same plate.

Opening along with the one metre next year will be the revamped 2.5 metre Isaac Newton Telescope. The Royal Greenwich Observatory has moved this telescope from under the rather murky skies of its headquarters at Herstmonceux Castle in southern England, and fitted it out with a new and better mirror to make the most of the superb skies of La Palma. Both these telescopes will be operated by remote control from Herstmonceux, using at first ordinary rented telephone lines. A staff of two dozen will live on La Palma, but British astronomers will not have to follow the usual practice of travelling there to use the telescopes. They will be able to sit at a control desk at Herstmonceux, where TV screens will show them what the telescopes are «seeing» and a display of the data, while a voice link keeps them in touch with the La Palma staff. The full data, on magnetic tape, can be flown back a day or two later — as quickly as a visiting astronomer could fly it back himself.

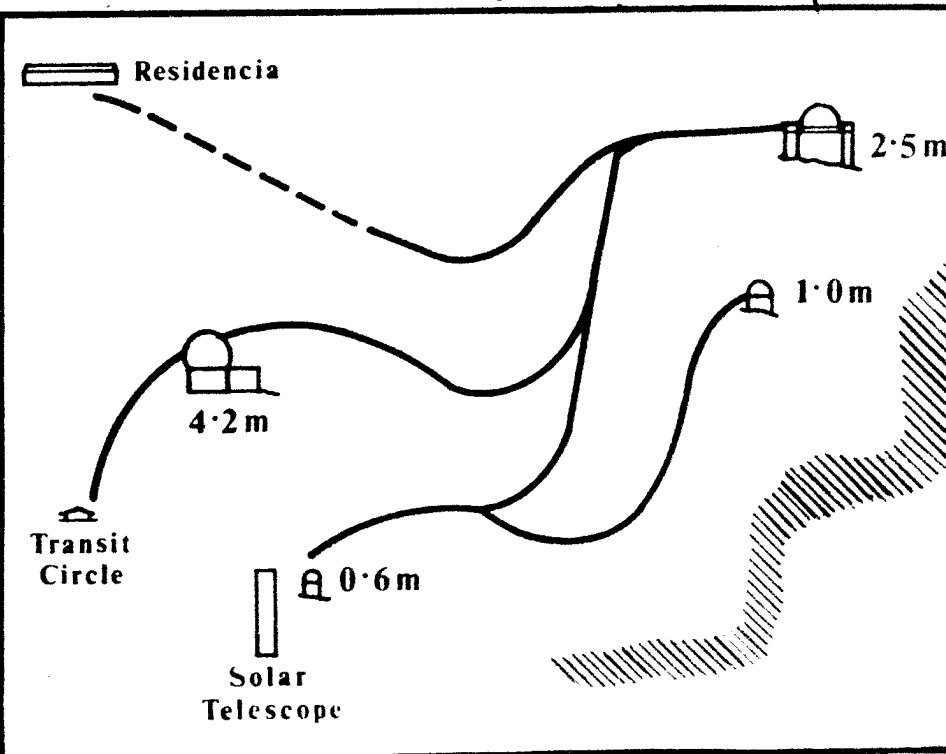
The Observatorio's main telescope, however, will be the 4.2 metre William Herschel Telescope. In the spirit of international collaboration, it is named after the Prussian musician and amateur astronomer who discovered the planet Uranus in 1781, while living and working in England. Another link is that Herschel presented the King of Spain with one of his home-made reflecting telescopes in 1803. And the name is appropriate too, because the 4.2 metre will be pivoted on the altazimuth type of mounting favoured by Herschel for his large telescopes. The vertical rotating fork of the altazimuth has long been out of fashion, overtaken by its rival the «tipped up» equatorial mounting, but for really large and heavy telescopes the altazi-



muth eases many engineering problems. Soviet astronomers have pioneered the altazimuth mount for large instruments with their six metre, and the sophisticated computer control now available means that this design will be the first choice for most future large telescopes.

The 4.2 metre mirror is now being polished at the British telescope-making firm of Grubb Parsons, where the telescope's frame is also beginning to take shape. The mirror is the

Continued on page 4



Half a dozen European countries are involved in the telescopes now under construction at the Observatorio del Roque de los Muchachos in the Canary Islands.

Editorial

CONSTELLATIONS

Fortified by Sun, sea, excursions, good companionship and a weekend free from lectures, we return to the second half of the programme. Your editor, ever watchful, has noticed with interest that the strange spell cast upon participants by any conference that lasts more than a few days is already operating.

A sense of belonging to the group influences everyone except the incorrigibly anti-social. Apart from membership of the whole, sub-groups form, as people with kindred interests gravitate together, irrespective of nationality. A person may even find himself a member of more than one group and like a free electron will wander from one group to another. There is an almost palpable atmosphere of incompleteness in a group which like an ion, lacks any of its parts. By the

end of the conference this gestalt effect has taken over to the extent that it is almost traumatic to part from the other members of the group. A friend of mine, a member of a group of four, who had spent almost a whole conference together, saw the other three members off at Athens airport. In a letter to me he described the incredible feeling of loss he experienced and how he felt an irrational impulse to grab the first three people he saw and attach himself to them.

Old stagers to conferences know that after a time recovery from this bonding effect does take place. To some extent. There always remain our memories and, if we are lucky, we meet our friends again some other place, some other time to experience once more that enriching sharing of new experiences.

TODAY'S EVENTS: LES EVENEMENTS DU JOUR

JOINT DISCUSSION III:

«The Extragalactic Distance Scale and the Hubble Constant»

(IAU Commissions 25, 28, 40, 45, 47, 48)

09.30-11.00, 11.30-13.00, 15.30-18.00, Room AB, 23rd August

SOC

* P.W. Hodge (USA), Chairman	28
E.A. Dibay (USSR)	28
R. Humphreys (USA)	45
K.I. Kellermann (USA)	40
D. Lynden-Bell (UK)	48
M. Peimbert (Mexico)	34
G.A. Tammann (Switzerland)	47
C. de Vaucouleurs (USA)	28
* Editor	

Commission

Programme

Session I — 09.30-11.00

J. Graham: «Distance Indicators in the Magellanic Clouds».

B. Madore: «Cepheid Variables in Nearby Galaxies».

D. Hanes: «The Distance to the Virgo Cloud».

Session II — 11.30-13.00

M. Aaronson: «The Fisher-Tully Relation».

C. Gordon: «Supernovae as Distance Indicators».

Discussion

Session III — 15.30-18.00

B. Carney: «Cluster Ages and the Age of the Universe».

G. Paturel: «Recently-developed Distance Indicators».

G.A. Tammann: «Recent work on the Hubble Constant».

Discussion

JOINT DISCUSSION V:

«Origin and Evolution of Interplanetary Objects»

(IAU Commissions 15, 20, 21, 22)

09.00-10.30, 11.00-12.30, 15.15-17.45, Room AA, 23rd August

SOC

* B.A. Lindblad (Sweden), Chairman	22
Z. Ceplecha (Czechoslovakia)	22
B.D. Donn (USA)	15
W.G. Eiford (Australia)	22
T. Gehrels (USA)	15
Y. Kozai (Japan)	20
L. Kresak (Czechoslovakia)	15
B.G. Marsden (USA)	20
B.A. McIntosh (Canada)	22
P.M. Millman (Canada)	22
J. Rahe (GFR)	15
* H. Rickman (Sweden)	
A. Simonenko (USSR)	22

Commission

INVITED DISCOURSE

In the Ancient Odeon of Patras: at 20.30

«Contemporary Cosmology» by Ya B. Zel'dovich.

At EOT Swimming Resort, Aya, Patras:

WINE FESTIVAL: 20.00-24.00.

ANNOUNCEMENT

Today, Monday August 23, the local group of YWCA (Young Women's Christian Association or XEN) organizes an afternoon of «Local Traditions of the month of August» at the Castello Restaurant (behind the Achaia Beach Hotel).

Ouzo, snaks and fruits will be served and Greek songs (accompanied by piano) will be sung; A lottery with Greek wines will take place. Time: 6:30 - 9.00 p.m.

Those interested, please put your name on the list at the Information Desk.

Publisher: For the Local Organizing Committee, V.V. Markeitos
Editor: A.E. Roy
Both at the University of Patras
Phototypesetting and Printing: P. Constantinopoulos, 115 Maizonos Str. - Patras

THE STEPHANION OBSERVATORY

by L.N. Mavridis, Department of Geodetic Astronomy, University of Thessaloniki, Greece

The Stephanion Observatory was established in 1966 and soon became one of the main astrophysical observatories in Greece. It lies in Peloponnesos near Mycenae ($\lambda = -22^{\circ}49'44''$, $\phi = +37^{\circ}45'15''$) at an altitude of 800 m. The main instrument of the Observatory is a 30inch Cassegrain reflector with assymetric mount (focal ratio f/3 for the primary hyperbolic mirror and f/13.5 for the Cassegrain focus) constructed by Astro Mechanics and belonging to the Department of Geodetic Astronomy, University of Thessaloniki. This telescope is equipped with the following auxiliary equipment:

1) One Johnson dual channel photoelectric photometer with offset guider unit constructed by Astro Mechanics. The photometer is mounted in the Cassegrain focus of the telescope and includes one RCA 1P 21 and one RCA 7102 photomultipliers, both of which are refrigerated during the measurements with dry ice.

2) One Meinel plane grating spectrograph with flat-field folded Schmidt camera f/2 focal ratio, constructed also by Astro Mechanics.

The 30-inch telescope is used by the members of the staff of the Department of Geodetic Astronomy, University of Thessaloniki for photoelectric observations of variable stars in the U, B, V, R, I colors of the International U, B, V System, as well as for medium-dispersion spectroscopic observations of variable stars. The research program includes:

1) Patrol observations of known and suspected flare stars.

2) Long-and short-term changes of the

quiet-state luminosity of flare stars.

3) Photoelectric photometry of galactic cepheids.

4) Photoelectric observations of fundamental stars.

5) Spectroscopic studies of variable stars.

The same instrument is also used by other members of other astronomical institutes in Greece, as well as by astronomers from neighboring countries (Bulgaria, Egypt etc) for various research projects.

Other instruments also in operation at the Stephanion Observatory at various times have included:

1) The French CNES operated in 1966 at the Stephanion Observatory one Satellite Tracking Station including both Doppler and Laser facility.

2) Prof. Dr. Heinz Neckel and his collaborators from the Hamburg Observatory carried out during 1967-70 photoelectric observations of late-type stars with the 38 cm reflector of the Hamburg Observatory, which was installed temporarily at the Stephanion Observatory. The same instrument was also used by Prof. Dr. L.N. Mavridis and his collaborators from the Department of Geodetic Astronomy, University of Thessaloniki for photoelectric observations of galactic cepheids.

3) Prof. Dr. J.R.W. Heintze and his collaborators from various astronomical institutes of the Netherlands carried out during 1967-1973 photoelectric observations of variable stars with the 40 cm reflector of the Utrecht Observatory, which was also installed temporarily at the Stephanion Observatory.

This tradition of international co-operation is always alive at the Stephanion Observatory. Guest observers are always welcome to apply for observing time and work at the Observatory.

Evagelatos Spyros Restaurant

A GASTRONOMICAL TREAT!!!

In the center of down town Patras conveniently located on Agiou Nikolaou str. 7, you will find the best restaurant in town.

For the last fifty years now S. Evagelatos has been catering for international connoisseurs of fine food exquisitely prepared and served by the continental chef and his fifteen experienced waiters. Open all day until midnight. We are waiting to serve you.

SCANDIA RESTAURANT

Agiou Andreou 6.

In our menu you will find the succulent specialities of the Greek cuisine. The original moussaka and the ever popular Greek souvlaki served with rice Both are gourmet's delight. Your choice of wide variety of our tasty pizzas and sea food is also available. Open to serve you from 17.00 to 02.00.

Our catering service is also operating the Wine Festival of the International Astronomical Union.

CUSTOM SCHMIDT SYSTEMS and other astronomical optics

Diffraction Limited has been largely involved in meeting the specific needs of astronomers. Our top priority has been to bring down the normally prohibitive design and fabrication costs for certain «one of a kind» items such as Schmidt Optics. For instance, we are making two 500 mm Schmidt Systems for Kuwait, one of which is a Flat-Field Schmidt Cassegrain (F/3.5) that covers a 7° field! Please don't hesitate to write or call for more information. (Tube assemblies available upon request.)

نحن لدينا رغبة صادقة
في مساعدة الدول
النامية التي تسعى
قدما لدراسة الكون
ابدي المنسح

DIFFRACTION LIMITED

3320 N. Tucson Blvd
Tucson, Arizona 85716
602-327-3079

Custom Optics For Astronomy

GASTRONOMY CORNER



arni fricassé

For this dish it is better to use baby lamb so that the meat will be tender.

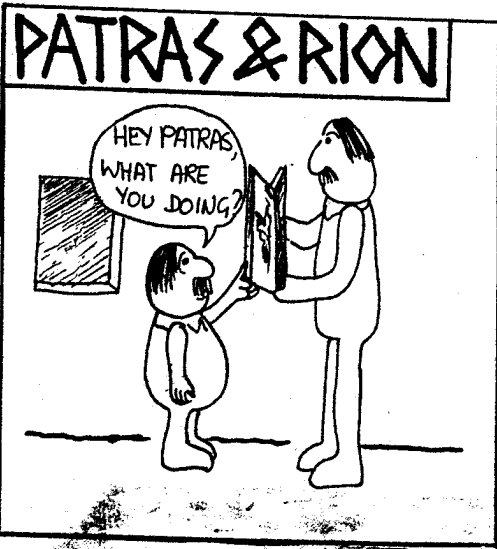
- 1 kilo lamb
- 1 large bunch fresh green onion chopped fine
- 1/2 heart lettuce (cut as for salad)
- Salt and pepper
- 2 tablespoons butter
- Egg-lemon sauce (2-3 egg yolks juice of 2 lemons)*

Wash and cut the lamb into serving portions. Melt 2-tablespoons butter in a large saucepan, add meat and sauté for about 15 minutes. Add chopped onion, dill, lettuce, salt and pepper. Add sufficient water to cover and simmer slowly for an hour and a half until the meat is tender.

Add egg-lemon sauce and serve hot.

* Beat egg yolks and while still beating slowly add lemon juice. Slowly add a small amount of liquid from saucepan still beating the mixture. Add the mixture to saucepan.

Wanda Goudas



How to obtain an International Reputation

The following five helpful procedures should go a long way towards enhancing your international reputation.

1. If the first letter of your surname is in the last half of the alphabet, change your name to one beginning with A, or even better with two A's like «Aardvark». In any alphabetical listing of authors of papers your name will then come first.

2. Make sure there are at least two other authors. Reference will then be made to Aardvark et al. (A is a most prolific writer — almost as productive as Anon — but there is no fear that he will be promoted before you).

3. Maximise your list of publications by:

- (i) writing a short account of the research work for NATURE,
- (ii) writing a paper on the research work for a learned journal,
- (iii) writing an extended abstract for an international conference,
- (iv) giving an account of the work at the international conference so that a further version

will appear in the Proceedings of the conference,

(v) allowing a moderately serious and misleading typographical error to slip past the proof stage so that it can be subsequently corrected by

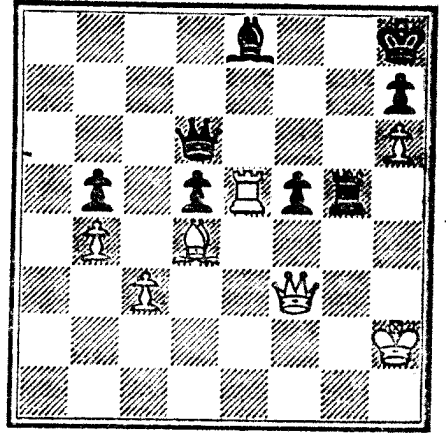
(vi) publishing a short note in a subsequent issue.

NOTE: Deal with (iv), (v) and (vi) personally but don't be selfish: Allow your colleagues to share in the work by taking care of (i), (ii) and (iii).

4. Be seen and heard at as many international conferences as possible.

5. Arrange to be called out from at least one session to take an urgent phone call: make sure that it leaks out that the call is from the President seeking your advice (it is the President of your local Astronomical society but who is to know that).

Chess Position 7



White, to move, wins

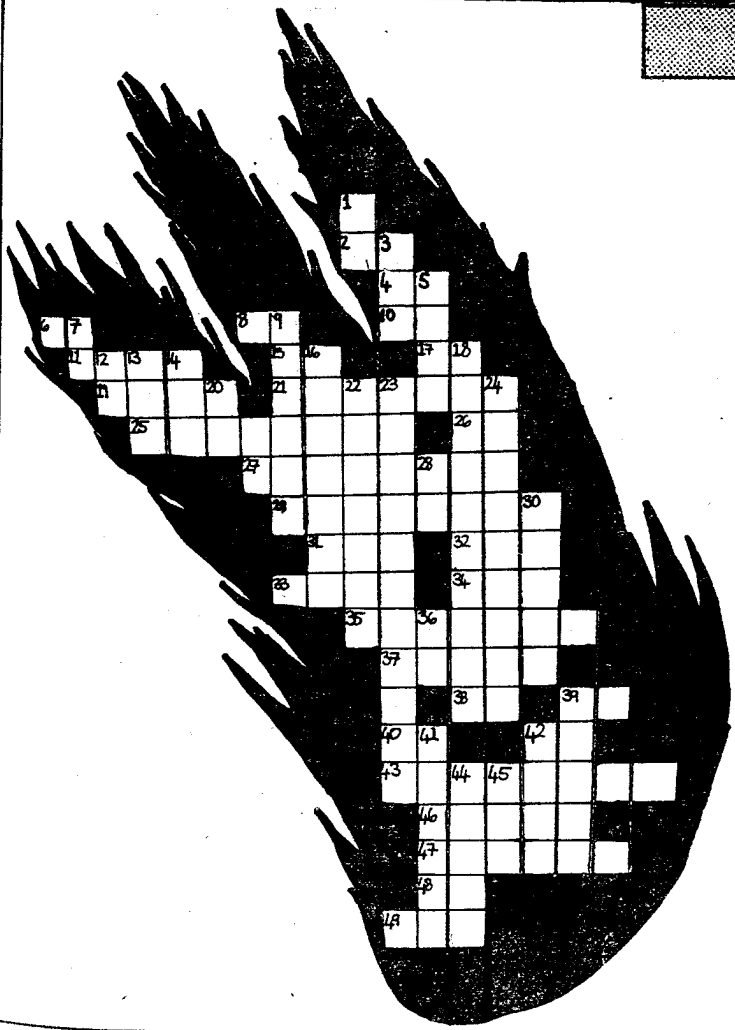
Solution to Chess Position 5:

1. ... R-QKt6! White loses at least a Rook.

Solution to Chess Position 6:

1. Q-B8ch, Q-Q12 2. R-R8ch!, K X R 3. P X P!
White threatens both 4.R-R1 mate and 4.P X Q
2 Qch. Black must resign. V.V.M.

ASTROCROSSWORD



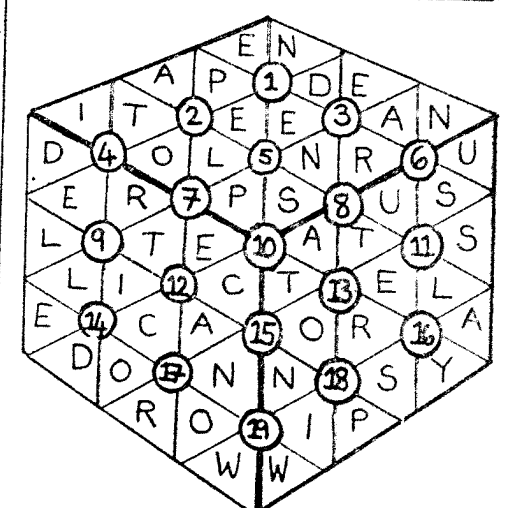
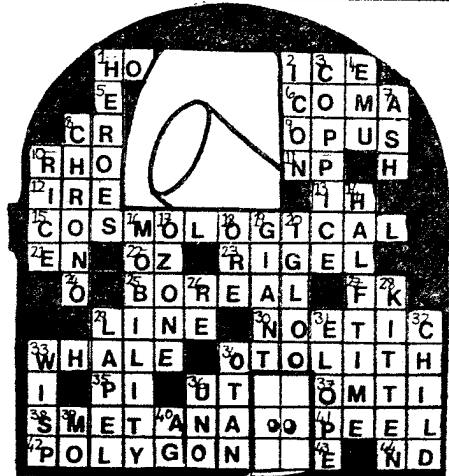
ACROSS

- 2. Too many of them deafen you.
- 4. Add a little English thank you to this satellite and you haven't got very much.
- 6. Does an English policeman measure his steps with this?
- 8. A positive Greek compass reading?
- 10. A shortened form of transcendental meditation.
- 11. This clue must be kept a secret.
- 15. Prolific writer of scientific papers.
- 17. Volume of celestial predictions.
- 18. Wander.
- 21. A down-to-earth person?
- 25. It's a long time.
- 26. Add an E for the definite article.
- 27. After your hard work at the IAU you may need one (two words).
- 29. As long as it lasts.
- 31. Quicker than walked.
- 32. Non-commissioned officer.
- 33. Some are silly, some are sensible depending on the point of view.
- 34. Sound of an angry dog?
- 35. The dog is making these?
- 37. No western film would be complete without one.
- 38. Lop the beginning of ECHO, add this to what's left to get a large impact.
- 39. Early classes.
- 40. Mind over matter?
- 42. Indefinite article.
- 43. Between one and two.

- 46. It used to be the farthest out planet.
- 47. A prayerful exchange.
- 48. Small unit of energy.
- 49. Anger.

DOWN

- 1. Subterranean part of the mind.
- 3. Add enough of them and they can fill any store.
- 5. A prefix for all.
- 7. Millilitre.
- 9. Worked for.
- 12. Alternatively.
- 13. Female deer.
- 14. Gastronomy — not astronomy.
- 16. Free time from work.
- 18. Tightening.
- 20. Not them.
- 22. Worlds and popular people do this.
- 23. Hair today and gone tomorrow?
- 24. State with a hot-line to God.
- 28. Not by the stars.
- 30. The pole without penguins.
- 36. Measured equatorially from the Ram.
- 39. With an addition it brings tears to the eyes because of its lost electron.
- 41. To find order in the Solar System obsessed him.
- 42. A Aquilae.
- 44. Not dead.
- 45. Bicyclists and indeed every human should avoid getting into one.



Rodopoulos Michalis
Cavo d'oro
Cafeteria - Spageteria
Iroon Polytehniou, Glyfada

Karamouzis Ant. (optician)
Prescription glasses, sun glasses,
contact lenses.
112, Maizonos str. Patras.
Tel.: 274.728, 221.989.

Bali Hairdressing Salon

«La coupe bali», haute coiffure.
200, Corinthou str. (1st floor).

The SIRIO 2-LASSO Experiment

S. Leschiutta, Politecnico and Osservatorio Astronomico, Torino, Italy

Time is one of the few commodities with the property to allow transmission or dissemination to remote users, via radiosignals. Large use is made of this possibility and the existence of standard time transmissions or of space surface navigation systems is widespread. Another very important use lies in the comparison between the atomic master clocks kept at the Astronomical Observatories or at the National Metrological Laboratories. An accuracy between 0.1 and 1 microseconds is currently reached in these operations.

But in the last decade an interesting development took place.

The accuracy and stability of the atomic clocks progressed in such a way that the characteristics of the existing radio comparisons methods are no longer adequate. Let us play with some figures

If the frequency difference between the two clocks to be intercompared is 10-14 (a rate of about 1 ns per day), and the resolution of your radio measurement system is of one microsecond, you will wait more than two years before the time difference will show-up.

To study this and related problems is the SIRIO 2-LASSO experiment, a space based time comparison promoted by the European Space Agency (ESA)

SIRIO is the acronym for «Satellite Italiana per Ricerca Orientata» (Italian satellite for applied research) and LASSO stands for **L**AsER **S**ynchronisation from **S**tationary **O**rbit. Indeed a laser synchronisation via a satellite will be tested for the first time, with the goal of one nanosecond accuracy at intercontinental distances.

The LASSO package, as proposed by B. Gagnebet of CERGA, frasse, is formed by:

- a panel of square cube corner reflectors,
- a very stable clock,
- an optical detector,
- a time-tagging system, and
- the telemetry channels of the satellite.

The operation can be summarized as follows:

— the retroreflector panel reflects back the optical pulses received from each of the laser ground stations.

— the detector, the time-tagging system measure against the space-borne clock, the arrival times of the pulses coming from different earth stations. These data are sent to a single earth station.

The data are finally combined with the **departure times** and the **round-trip propagation times** of all the ground stations, in order to obtain the time difference between the clocks.

This method suffers from a number of limitations and sources of errors, but in principle can prove to be the most accurate time synchronisation system now possible with a gain in accuracy of one-to-two orders of magnitude.

The SIRIO-2 satellite will be launched next September, and after a commissioning period of some months, the LASSO experiment will start its sessions.

Twenty-five observatories and a dozen nations have shown interest in participating. The Nations are Austria, Brazil, the Democratic Republic of Germany, France, Greece, Holland, India, Italy, Spain and United States. Also the Bureau International de l'Heure will participate.

To study the operational procedures, ESA has set-up the Lasso Experimenters and Users Team, a body formed by all the participating observatories, ESA and Telespazio, the agency that will run the technicalities of the experiments.

This team of experimenters have met many times in the last few years, but for their meeting immediately preceding the launch of the satellite and the beginning of the experiment, they chose this UAI 18th Plenary Assembly.

And consequently every one interested in knowing how the nanosecond accuracy can (hopefully) be secured over a span of ten thousand kilometers is warmly invited to attend the meeting, in Room T12, Tuesday 24 August.



Contemporary Greek music casts its spell at the Ancient Odeon of Patras! A study in scepticism, perplexity and endurance.

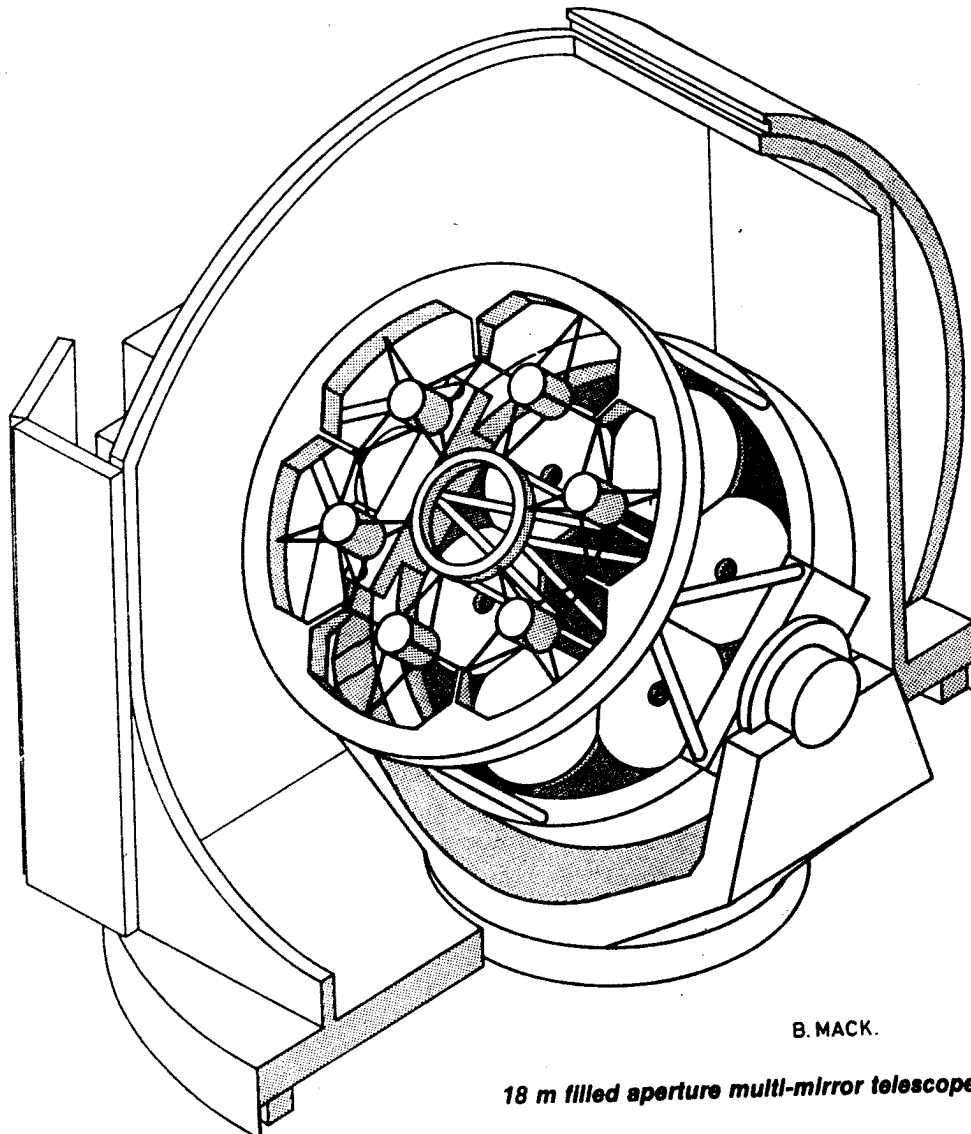
Major international observatory to open next year

Continued from page 1

sister of the Cervit mirrors in the three currently-operating «four metre» telescopes (the Anglo-Australian Telescope, the Kitt Peak Mayall Telescope and the Cerro Tololo 4 metre in Chile), but very slightly larger because the mould at the Owens-Illinois works has been left slightly bigger after each casting has been removed

The William Herschel Telescope should be assembled on La Palma by 1985, and it will also be under remote control from Herstmonceux. It will have several different foci where astronomers can place various light-detectors and spectrographs — the prime focus at the top of the tube, the Cassegrain behind the mirror, two Nasmyth foci at the pivots of the telescope tube, and two «broken Cass» foci on the telescope frame at right angles to the Nasmyth foci. Astronomers can change from one to another merely by altering the configuration of secondary mirrors. In straining for the faintest stars, galaxies and quasars, the telescope's large size is aided by the dark skies of La Palma

What of the future? European astronomers have one of the best observatory sites in the world right on their doorstep in La Palma, and the countries already participating will continue to exploit it as fully as they can — while of course welcoming new colleagues. There is, for example, provision for an optical link between the 2.5 metre and the 4.2 metre to allow them to work together as an interferometer — to show some of the finest details of stars or quasars which would only be apparent to a telescope a hundred times larger than either telescope alone. This technique does not reveal fainter objects, though. Another plan being promoted by the Royal Greenwich Observatory's director, Alec Boksenberg, is a large optical telescope equivalent to a single instrument 18 metres across (a «thousand inch» telescope or more). It could for example combine six 7.5 metre mirrors in a common frame



18 m filled aperture multi-mirror telescope

The Canary Islands have a long association with astronomy. The peak of Tenerife was the first mountain site to be tested for astronomical observations, when the Astronomer Royal for Scotland took an 18 cm

telescope there in 1856. Now the association is continuing into the 21st century, as astronomers build on the neighbouring island of La Palma the northern hemisphere's leading international observatory

ATLAS OF COMETARY SPECTRA

During the XVIIth General Assembly of the IAU in Montreal in 1979 a Working Group was set up by Commission 15 to prepare an Atlas of Cometary Spectra which will be a sequel to Swings and Haser's «Atlas of Representative Cometary Spectra» published in 1956.

The main goal of the new atlas is to show the progress that has been achieved in the meantime and to present some reproductions of the best of the existing material on cometary spectroscopy.

The emphasis will be laid essentially upon high-dispersion spectra (2 or 3nm/mm to higher resolutions) but some lower dispersion spectrograms will be included as well, for instance for the fainter comets. Although the major part of the Atlas will be concerned with optical, photographic spectra, the ultraviolet, infrared and radio regions will also be covered to some extent.

Reproductions of a number of plates that will appear in the Atlas are shown in a display located in the Poster Room, CP (Concourse Area), next to the Registration desk. Comments, critiques or suggestions from the interested persons would be most welcome. Please contact C. Arpigny, B. Donn, F. Dossin, J. Rahe or S. Wycroff.

Financial support from the National Aeronautics and Space Administration and from the Scientific Programme of the North Atlantic Treaty Organisation is gratefully acknowledged.

COMET AUSTIN SEEN

by H. Haupt

The comet AUSTIN was spotted using binoculars on Friday night (21.35 Greek time = 18.35 U.T.) from the beach near Averoff Hotel by H. Haupt (Austria), his family and some more astronomers. It appeared as a fuzzy spot and was nearly as bright as the star Omega Ursae Majoris. No tail could be detected.