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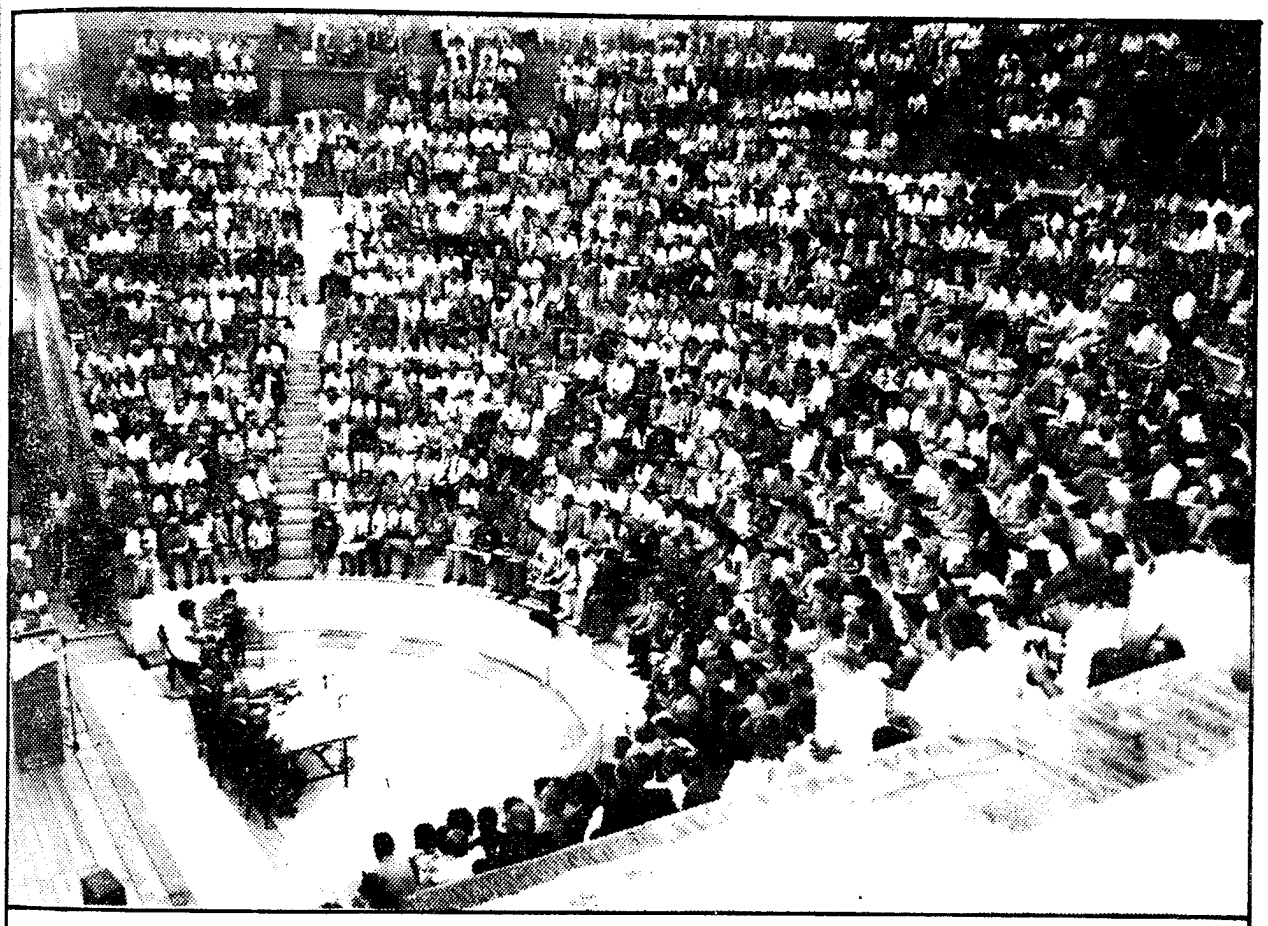
Inaugural Ceremony and First General Assembly



Seated under deepening twilight skies in the warm-hued ancient Odeon of Patras, 2.500 astronomers and guests last night attended the Inaugural Ceremony of the IAU. But the mood of happiness and relaxed optimism was marred by the news that Professor M.K.V. Bappu, the President of the IAU, is seriously ill in hospital following openheart surgery earlier in the month.

The evening, however, was as perfect an introduction to the «cradle of astronomy» as anyone could wish. Delegates were first entertained by musical prelude from the mixed choirs of OTE and Patras. As swifts and swallows swooped overhead, strains of traditional Greek folk tunes echoed off the ancient walls of the Odeon. The women's costumes were exquisite: wine and mulberry Byzantine-style dresses worn by the OTE choir, and flowing white traditional gowns, clasped by belts of gold leaves, by the women of Patras.

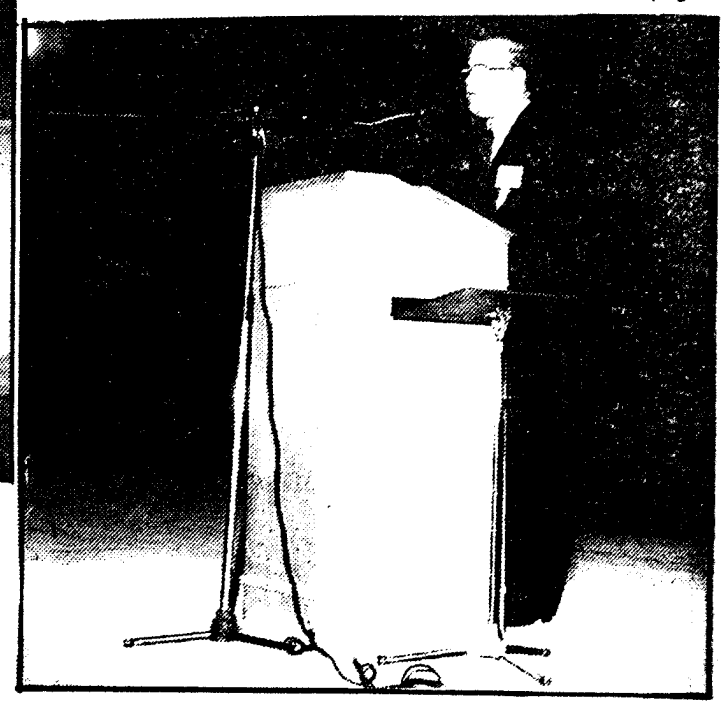
Following the singing, Professor C.L. Goudas, Chairman of the Local Organizing Committee, introduced the Chairman of the National Organizing Committee, Academician J. Xanthakis. In his welcome to the IAU, Professor Xanthakis spoke of astronomy's roots in ancient Greece, and how appropriate it is, 25 centuries later, that the descendants of the ancient astronomers should return to the land where their science first began.

(His full speech appears on page 2)

Professor Goudas followed to deliver a message from the President of the Hellenic Democracy, Mr Constantine Karamanlis. Due to unforeseen duties, the President explained in his message, he himself could not inaugurate the Assembly, but he wanted to convey his appreciation of the peaceful, international co-operation which is its conerstone. «This unity amongst students of space constitutes a model of peaceful co-operation and an example which would be most desirable if the troubled world of our times could follow... for the sake of all peoples of the Earth.» (The full text appears on page 2).

The Rector of the University of Patras, Professor George Maniatis, welcomed the delgates on behalf of the University. «It is an honour for such a young university», he said, «and it is the biggest international gathering we have had on our campus». Professor Maniatis explained that the meeting was particularly important for the University, as it would provide a stimulus for the active community of astronomers who are already working there. And he went on to express the kinship that he, as biologist, felt with astronomers: both disciplines were ultimately concerned with the Universe and Man's place in it. He looked forward to the day-to-day business of the Assembly, for he knew that the exchanges and personal contacts made at such international meetings could not be achieved by the normal channels of scientific communication.

Continued on page 6



Top left: delegates await the start of the Inaugural Assembly in the ancient Odeon, Patras.
Bottom left: the OTE choir entertains the delegates with a Greek folk song.
Bottom right: Professor C.L. Goudas delivers the address of the President of the Hellenic Republic.

MESSAGE TO THE ASSEMBLY

sent by the President of the Hellenic Democracy

Mr. CONSTANTINE KARAMANLIS

It is a great pleasure for me to salute the convocation of the 18th General Assembly of the International Astronomical Union in Greece, and to welcome its members to this country, which is one of the ancient cradles of Astronomy. I am very sorry, indeed, that due to unforseen duties, it has become impossible for me to inaugurate personally the works of your Assembly.

I deeply appreciate the fact that in your Assembly, scientists participate from all over the world. This unity among students of space constitutes a model of peaceful cooperation and an example, which would be most desirable if the troubled world of our times could follow, in order to find new ways towards progress, for the sake of all peoples of the Earth.

The program of this Convention manifests the wish of the participants to make this meeting a landmark in the field of exchanging information among students of space.

I wish your efforts to be successful, not only for the benefit of science, but also for the good of humanity in general.

MESSAGE A L'ASSEMBLEE

envoyée par le Président de la Démocratie Grecque

Monsieur CONSTANTIN KARAMANLIS

C'est une grande joie pour moi de m'adresser à la 18ème Assemblée Générale de l'Union Internationale Astronomique en Gréce et de souhaiter la bienvenue à ses membres dans ce pays, qui est un des anciens berceaux de l'Astronomie. En effet, je regrette vivement de ne pas pouvoir inaugurer la Convention à cause d'un engagement inattendu.

Le fait que les scientifiques, qui participent à cette convention, viennent de tous les pays du monde, est d'une importance capitale pour nous. L'unité qui existe parmi les étudiants de l'espace constitue un modèle de coopération pacifique et un bon example, tellement souhaitable pour notre monde en confusion, afin de trouver de nouvelles voies menant au progrés pour le bien de tous les peuples de la Terre.

Le programme de cette Convention reflète le souhait des participants de faire de cette rencontre un évènement spécial pour échanger des idées parmi les étudiants de l'espace.

Je désire réellement que votre effort sera un succès, non seulement pour le bénefice de la science mais aussi pour le bien de l'humanité.

ADDRESS BY THE CHAIRMAN OF THE NATIONAL ORGANIZING COMMITTEE, ACADEMICIAN J. XANTHAKIS

It is a great event for Greece and a great honour for the University of Patras to welcome the 18th General Assembly of the IAU. Astronomers young and old from all over the world have come here to present the results of their recent researches, covering the various fields of astronomy and astrophysics. They will also present new ideas and opinions concerning their working programme for the future.

Dear colleagues, we have gathered here on the land that gave birth to a new child, the Science of the Skies, the land where ancient people from the Near and Far East made their first observations of stars and planets. This new child grew up in the Land of Ancient Greece, with the support of geniuses like Thales of Militos, Pythagoras, Philolaos, Heracletus and Aristarchos of Samos.

This young Science eventually emigrated to the Western world to receive his later education from Copernicus, Galileo, Newton and other great scientists of the Renaissance and more recent times.

Thus, it is natural that twenty-five centuries later, the descendants of Ancient astronomers would wish to visit this country where the science of astronomy saw for the first time the light and made its first steps.

We heartily welcome you in this small

Professor John Xanthakis

corner of Europe with its old history and civilization. We do however regret that our financial means do not allow us to meet the standards of hospitality set by «Ξένιος Δίας» i.e. Jupiter, the father of the Gods of our ancestors.

The National and Local Organizing Committee have done their best however to facilitate your work here and make your stay in this picturesque coast of Peloponnesus as pleasant as possible.

ALLOCUTION DU PRESIDENT DU COMITE NATIONAL D'ORGANISATION, L'ACADEMICIEN J. XANTHAKIS

C'est un grand événement pour la Grèce et un grand honneur pour l'Université de Patras d'accueillir le 18ème Congrés International d'Astronomie. Des savants et des jeunes astronomes venus des différents pays du monde sont ici réunis, pour présenter les résultats de leurs recherches récentes dans les différentes disciplines d'astronomie et d'astrophysique. Ils vont aussi discuter et exposer leurs idées nouvelles et leurs opinions pour les recherches de l'avenir.

Chers collègues, nous sommes ici, dans la région ou a vu pour la première fois la lumière du jour, ce nouveau né, qui était la Science du Ciel, avec les observations des peuples anciens du Proche et d'Extrême Orient. Ce nouveau né, dans ce pays des Grecs anciens, avec le génie de Thales de Millet, de Pythagore, de Philolaos, d'Héraclite et d'Aristarque de Samos est devenu un adulte.

C'est dans l'âge de la puberté que ce jeune homme a émigré quelques siècles après dans l'Occident pour se former en un jeune savant, sous l'impulsion des découvertes de Copernic, de Galilée, de Newton et d'autres grands savants de la Renaissance et des années récentes.

C'était donc une nécessité que les successeurs des astronomes des peuples anciens, de vouloir visiter, après 25 siècles, le lieu où a vu la lumière et a fait ses premiers pas solides, la science du ciel. Nous vous accueillons ici cordialement, dans ce petit coin de l'Europe avec sa longue histoire et sa civilisation ancienne. Mais nous regrettons que nos moyens financiers ne nous permettent pas d'être à la hauteur de notre tradition hospitalière, de «Ξένιος Δίας», de dieu Jupiter de nos ancêtres. Les Comités d'Organisation Nationale et Locale ont essayé de faire tout ce qu'ils pouvaient pour faciliter aussi que possible votre travail ici, et de rendre votre séjour à cette côte pittoresque du Péloponnèse agréable autant que possible.

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Editorial

NOT THE LAST OF THE WINE...

For many of us it is as if we never parted three years ago in Montreal. Old friendships have been renewed, old discussions and arguments resumed. We are already in the interlacing orbits of meetings after the Informal Gathering of Monday and the Inaugural Ceremony and First General Assembly of Tuesday.

In the area of the Wine Festival members and guests had their first reunion in Greek manner: after all, the original symposium was a drinking party which included music and dancing and good conversation though by all accounts it often ended in an orgy of wine drinking. Hippocrates prescribed wine for indigestion while Socrates is said to have been able to imbibe huge quantities of it with no ill effects. Certainly no-one was heard to complain of indigestion after the Informal Gathering and equally certainly some of the learned participants had at least one thing in common with the great philosopher.

But the wine that uplifted our spirits was the wine of friendship, that gives joy in seeing the faces of our friends once more. Some of us recalled with affection old friends who alas will be seen no more at General Assemblies of the IAU but who live on in our memories. We watched new friendships being formed among the younger members and guests and realised again that as far as the wine of friendship and continuity and enthusiasm is concerned, there happily will be no end to that glorious vintage.

New Commission to search for Extraterrestrial Life

The Executive Committee of the IAU has approved the establishment of a new IAU Commission, No 51, with the title «Search for Extraterrestrial Life», which will be proposed next week, to the General Assembly for final approval.

The goals of the new commission will include: Search for planets accompanying other stars; habitability and evolution of planets; Search for radiotransmissions of extraterrestrial origin; Studies of biologically relevant interstellar molecules; Possible spectroscopic evidence of biological activity; Coordination of international efforts and collaboration with other international unions.

The Organizing Committee of the proposed new commission consists of the following: R. Brown (Australia), P. Connes (France), F. Drake (USA), G. Gatewood (USA), L. Goldberg (USA), J. Jugaku (Japan), N. Kardashev (USSR), G. Marx (Hungary), F. Pacini (Italy), M. Papagiannis (USA-Greece), M. Rees (UK), V. Troitsky (USSR).

The Executive Committee will be proposing Prof. Michael Papagiannis, Chairman of the Astronomy Department of Boston University, USA and corresponding member of the Academy of Athens, Greece, as the first President of the new commission.

IAU members who would like to become members of the new commission are asked to leave a note in the mail box of Prof. Papagiannis (No 1585 in the boxes of Greece) indicating their name, address and institute of affiliation.

IAU Commission 9

Working Group on Photographic Problems

There will be a Working Group meeting on WEDNESDAY AUGUST 18 in Room T 15 from 15.00 to 18.00 h. This meeting is open to anyone interested in astronomical photography and its applications.

ANGLO-AUSTRALIAN TELESCOPE

There will be a meeting to discuss instrumentation and future plans for the AAT on Wed 18 Aug. The meeting will be held from 17.00 to 19.00 hours in Room T 12.

All AAT users and others interested in the Telescope are welcome to attend

Commission No 49 is concerned with the physics of the heliosphere, its boundary and interface to the interstellar medium. At this 18th General Assembly of the IAU the Commission will have the following specific topics that are presented in form of invited reviews as short contributions. Special emphasis will be given to the problems of the three-dimensional structure of the heliosphere and its boundary configuration.

Program for sessions of Comm. No 49 scheduled for the General Assembly-IAU at Patras, Greece:

Date: **Thursday, 19th August,** Room AE

49/1 Scientific session: Inner heliosphere 9.00 to 10.30 h.

1) «Acceleration mechanisms of the solar wind» (invited review) by Dr. A. Barnes.

2) «Heavy ion dynamics in the solar wind» (invited review) by Dr. H. Rosenbauer.

49/2 Scientific session: Outer heliosphere 11.00 to 13.00 h.

3) «Solar wind interaction with interplanetary obstacles» (invited review) by Dr. C Goertz.

4) «Solar wind modulation of cosmic rays» (invited review) by Dr. Martin Lee.

5) «Role of cosmic rays in decelerating the solar wind» (contr. paper) by Dr. M.K. Wallis.

49/3 Scientific session: Heliospheric interface 14.00 to 16.00 h.

6) «The outskirts of the solar system» (invited review) by Dr. S. Grzedzielski.

7) «Modification of the interstellar gas parameters in the heliospheric interface» (contr. paper) by Dr. A. Himmes.

8) «Comment on heliospheric boundary structure effects» Dr. H.W. Ripken.

(The program is open for further contributions and remarks).

Hans J. Fahr
(President)

GASTRONOMY CORNER

THE OLIVE

The olive tree, rare in the north climates of Europe, is indeed very common in the Mediterranean region, and a well-known feature of the Greek landscape.

The botanical name of the plant is **Olea europaea satira**; this is the tree which bears the delicious olives we get in the shops. Altogether there are about fifty species widely distributed in the Old World, from the Mediterranean region, through parts of Africa and the Himalayas to New Zealand. All are evergreen; some are spiny, some are not.

Some bear fruits (drupes) which are not edible. The wild form **Olea europaea var. Oleaster** is one that has inedible fruits. (A drupe is simply a fleshy fruit with a hard kernel or stone, such as we find in, say, the plum).

The leaves of the olives are leathery, usually oval or oblong in shape, seldom more than 4 inch long, shining above and greyish beneath. The flowers are small, white and come in panicles - those of **O. Laurifolia,** a species from S. Africa, are fragrant.

For bottling, olives are picked unripe and then treated by soaking them in water often containing lime and wood-ash. This process gets rid of their bitterness and makes them more palatable. They are then bottled in brine and somtimes flavoured with spices. Francatelli, who was chef at one time to Queen Victoria, says that the Olives grown in Lucca are the finest and the most palatable. They should be served as an hors-d'œuvre or «handed round after the cheese, the better to relish a glass of port».

To stuff olives, it is first necessary to stone them. This is a simple job if you have a stoning implement or an olive-pitter; the olives are then blanched by putting them in boiling water for a coup'e of minutes. Next, plunge them into cold water for a minute. Take them out, drain them, and they are ready for stuffing.

There are many delicious fillings: foie gras, shrimp-butter, ordinary cream cheese. Serve stuffed olives with crisp french rolls and butter and a glass of wine. This makes an excellent light lunch to have in a hot summer's day; excellent too for a picnic. The stuffed olives may be packed in a plastic box and moistened with a little oil.

Black olives are those which are picked ripe. They are washed several times in clean water then put into boiling brine - no alkali treatment is used. Finally they are dried and pickled in oil. Black olives are delicious served in a tomato salata and accompanied with wholewheat bread.

Oil pressed from olives grown in the Meditteranean region is used in cooking and salads, where they are plentiful and pure olive oil is cheap.

The French have a pickled olive the call picholine. Picholines are grown specially for the table. The best of all olives, it is said, come from Syria (indeed, at one time, from the Mount of Olives).

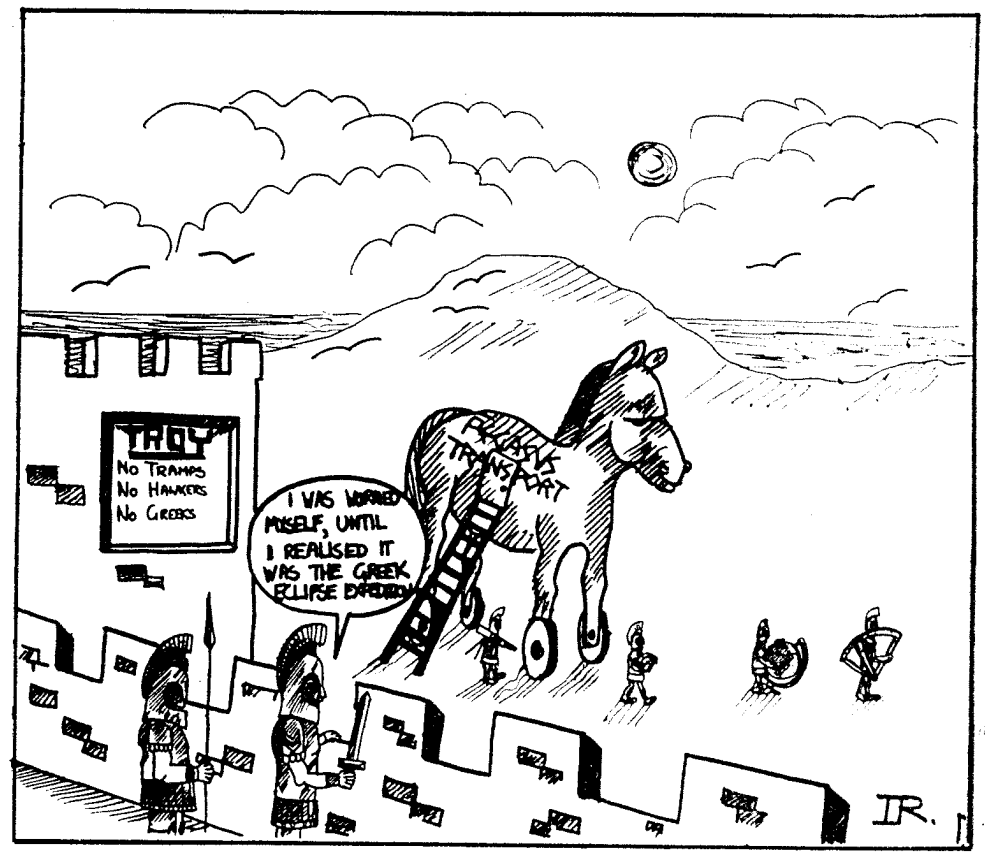
Here in Greece, we have several kinds of olives and it is an opportunity for those who like olives and olive oil to buy some for they are fairly inexpensive.

Here is a recipe combining fish, olive oil and lemon called **Taramosalata**

4 oz jar of fish roe or 150 gr of fish roe
1 small onion grated
juice of 3 lemons
1-2 cups olive oil
4-5 slices of white bread, trimmed.

Mash the fish roe and add the grated onion. Add a little olive oil and beat thoroughly to a smooth paste. Moisten the bread and squeeze out all excess water. Continue beating the fish roe mixture and add alternately small pieces of the damp bread, olive oil and lemon juice. The mixture should be beaten until smooth and pinky creamcoloured. Turn into a dish, smooth the top and chill. Serve, garnished with lemon wedges and halved black olives. (If preferred, this recipe may be made in a blender at medium speed).

Helen Markellos



WHAT THE STARS FORETELL

by Madame Zaza

LEO (July 23 - Aug. 23). For the next ten days you will be surrounded by an usually large number of foreigners. You will be encouraged to sample strange foods and drinks. Over indulgence may bring problems of a gastronomical nature.

VIRGO (Aug. 24 - Sept. 23). Colleagues will make demands upon your time. You will be asked to attend many meetings and listen to reports of distant and often dull happenings. Information will come from many sources. Keep what you hear to yourself. The evenings should be rather more relaxing.

LIBRA (Sept. 24 - Oct. 23). If it is your birthday this week it may be predicted that you will find yourself one year older. The stars and planets have conspired to ensure that your birthday will be spent in strange and unusual surroundings Try to enjoy it. Remember: it is the first birthday of the remainder of your life.

SCORPIO (Oct. 24 - Nov. 22). An excellent time for making plans in connection with your material proress. Look out for an opportunity coming your way to enlarge your horizons. Some people may criticise your pet theories. Pay no attention. They are prejudiced and under the influence of their guiding stars.

SAGITTARIUS (Nov. 23 - Dec. 21). You may well find romance today or later in the week. Beware! Strange surroundings, sun, sea, scenery may mislead you into thinking it is The Real Thing. It could be — it probably is not but enjoy it while you can. Remember. Eros is also an archer — and Greek

CAPRICORN (Dec. 22 - Jan. 20). The planets Uranus, Neptune and Pluto - the planets governing steam engines, railways and package air travel respectively and so not needed by astrologers before their discovery - are active now in your life. Avoid travelling in a steamdriven aeroplane.

AQUARIUS (Jan. 21 - Feb. 19). This is the Age of Aquarius. You must have heard the song! Today's child will not have an easy time in life and may well be forced to emigrate to strange lands - the Moon, Mars or Space Colony Model III. If so, then for his future guidance his astrological charts will undoubtedly have to be topocentrically reoriented. With modern computer facilities this is not difficult but very, very expensive.

PISCES (Feb. 20 - Mar. 20). You may not appreciate it but you are receiving a good deal in the way of helpful advice. It is time to listen to those older or perhaps wiser than yourself. If you do not take their advice you'll be sorr-r-r-y! Or maybe have a hell of a time!

ARIES (Mar. 21 - Apr. 20). You will be making more journeys than usual this week. More decisions than usual will also be required of you. However my exhaustive computerised analysis of the planetary charts reveals that this applies more directly to those in the vicinity of Patras: the other 250,000,000 born under this sign need not worry.

TAURUS (Apr. 21 - May 21). Mars is in the ascendent, Jupiter is in opposition to the Moon which is in the first quarter; Venus and Saturn are in the sixth house of the Zodiac. Beware. On no account - Ah! My coffee has spilt all over my chart and I cannot compute another until I get a new battery for my calculator.

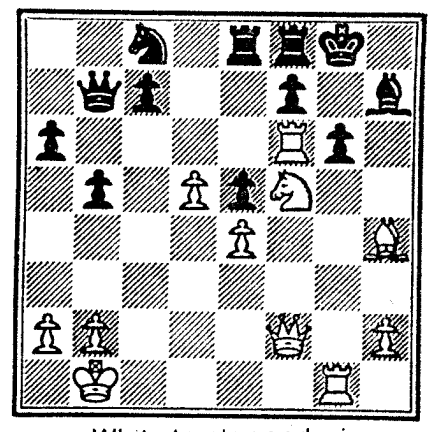
GEMINI (May 22 - June 21). A good time to add to your knowledge but you must work at it and disregard distractions. Remember: some drink of the waters of the fountain of knowledge, others merely gargle.

CANCER (June 22 - July 22). A particularly difficult horoscope to interpret this week. Further guidance should be sought by those born under this sign by sending $150 (ten percent discount for cash) to me care of the editor: this nominal sum will defray the expenses incurred by utilising additional technology - tea leaves, Tarot cards, sand trays, coffee grounds, crystal ball, sheep entrails and the like - in producing a definitive chart, with a 95% level of confidence.

SOUVLAKI (Jan. 1 - Dec. 31) (Some mistake surely? - Ed.). Everyone born under this sign (the ancient Greek constellation of the kebab) may be sure that taxes, pollution, the cost of living, the imbecilities of politicians, will continue to burn them up

Have a good day!

Chess Position 2



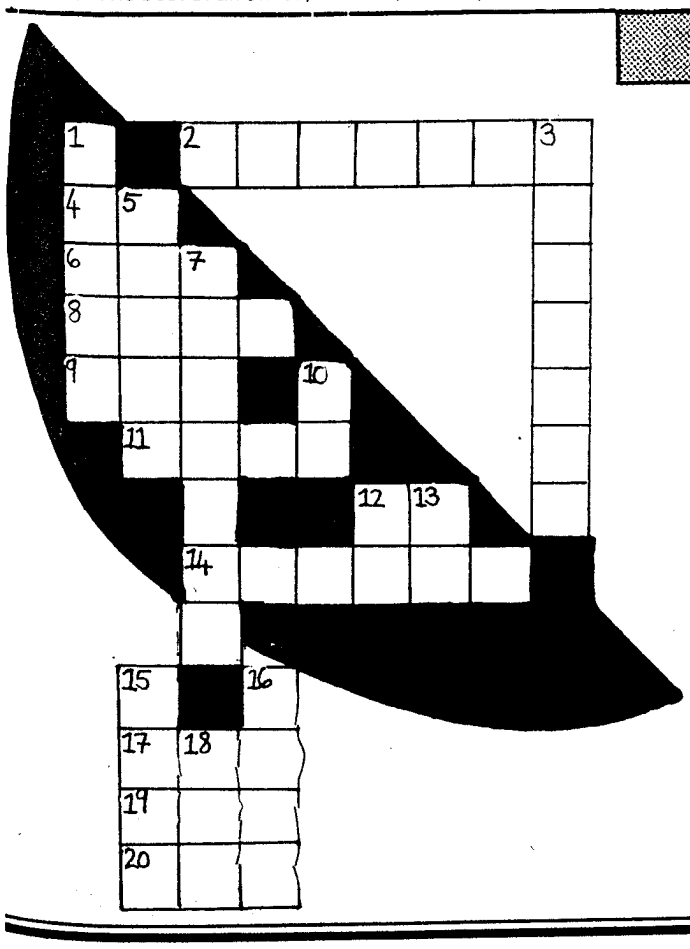
White to play and win

Solution to Chess Position 1:

1. R X P ch, K X Kt 2. R-R7ch, K-Kt1 3. R-R8ch, K X R 4. P-Kt7ch, K-Kt1 5. R X R = Qch, K X Q 6. K X Kt White has a won ending.

V V.M

ASTROCROSSWORD



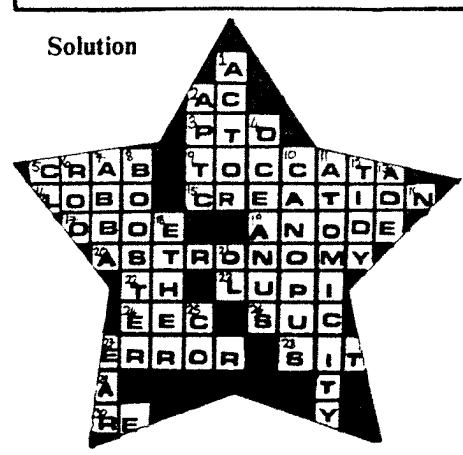
ACROSS

2. *Spectacularly successful traveller.*
4. *I feel tidal friction is one thing but this is ridiculous!*
6. *A long look at cosmic rays, solar plasma, Van Allen belts and so on.*
8. *A pleasant French town?*
9. *She leaves the craft.*
11. *An amorous asteroid.*
12. *With another 'N' you could live in it.*
14. *An apple was a matter of some gravity to him.*
17. *In Crete Jove hid there.*
19. *If it's a god it's false, if it's a hat it protects, if it's a can it preserves.*
20. *Appropriately enough.*

DOWN

1. *It conducts electrifying chase of a smaller body.*
3. *One keeps harping on their quick change behaviour.*
5. *Nose-cone.*
7. *Appropriate instrument for the music of the spheres?*
10. *Not them.*
12. *Neither male nor female.*
13. *A refusal.*
15. *(American) astronomers do it at..*
16. *The sound of one clapping gives 18D?*

Solution



INAUGURAL CEREMONY ADDRESS

read by Prof. E.K. Kharadge

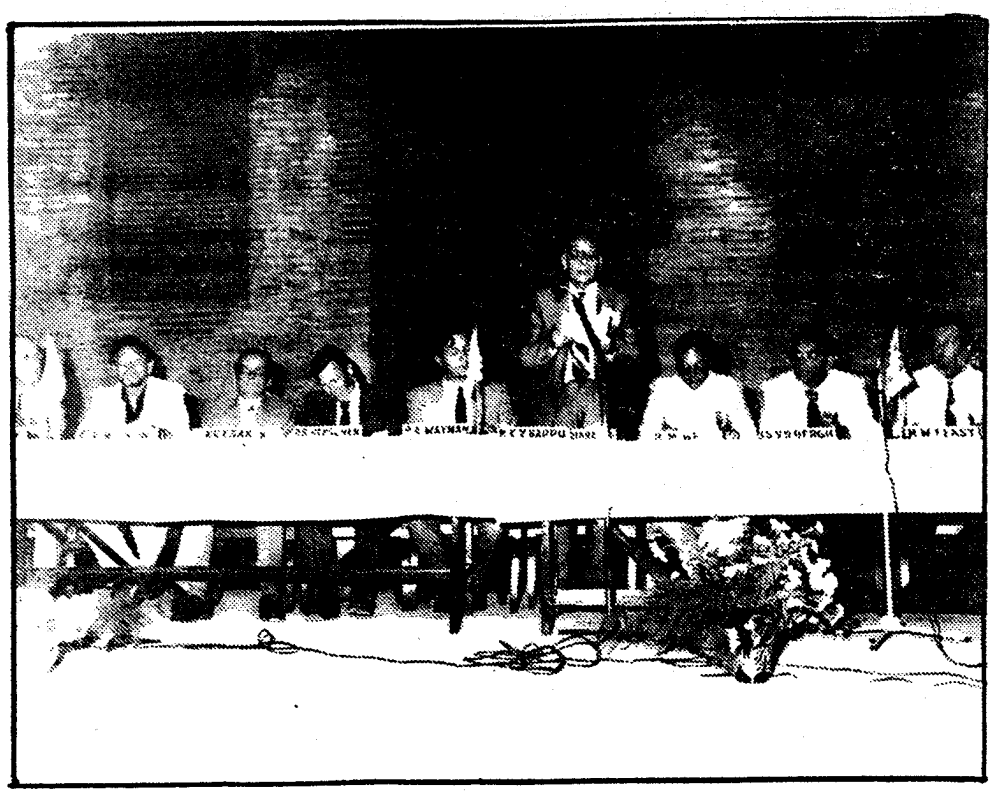
of Professor M.K.V. Bappu

Your Excellency, Minister of Education, Professor Xanthakis, Mayor of Patras, Mr. Vice Chancellor, Ladies and Gentlemen:

It is with great pleasure that I wish to convey to you, the sincere gratitude of the International Astronomical Union, for your very kind invitation to hold our General Assembly in Greece, and for the very warm welcome you have extended to us. This delightful seaside venue with its ancient castle, the several attractions for the visitor, and its place of learning, provides a setting for our deliberations of the forthcoming week, that is both popular and practical. Sitting here today, in this ancient Odeon of Patras, whose walls have held the rapturous silence of deep concentration or the thunderous ovation of approval of many a Greek classic, here beneath a glowing canopy of stars, a present generation of astronomers seeks to keep a tryst as it were, with their predecessors of an ancient past The Greek philosophers of antiquity have provided us with much of the basis of our present concept of man, state and society. From the point of view of those gathered here, the Greek mind has demonstrated the power of abstract thought and mathematical ingenuity. Its picture of the world was intertwined with reasoning and apparent harmony.

It is therefore, very gratifying to find that Astronomy in the Greece of today has not just rested on these very creditable laurels that assure it a place in the history of Mankind. There are several flourishing schools at many centres of learning whose contributions in such fields as mechanics, galactic dynamics and solar physics, to mention just a few, have been highly rated by the astronomical fraternity. This awareness of its role in human history and willingness to participate in international cooperation is seen in the fact that Greece has been a member country of our Union since its inception. Its individual members have contributed very effectively to the progress of our science. We can offer no better testinomy of your interest in the affairs of the Union, than the fact that our General Secretary of a few years ago has been a distinguished colleague from this country.

We are happy to be here today. There is an air of excitement akin to homecoming. For, it is a privilege to be invited as astronomers to this cradle of human endeavour from where Man first speculated on the nature of the Universe and his environment.



In the absence of Professor Bappu, Professor Kharadze opens the First General Assembly.

FIRST SESSION GENERAL ASSEMBLY PRESIDENTIAL ADDRESS

read by Dr. M.W. Feast

of Professor M.K.V. Bappu

Members of the Union,

Ladies and Gentlemen:

Circumstances, totally unexpected, and to some extent beyond my control prevent me from being with you during this General Assembly. Like many amongst you, I had looked forward to a feast of scientific fare with a gourmet's anticipation and especially the opportunity to meet both a young generation of IAU members, as well as those already established in the profession, when I was a newly initiated member. Wherein lies the strength of our Union and at the same time its principal charm that keeps us all together. Besides the aspects of international cooperation, the Union has a prime responsibility of promoting the study and development of Astronomy in all its branches. It does so by fostering an awareness of accomplishment, and providing some of the sources of stimuli that can result in creative intellectual productivity. On this occasion, the joint-discussions, the invited discourses, the joint commission meetings, to mention a few, cover a wide variety of astronomical enterprise; the cream of much effort and its implications, discussed and absorbed, before we return homewards for a fresh look at the problems that interest each of us.

The years ahead hold forth the promise of striking developments on a magnitude never witnessed before. We are on the threshold of an era when we shall have the opportunities of using telescopes from space that will have apertures, considered large even from ground-based standards. With the veil of limitations imposed by the earth's atmosphere behind us, and with the variety of new technological triumphs at our disposal, we approach in our quest, the ultimate in resolution and limiting brightness. This has always been the astronomer's fondest dream. And the nature of physical discovery that we have witnessed over the ages gives us the feeling of assurance that a major technological leap of this kind will in its wake stabilize some of our conjectures, bring out the totally unforeseen characteristics in some of the objects we study, will revolutionize our thinking, and in general produce a multitude of data that needs to be sifted through with care and judgement. This avalanche of information will

Continued on page 6

The IAU - the First 60 years
Reminiscences and Reflections

by Zdeněk Kopal

The 18th General Assembly of the ternational Astronomical Union meeting in atras this month coincides with an important niversary in the history of our organization: r it is 60 years almost to a month since the st IAU General Assembly met in Rome, ly, in 1922. Many events have occurred nce that time which changed the face of the orld almost beyond recognition; and it is ly natural that these events should be flected also in the life and activities of our nion. The aim of the present notes, written an old-timer, should be to give a brief count of them, and attempt to trace their uses.

First, some vital statistics: when the I.A.U. as formed in the aftermath of World War I, it d only a little more than 200 members — in a orld of some 1500 million inhabitants. Its embership grew up at first only at a oderate speed — by the time of the 9th eneral Assembly held in Dublin in 1955 it as still possible to take a group photograph the entire assembly on one plate. However, th the advent of the space-age in 1957 the A.U. membership began to grow by leaps d bounds. Ten years later — by the time the th General Assembly met in Prague, the A.U. membership already exceeded 3000 in world whose population had risen to 4500 illions: therefore, while the world popula- n trebled, the number of astronomers ganized in the I.A.U. increased 15 times. is fact, in turn, was bound to bring about so secular changes in the role of astrono- ers (and their organizations) in the world, hich may be of interest to recall.

The first 5 General Assemblies of the I.A.U. ere held in Western Europe (one on the East ast of the United States) — never too far om the shores of the Atlantic; and since in e days of predominantly surface travel one d not have to worry about baggage owances, the tenor of most meetings was ore formal: white tie and decorations were rigueur for more than one occasion; and en the Union met in a national capital, its embership used to be received in person by e head of state. Who would ever forget the I.A.U. General Assembly held in July 1935 Paris, when all astronomers of the Union re received by the President and Mme brun in the gardens of the Elysée palace; or e closing banquet at the Eiffel Tower which ted till dawn? The 6th General Assembly in ockholm was held in August 1938 already in e deepening shadow of another storm of bal dimensions, which broke out a year er with unparalleled fury to shake the world its foundations. And when the main storm w over, the world never returned to what it ed to be — an observation fully applicable the IAU as well.

On the external side, the heads of state ased to receive the Union (at least in rson), possibly to economize on the costs of large receptions! Moreover, the locations where general assemblies are being held have been (quite rightly) de-centralized from small areas of high-density population to a theatre of global proportions, but this fact is bound of necessity to increase the travel costs for the participants from distant parts of the world. In the «roaring sixties» it was still possible to have these travel costs under-written from public funds of national origin even for young participants who may not stand yet too high on the official ladder of their organizations. However, in the more recent past, the costs of travel (mainly by air) have kept escalating — and the sources of national support drying up — to such an extent as to make a participation of especially the young generation of astronomers in the I.A.U. meetings in the future increasingly difficult — a problem of concern not to them alone; for without a steady influx of young blood the Union could wither rapidly into insignificance.

And there are other costs for the participants in the Union activities besides travel. In the days which its older members still well remember, participants travelling from a distance could usually rely on a considerable amount of local hospitality. Due to the economic facts of life such hospitality has now all but disappeared. On the contrary, few organizations can afford now to invite the Union to meet on their ground without charging «registration fees» to all participants — fees which (like everything else) are escalating with inflation. Older participants can still remember the days when there were no such charges. At Montreal in 1979 they amounted, however, already to $50 per person; at Patras they have now escalated to $100; and whether future escalation will be in arithmetic or geometric progression is anyone's guess.

Political Perturbations

The principal reason for this distressing situation is, of course, the rampant inflation of our age — coupled with the fact that the I.A.U. is not (and never has been) a wealthy organization; nor has it ever been politically independent of its sponsors. It was, in fact, founded by the Allies of 1918 as an annex to the Treaty of Versailles (with English and French still remaining its «official languages»), and created as a union of National Committees of adhering countries, whose financial contributions (bartered in the style of Common Market) are essentially responsible for its maintenance. Alternative, or supplementary, sources of income for the Union have not been seriously sought by its leadership, because the present system continues to offer certain advantages to its sponsors.

It may be of interest to recall, for instance, that the German astronomers were not admitted to the membership of I.A.U. during the days of the Weimar republic — that privilege was extended to our German colleagues only after the advent of Hitler (whom the former Allies were obviously more intent to please); and the Union has really never been free of political interference from many directions ever since. Perhaps the most conspicuous example of such an interference in recent years was the technical expulsion of the Republic of China, which was eased out of our midst in 1955 by the United States (during the enlightened era of John Foster Dulles), in collaboration with certain astronomers from Western Europe. Only God knows what good should have come to the science of astronomy and to the International Astronomical Union from severing (albeit temporarily) its official ties with the most populous nation of the Earth; but such acts did happen, and will continue to happen as long as the present structure of the I.A.U. remains unchanged — i.e., as long as it remains in effect only a Union of National Committees; with little strength at grass-roots. For this has been its principal weakness built in at the time of its foundation; and the principal obstacle why the Union has not addressed itself to problems facing it — and astronomy — now with greater effectiveness.

Some of these (concerned with escalating costs of meeting attendances) we have mentioned already. Let us now mention another — and equally important — task which should exercise the Union and its members seriously and in the near future: namely, the need for all results of current astronomical research to be made freely available to others. An exchange of publications to this effect — initially the task of learned societies or national academies — assumed since the commencement of the 19th century a more organized form through astronomical publications and journals (some of which — like the Astronomische Nachrichten or the Monthly Notices of the Royal Astronomical Society — are still with us today). The same cannot, unfortunately, be said of publications once issued by individual observatories — once printed at their own expense and distributed freely to all interested parties.

The formative years of the I.A.U. coincided with the time of «Indian summer» of that heroic epoch in the history of our science; and the first half of the 20th century saw its general decline. Disappearing series of once-proud serials of observatory publications or annals made way, to be sure, to new serials of observatory reprints of individual papers printed in different journals — a way which has dominated exchange of astronomical publications in the second half of this century — but anyone can read the writing on the wall that this mode of information exchange is likewise apt soon to become extinct.

Why? the reason usually given to justify this trend — namely, the escalating costs of printing — may at best constitute a part of the answer, but certainly not the whole. For it leaves out of consideration the fact that **all** costs of contemporary scientific life — buildings, instruments, salaries, etc. not only printing — have been escalating in a similar way; and yet money seems available to meet them. No; a general decline in the exchange of astronomical publications is being caused by our **greed** — a growing tendency to spend available funds «in-house», and to de-emphasize «hand-outs». This, if it continues unchecked, will be bound to increase the gap between «have» and «have-not» nations in astronomy (as it is doing in so many aspects of human life on this planet) — and which organization other than the I.A.U. could be called upon with greater justification to anticipate the needs of the future, and do something about them while there is still time?

Page Charges

In the meantime, astronomical journals continue to appear (and some even flourish), but another devil has of late raised its ugly head to impede dissemination of astronomical information: namely, bay the bogey of «page-charges» levied against the authors (or their institutions) for the privilege of having their work appear in print. Arguments usually advanced to rationalize such an economic policy are specious and unconvincing. But whatever the case may be, many will find it repugnant in principle that it is the author — the man who did the work — who should, in addition, pay for the privilege of offering freely the results of his work to others. If anyone, it is the user who should pay (through subscription, or other ways) for free access to them.

For authors (or their institutions) to subsidize publication of their work is, moreover, demoralizing and, as such, of legitimate concern to the I.A.U. on at least two counts: it favours individuals (or institutions) who can afford to buy themselves access to the channels of publications; and it discriminates against contributions from countries with «soft» currencies, not readily convertible (at least, not without a lot of red tape) into those in which page-charges are to be paid. Neither of these points has anything to do with the quality of the work in question, but with circumstances largely beyond the control of any individual astronomer. Should, moreover, this situation worsen in the course of time, would it not only be legitimate, but necessary, for the Union to provide assistance to professional colleagues in the developing countries to ensure that the flow of astronomical information continues to function unimpeded.

Most astronomers would probably agree that this is a worth-while challenge; but to accept it would again cost money which the Union at present does not possess; and the question ist: how to raise it? By augmenting the regular income of I.A.U. by dues (statutory, or voluntary) paid by the members themselves? By enlisting interest and support of philanthropic organizations (national, or international) which could assist in our needs? Or by developing a closer cooperation between I.A.U. and amateur astronomers — who outnumber the professionals organized in the I.A.U. at least ten-to-one; and some of whom are well organized in large associations of considerable wealth? After all, there is much more money in circulation in the world now than has ever been in the past; the question is only how to channel it to useful ends

None of these questions admit of easy answers but all (and many others) may have to be asked and answered — before we shall have done what is expected of our generation

HEALTH - INSURANCE - SECURITY

(Tel: 992.342)

Participants and guests, or other persons on their behalf, seeking medical assistance rgently should call day or night the following telephone numbers

elephone	Name	Specialization	Language
76.400	Dr. S. Stavropoulos	Cardiologist-Pathologist	English
78.957	Dr. C. Christopoulos	Cardiologist-Pathologist	French
22.744	Dr. C. Klounikas	Cardiologist-Pathologist	French
77.833	Red Cross		English-French
92.342	Mrs. Helen Ghekas		English-French German

Mrs Ghekas, member of the Secretariat, will assist participants to find the appropriate ealth service in case of extreme urgency

During the scientific sessions there will be outside the University Dormitory Concourse a ed Cross ambulance that will provide First Aid service on the spot or take patients, in case f need, to the University Hospital which is located about 10 km from the University

Participants who requested or will buy upon registration insurance coverage, under the rms specified in the Preliminary Programme, should contact, in case of need, Dr Paul atjiconstantinou (tel 991 920, building A, first floor, Office of LOC) To Dr Hatjiconstantiou participants should also address their questions concerning security

FIRST SESSION GENERAL ASSEMBLY PRESIDENTIAL ADDRESS

read by Dr. M.W. Feast

of Professor M.K.V. Bappu

Continued from page 4

undoubtedly need the coordinated effort in analysis of so many dedicated to astronomy, that it will need to be global in nature. As a Union of such likeminded individuals, we see ourselves in an important role of the task of assimilation of these new results; it would be a perfect setting for international cooperation where the entire fraternity is engrossed in the adventure of exploring the vistas of the unknown Should we not explore this important angle in great detail before we are engulfed in the actuality of subsequent events?

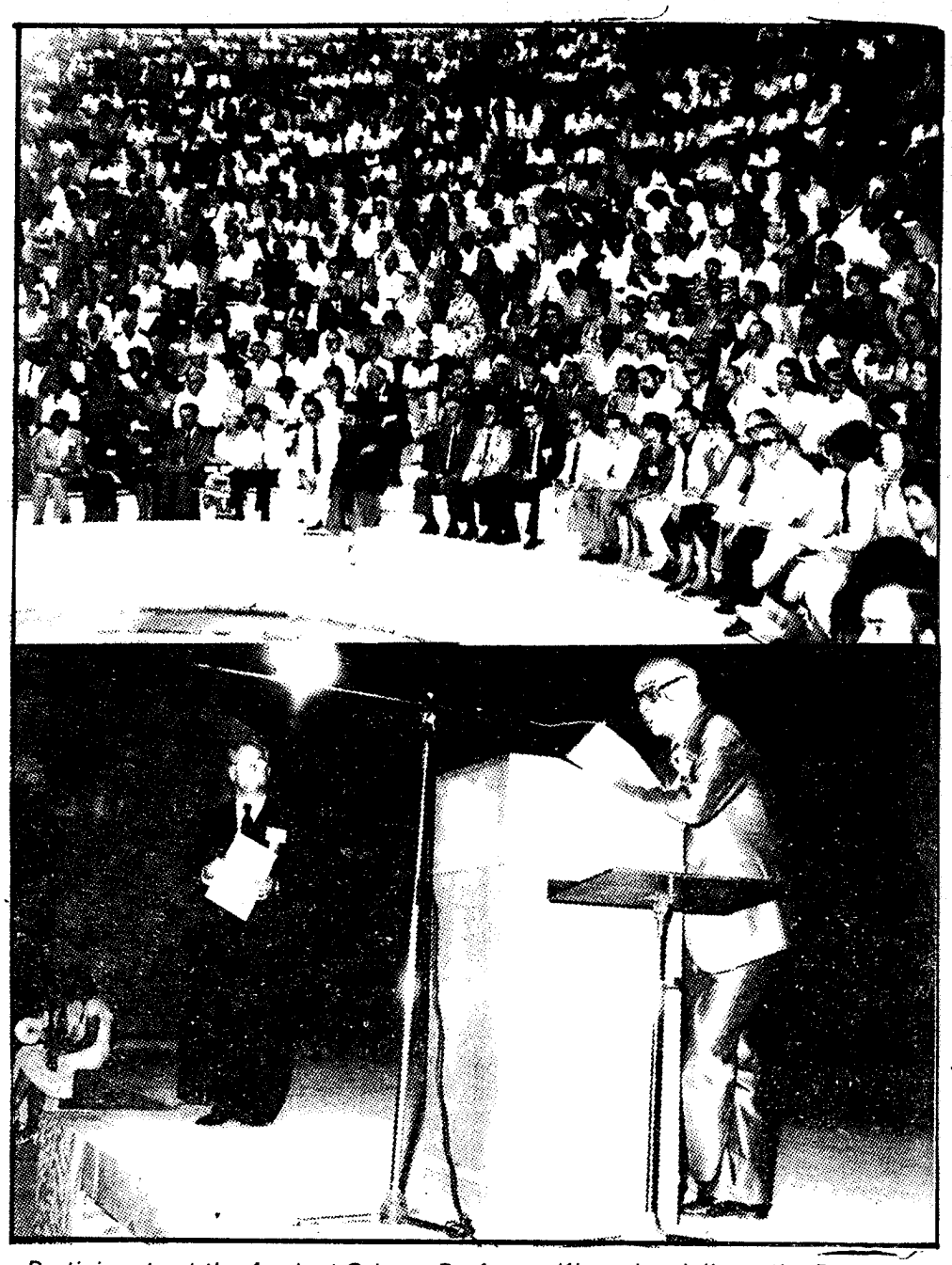
At this time and stage of development of our science I cannot rule out the feeling that our approach to the unknown and the unexplored has been overcautious and without the touch of daring, bordering on rashness that has characterized the bold explorer of the past. Are we enmeshed in the fetters of inhibition originating from a conservatism of outlook? Could we have had discoveries ahead of the times they were actually made, if only a freshness of approach was not lacking? I am of the opinion that it has been so

Assuming that my surmise is likely to be valid, I fear that we have been slow to respond to the lessons of experience of the recent past In our search for objects that display peculiarities of a kind beyond our normal familiarity, we could with advantage follow the pattern adapted by that illustrious pioneer, Kapteyn, of sampling received from objects in a restricted area of sky. With the era of the large space telescopes round the corner, perhaps this philosophy of approach would be a dire necessity.

While innovation in technique is a factor of much significance in the discoveries that will yet be made, it is certain that an even greater role will undoubtedly be of a human intellect. Time and again we have seen how an individual has appeared on the scene and transformed a picture of gathering confusion into one of logical rigour and aesthetic simplicity In the final reckoning, it is this aspect of Man that is a responsibility shared by each one of us in our individual roles, be it of teacher or senior colleague, as well as of the astronomical community and the Union as a whole, to nurture such possibility. The history of the human race provides the evidence that the spark of enthusiasm which fires the genius in Man has no regional preferences for its origin. To fan this streak into the flame of intellectual achievement is at once an obligation and an assurance of a dynamic future. In its longterm view of contributing to the development of Astronomy, the Union must necessarily give considerable attention to the very important role of the individual in Astronomy.

I shall dwell very briefly on one further aspect to which the Union must find the resources necessary for effective implementation. Since the dawn of human civilization, we have seen how emulation has spread the zone of achievement. The facility of travel has been the prime means of doing so. The examples witnessed and experienced first hand, the contacts made, the discussions, the arguments and the listening which update one's awareness of the problem, all apply to any form of enterprise, astronomical or otherwise. In research and in the propagation of learning, it is well-known that a brief period of contact with the great masters, whichever part of the globe they be in, has always provided the stimulus for achievement; the confidence of one's capability coupled with a spark of ambition inevitably brings on a measure of success. Our efforts within the Union, to promote such possibilities, have been of modest dimensions, for the resources we usually provide Commission 38 are meagre. This is an important area which deserves considerable attention. In the years ahead, it might indeed be an important lifeline of existence.

I send each of you my greetings and good wishes. I hope you will all have a very useful and enjoyable stay at Patras.



Participants at the Ancient Odeon; Professor Kharadze delivers the President's address;

Inaugural Ceremony and First General Assembly

Continued from page 1

Following the Rector, IAU Vice President Professor E.K. Kharadze read out an address prepared by the President Professor M. K.V. Bappu. In his speech, Professor Bappu conveyed the IAU's thanks for the invitation to hold the Assembly in Patras, in the country where many of our present ideas on man, state and society were born. (A full report of Professor Bappu's speech appears on page 4).

After these speeches of welcome and thanks, the President of the National Academy of Athens rose to open the XVIII General Assembly. Professor Pericles Theocharis expressed his honour and pleasure at welcoming the IAU to Patras, city of his origin. Then to applause from the encircling rows of delegates, Professor Theocharis declared the General Assembly open.

Professor Theocharis described the IAU's Assembly in Greece as a pilgrinage of astronomy to the place of its birth. The Greek contribution to astronomy was most marked in three spheres. Greek astronomers have, first, improved the standards of measurement in astronomy; secondly, they have developed geometrical models of motions in the sky; and thirdly, the Greeks have specialized in the calculation of cosmic dimensions. In the first, they have followed on from the Egyptians and Babylonians, but in the other two fields the Greek astronomers have opened new chapters resulting in new advances.

Why this precision in astronomy while there was a paucity of measurements in other physica sciences? Professor Theocharis ascribed this partly to the obvious practical uses in navigation — as mentioned in the most ancient poetry — and in agriculture. But more important were irrational factors, stretching back to earlier times of astrology. The cyclical character of changes in the sky awoke the consciousness of ancient man to the certainty of the heavens as opposed to the uncertaint of our life on Earth. This religious fascination led to simple star worship, which was then rationalized into an urge to achieve great precision in studying the sky

Through the great years of Greek philosophy and the birth of science in Greece, this concept was a disputed one: Plato spoke of the immortality of the soul as contrasted to the divinity of the stars, while the Pythagoreans refuted the concept of separating the sky and Earth. Once Aristotle accepted this unity, it became fundamental to the development of Greek science which has led eventually to our modern world of science and technology.

The colourful choirs then returned for another recital of songs, both national and international — ranging from a folk song on the sailing of sponge-fishing boats to the negro spiritual Kybaya and a Greek song mimicking a kitten chasing a mouse. The audience warmly applauded the marvellous musical performance that the choirs had given.

These songs concluded the Inaugural Ceremony, and after the official visitors had left, the meeting proceeded to the First General Assembly. Vice-President Kharadze opened the Assembly with the sad news concerning the President. Professor Bappu had undergone a major open-heart operation in Munich on 9 August. But although the operation was successful, serious complications have now occurred, and his condition now gives «cause for serious anxiety». He called on the Assembly to join in his earnest desire for Professor Bappu's full recovery. Dr. M.W. Feast then read the President's prepared address to the Assembly (in full on page 4). The Assembly continued to its programme

AN ASTRONOMY VIDEO DISC PROJECT

By Claire J. Carr and Everett Q. Carr
Herkimer BOCES Planetarium
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In July 1980 we began work with a Pioneer VP-1000 Laser Disc and a PET computer to construct an intelligent interactive video disc learning system. The first programs were written for the MCA-Discovision disc, «What Makes It Rain». An adaptor consisting of a few IC chips and a pair of transistors made it possible for a computer program to control the VP-1000. All the functions of the remote control could be duplicated under program command. For example the program could search the disc for a specific frame; run the disc forward or backward for a specific time, halt for a specific time, return to the original or specified frame and repeat the process as often as required. The pedagocial design allowed reinforcement of correct answers in several ways. The words could appear in print on the computer display. The visual and audio of the disc could be repeated simultaneously. As one of our third-graders who participated in the test exclaimed, «Gee that's neat»! We tested 137 third graders with our program. Their test results were compared with 105 students subjected to a chalkboard lecture on the same material. The test results were considered identical

The Intelligent disc

We teach astronomy with a planetarium and computers. They are tools. The «intelligent» video disc is another tool, one equally at home in a class as at our planetarium. The Intelligent disc is however uniquely suited to an ideal of an educator, individualized instruction — taking a student from where they are to where they want to be in their studies. In a proper program the student is fully engaged, a necessary condition for learning. The LaserDisc, the computer and the adapter can be assembled in a quantity of one unit for just under $1300 at this writing. A VIC would be used with a 13 inch moniter. Our working premise in considering a laserdisc is that the same disc can be used at several levels of instruction just by altering the program. We also hope to explore the idea that an average interested teacher could learn a simple programming scheme and make their own programs. Failing that, the teachers could be induced to allow the system in the class room or in a center so that students could use the equipment and prepared computer programs. There are other hopeful ideas to be explored. For instance, the 750.000 NASA pictures of the planets could actually be reproduced on 7 laserdiscs. In fact JPL has already made such a disc. The results were excellent considering the bandwidth limitations of the standard TV receiver here in the US. I must guess, but if the high definition TV system comes into use the laserdisc can probably handle the bandwidth. It is possible even now however to place these seven discs in US high schools and colleges for less than $160 a set. Students then can have access to the source material planetary scientists will use for the next 20 years. It is possible for a skillful high school student to draw wind vectors on Mars dune pictures and uncover secrets of Martian weather, its soil and ice transport mechanisms.

Our work with commercial discs showed it was possible to construct useful learning modules with the disc made from a film. These discs were far from ideal however. It was difficult to branch for fast and slow students. There were no provisions for a scientific approach of observation, hypothesis and experimentation. Nor were there provisions for simulation under computer control. And there were no opportunities to use the computer as a measuring device, timer or calculator. It would be neat, as our student said to measure the major and minor diameters of an IO volcano and determine its true diameter, the altitude of an elevation from the sun angle, do a crater count in the quadrants for comparison or measure the altitude of the eruption on the moon's limb. In fact there seemed countless opportunities for pertinent, engaging and useful studies. In fact, its boggling.

A bold proposal

All this prompted a bold proposal to the assembled membership of the Mid Atlantic Planetarium Society, in April 1980. We asked for $1500, almost all the treasury contained, to undertake the work of producing a video disc. An interesting but not lengthy discussion took place during which it was determined that no other member of the society had video disc player and fewer than one in four thought that they would acquire one in the next two years. The affirmative vote to proceed was therefore a surprise. The officers were to determine how much would be spent however and that others should share the opportunity. The proposal was therefore presented to the International Planetarium Society in Mexico City, July 26th. Approval was given there for the production provided that at least 50 copies would be ordered of the disc at $50 per copy. At this writing we have orders for 23 copies resulting from a sample mailing about the project. It seems appropriate to open up the opportunity to the international community since the disc will be a collector's item at the very least. Moreover it will be a bargain since we estimate it will contain the equivalent of $300 to $500 worth of equivalent slides and films. The MAPS /IPS laserdisc will contain as much planet flyby material as possible. This will include the first Moon shots thru the Voyager II mission out to Saturn. There will be a computer generated image of the Venus surface, in rotation showing both hemispheres. We will attempt some Martian 3D and a simulation of the flight down Valle Marinaris. The project is however a modest one since the only costs covered so are the direct disc production of 50 copies. The authors will supply an index and demonstration programs for the PET and VIC computers. Discs are designed for the Pioneer VP-1000 but are believed to be usable on the Magnavox, SONY MCA Discovision Associates machine and the Philips machines if they have produced any.

Discs may be ordered from the International Planetarium Society. Checks should be payable to the Society. The authors will be happy to pass the orders on to the Treasurer. Perhaps others will care to join in the endeavor.

NASA STUDIES CONCEPTS FOR ORBITING HIGH-ACCURACY ASTROMETRIC TELESCOPE

David C. Black, research scientist, Theoretical and Planetary Studies Branch, Ames Research Center, NASA

An important and long-standing problem in astronomy is the origin of the solar system. Is the solar system but one example of a process that occurs frequently in nature, as would be indicated by currently accepted theories of star formation, or is it representative of a relatively rare process? A necessary step in answering this question, as well as in providing details of the process by which planetary systems and stars are formed, is provided by a comprehensive search for and characterization of other planetary systems. At the present time there is no unequivocal observational evidence for the existence of any planetary system other than our own.

A wide variety of techniques could be used to search for evidence of other planetary systems (see **Space Sci. Rev. 25, 35 (1980)** for a review of these techniques). Perhaps the most promising search technique, and the oldest, is that of astrometric observation. Until relatively recently the accuracy with whith measurements of the relative positions of stars could be made was several milliseconds of arc per yearly normal point (displacement of the sun due to Jupiter as viewed from a distance of 10 pc is 5×10^{4} seconds of arc). However, it is now possible using photolectric detectors to obtain the accuracy in a single night of observing that required a year using photographic detectors. Ultimately turbulence in the earth's atmosphere will limit the accuracy attainable for wide-field, single-aperture astrometric observations at a level of $\sim 1\text{-}3 \times 10^{-4}$ seconds of arc While this level of performance would be a significant improvement over that currently attained, and would allow detection of Jovian-mass companions to many nearby stars, it is not adequate for a comprehensive search effort. In order to conduct such a search, it is necessary that observations be accurate to 10^{-5} seconds of arc or better and that in turn requires a space-based astrometric system.

There are currently plans for two space-based telescopes which can be used for astrometric observations. The space telescope (ST) can be used in at least two modes to conduct relative stellar positional measurements, but the estimated accuracy of ST for such measurements is only 10^{-3} seconds of arc, inadequate for a comprehensive search The European space agency's Hipparcos Satellite, unlike the ST is specifically designed to conduct astrometric observations with emphasis on parallax measurements However, the expected accuracy of Hipparcos for relative stellar positional measurements is also only $\gtrsim 10^{-3}$ seconds of arc Recognizing both the fundamental scientific importance of results from a comprehensive search effort and the inadequacy of existing or planned astrometric instruments to conduct such a search, NASA and the California Space Institute recently sponsored a joint study on the feasibility of developing a space-based astrometric system capable of measuring relative stellar positions with an accuracy of 10^{-6} seconds of arc (the angular subtent of the bohr radius of hydrogen viewed from a distance for ten meters!) the study was conducted by the Lockheed Electro-optics Group in Palo Alto, California

The study considered two types of astrometric telescope, a classical imaging system and a white-light interferometric system. The physical characteristics of the initial concepts were 1-meter aperture 16.5-meter long imaging system, and 1-meter aperture(s) 15-meter baseline interferometric system The latter was a pupil-plane system that would simultaneously measure the positions of four reference stars and a target star The former was a simple parabolic reflector with measurement done at the prime focus using a CCD array behind a moving ronchi ruling, and could simultaneously measure the positions of hundreds of stars. The ruling modulates the incoming starlight thereby encoding the information concerning relative positions of stars into phase information in the output response of a discrete region of the CCD Array A major consideration of the study was to define a system which would cost (including spacecraft) less than $150 million

After several months of study it was concluded that although the interferometric system would be more sensitive than the imaging system, it was not clear that it was technically feasible and the cost estimates were well above the goal of $\$ 1\,5 \times 10^{8}$ The imaging system appeared technically feasible, but was also too expensive as originally conceived Lockheed then considered a scaled-down version of the imaging system (an F/8 rather than a F/16) The reduced system was nearly as accurate as the larger system, but was considerably less expensive A major gain in cost savings derived from the fact that an existing spacecraft (the multimission modular spacecraft) could be used, and the reduced size permitted use of a less-expensive thermally-compensating truss structure for the telescope The cost for the scaled-down system, including space-craft, is estimated to be $< \$ 150M$ The theoretical accuracy of the system for measurements of relative stellar posisions is estimated to be 10^{-6} seconds of arc in 10 hours of integration

NASA is continuing to study this promising instrument, not only because of its potential for shedding light on the issue of the origin of the solar system, but also because of the wide range of other valuable observations which could be conducted with such an accurate system Individuals interested in more detailed information can contact Dr David C Black at NASA's Ames Research Center, Moffett Field, CA 94035

NOTE FROM YOUR «PUBLISHER»

Your publisher is the Local Organizing Committee It is our great pleasure to welcome you all to Patras and wish you a pleasant and fruitful XVIIIth General Assembly. You are the people we have been planning, predicting, thinking about for the last two years. We hope you will find the results of our efforts satisfactory, that not many omissions have been made. If, however, you meet with some shortcomings you will perhaps find them acceptable considering our limited finances and personnel. Despite such shortcomings and apart from the Assembly's strictly scientific content, we hope that this meeting of astronomers from so many countries will help to promote international understanding and collaboration, for Astronomy, the study of the Universe, is perhaps the human endeavour most likely to bring together the peoples of this Planet Earth in peace and friendship.

ABOUT ASTROCOSMOS AND ITS EDITOR: Considering ASTROCOSMOS as the most important of our publications we invited Archie to be its Editor. Archie E. Roy is Professor of Astronomy at the University of Glasgow, Scotland. His teaching and research has been in Celestial Mechanics and Mathematical Biophysics. He has written astronomical textbooks and has annoyed many of his scientific colleagues by taking parapsychology seriously (I have been one of the annoyed colleagues myself since I spent eight years in Glasgow without being visited by a single ghost). But what fitted Archie best for the job of Editor of ASTROCOSMOS was, we thought, his being an author of fiction too (six of his novels will be in paperback soon). Also, his connections with Greece and knowledge of the place (he has visited the Country seven times and has made many Greek friends both here and in Glasgow) were the best guarantees for that «Greek flavour» we wanted ASTROCOSMOS to have. When he accepted the job we knew we only had to secure the necessary facilities and leave the rest to him. This was done to the best of the L.O.C.'s means and by last week all was set and ready for action; office, personnel (reporters, translators, typist, couriers), telephones, typewriters, etc. We hope you will like ASTROCOSMOS. If you do it will be due to Archie.

Most of the standard material to appear in this newspaper (general articles, cartoons, etc.) was in press before the Assembly began. The unfailing patience and in our opinion superb technical competence of our printers Mr and Mrs Constantinopoulos have already been in evidence and we thank them gratefully. They also helped in producing our other publications — final programme, list of participants, etc. — which we hope you will find up to standard.

Vassilis Markellos
L.O.C.

YOUR ASTROCOSMOS AND PRESS OFFICE STAFF

In spite of the above the Editor still had some doubts that he was fitted for the post. So we craftily gathered round him a talented staff of young people to do all the work so brilliantly that afterwards he can take much of the credit for their success.

Our reporters Heather Couper and Nigel Henbest form the well-known writing team known to their friends as Hencoup Enterprises. Nigel is a successful author, having written a number of books on astronomical topics. He is also astronomy feature writer for the British science publication NEW SCIENTIST and a consultant for the Royal Greenwich Observatory. Heather is a lecturer at the Greenwich Planetarium, National Maritime Museum, London, U.K. She has also published a number of books, lectures extensively in astronomy and is particularly interested in astronomical education, being currently on the Education Committee of the Royal Astronomical Society, U.K. Among the many talents of Hencoup Enterprises is the ability to make palatable wine out of the most unlikely ingredients. Heaven alone knows what alcoholic inspiration they will find on this visit to Greece where every village seems to have its own local vintage. The idea of Retsina Chateau Hencoup is almost too much to contemplate.

Peter Thomas Pappas, born in Milwaukee, Wisconsin, spent most of his professional life in the experimental flight centre of Boeing Airplane Industry in Seattle Washington, U.S.A. After returning to Greece he has written for a number of years a column of interpretative journalism for a Greek daily newspaper on world affairs. As the only person on ASTROCOSMOS staff with direct newspaper experience we can blame him if he allows us to create a journalistic disaster.

Tonia Margaret Pappas is currently attending business administration classes in the American College in Athens. She finds her participation in ASTROCOSMOS and the Press Office of the IAU General Assembly «a most memorable experience». We find her knowledge of English, Greek, French and Spanish decidedly useful.

Aspasia Koutsouveli is the young lady who manages to transform quickly and efficiently the editor's highly individualistic handwriting (unkind people have been known to call it illegible) into neat typescript for the printer as well as providing coffee to stimulate our talents.

Kosta Papadakis' main concern during the Assembly will be to safegard the non-Greeks in our staff from... losing themselves in the town of Patras or between the ancient odeon, the wine festival and the printer's office. Also, to help our publisher Vassili Markellos provide all the facilities to them. For example, he is the one who brought in that huge coffee-maker Aspasia uses about six times a day for the benefit of our Editor and staff. Normally Kosta is a research student at the University of Patras working on the three-body problem.

Left to right: Olga, Heather, Nigel, Aspasia, Vassili, Archie, Peter, Tonia, Karen (liaison to the IAU Secretariat), Kosta.

Ian D.B. Roy is the young man, son number two of the Editor, who has provided all the cartoons you will find in ASTROCOSMOS as well as the layouts for the astronomical crosswords. Sixteen years of age, he hopes to make a carrier in commercial art. A large fee for his services to ASTROCOSMOS was negotiated on his behalf by his young brother David, aged 14, who as agent hopes to take the customary ten percent (Note by the publisher: the fee in question will be paid BY THE EDITOR when he returns to SCOTLAND!).

Olga Filippa works mainly in the Press Office. She is an undergraduate student of Engineering at the University of Patras but thinks that «astronomy is *probably* more exciting».

Last but not least, Vassili Goudas is our part-time courier, part-time photographer and general troubleshooter. He plans to be an undergraduate student at the University of Patras next autumn when he hopes to meet «more students and fewer Professors» than in the IAU General Assembly (just out of high school, he is not convinced yet that Professors are eternal students!).

TODAY'S EVENTS: LES EVENEMENTS DU JOUR:

JOINT DISCUSSION I:

«Solar Luminosity Variations»
(IAU Commissions 10, 12, 27, 35)

09.30-11.00, 11.30-13.00, 15.30-18.00, Room AB, 18th August

SOC	Commission
* J.A. Eddy (USA), Chairman	10
P.V. Foukal (USA)	
D.O. Gough (UK)	35
G.A. Newkirk (USA)	10
G.W. Lockwood (USA)	27
* Editor	

Programme
H.S. Hudson: «Observations of Short-Term Solar Irradiance Variations from Spacecraft».
P.V. Foukal: «Interpretation of Short-Term Solar Irradiance Variations».
J.A. Eddy: «Historical Reconstruction of Solar Constant Variations».
G. Frohlich: «Radiometry of Solar Irradiance Variations over Long Time Scales».
J. Christensen-Dalsgaard: Theory of Evolutionary Changes in Solar Luminosity»
W.C. Livingston: «Indirect Diagnostics of Solar Irradiance Changes».
G.W. Livingston: «Indirect Diagnostics of Solar Irradiance Changes».
G.W. Lockwood: «Luminosity Variations in Late-Type Stars».

JOINT DISCUSSION VI:

«Active Galactic Nuclei»
(IAU Commissions 28, 40, 48)

09.00-10.30, 11.00-12.30, 15.15-17.45, Room AA, 18th August

SOC	Commission(s)
* F. Pacini (Italy), Chairman	48
M.J. Rees (UK)	48
M. Kafatos (USA)	28
K.I. Kellermann (USA)	28, 40
E.Y. Khachikian (USSR)	28
* Editor	

Programme (Provisional):
Topics: The Evolutionary Stage of Galaxies with Active Nuclei. Physical Conditions inferred from observations in the inner regions of active galactic nuclei.

INVITED DISCOURSE

In the Ancient Odeon of Patras: at 20.30 h.
«Astronomy in Ancient Greece», by M.A Hoskin.

At EOT Swimming Resort, Aya, Patras:
WINE FESTIVAL: 20.00-24.00