

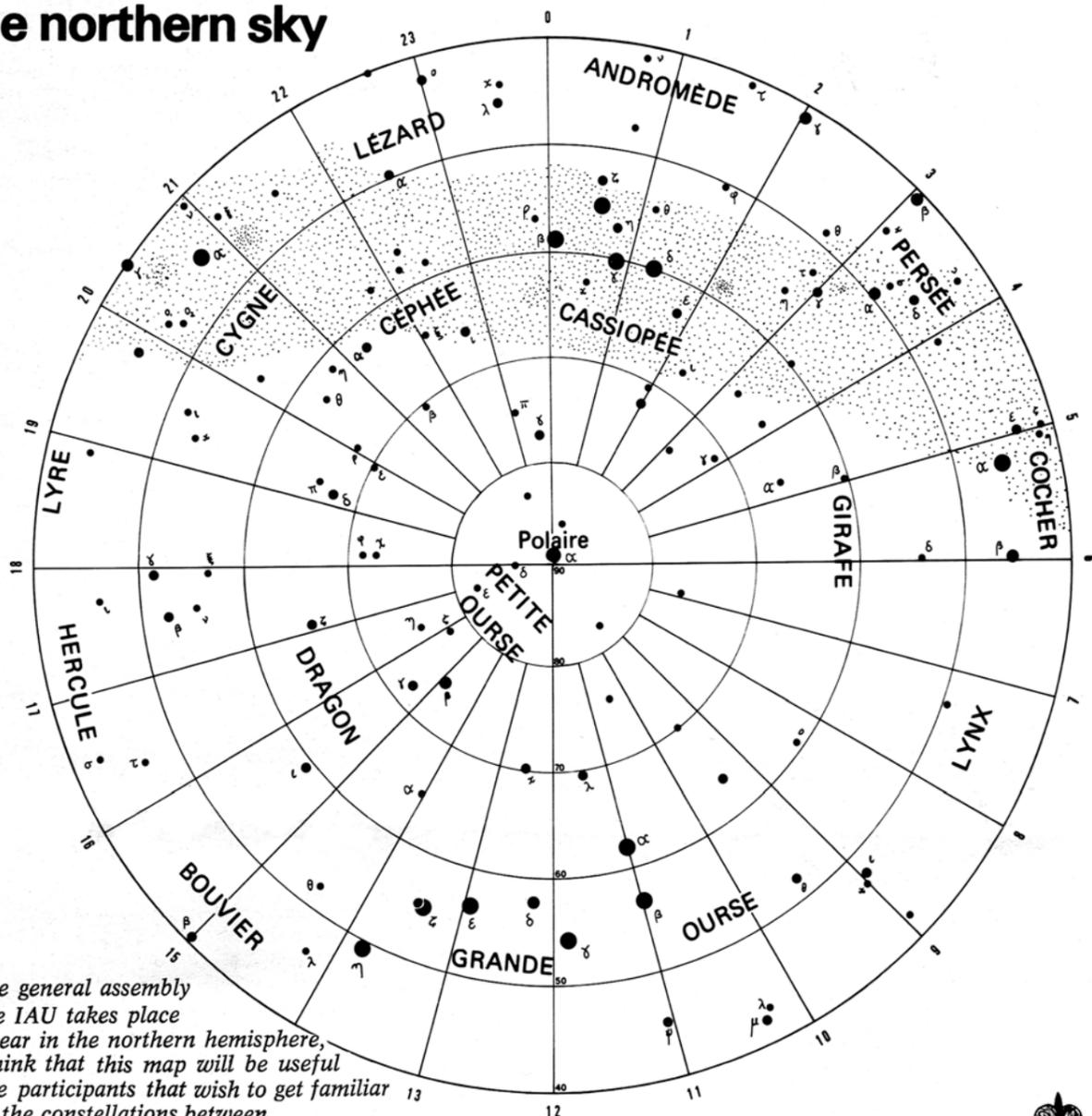
La Gazette d'Uranie

XVI^e Assemblée Générale



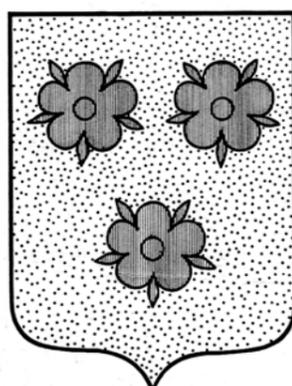
XVIth General Assembly

the northern sky



As the general assembly of the IAU takes place this year in the northern hemisphere, we think that this map will be useful to the participants that wish to get familiar with the constellations between 40° north and the Pole.

about grenoble



as or means gold and gueules means red in heraldry (English : gules).

This figure represents the coat of arms of the city of Grenoble. You have probably seen it already when walking about the streets either on public buildings or used as a decoration in shop windows or other places.

It reads in French "d'or à trois roses de gueules" which means that the background of the shield is gold with three red roses on top.

As the printing here is in black and white we have used the conventions of heraldry : the tiny dots mean the colour is gold, the vertical hatching represents red (gueules), horizontal hatching would be used for blue (azure) etc. The same convention is used if a coat of arms is to be engraved on stone.

The origin of this coat of arms is not sure. The name of Grenoble comes probably from Gratianopolis, the town of Gratian (Gratian, son of Valentinian the 1st, was the roman emperor from 375 to 383 A.D.). A play on words may have led to the idea that it meant the town of the Graces of mythology, each of the three Graces being represented by a rose.

Another more far fetched explanation is that three roses came out from "noble seeds", in French "grains nobles", which explains also the name of the town.

B.M.

latest news

— The sessions on Hot Interstellar Gas in the morning of Wednesday, 25 August, and on interstellar Molecules and Dust in the afternoon of the same day, are sponsored jointly by Commissions 34 and 44.

— Le Centre Aéré pour les enfants sera ouvert de 8 h 45 à 12 h 30 et de 13 h 45 à 17 h 45 au Bâtiment de Physique. Il sera fermé le samedi après-midi et le dimanche. Prix : 6 F la demi-journée. Tickets en vente à l'accueil.

(The Day Camp for children will be open from 8.45 to 12.30 and from 13.45 to 17.45 at the Bâtiment de Physique. It will be closed on Saturday afternoon and Sunday. Charge : 6 F for a half-day. Tickets on purchase at the welcome office).

l'assemblée générale de 1935

L'UAI se réunit pour la seconde fois en France : déjà, il y a 41 ans, elle y avait tenu sa V^e Assemblée générale. S'il n'y a plus actuellement de membres de l'UAI ayant participé à la 1^{re} Assemblée générale, plusieurs de ceux qui sont actuellement à Grenoble ont assisté à celle de Paris.

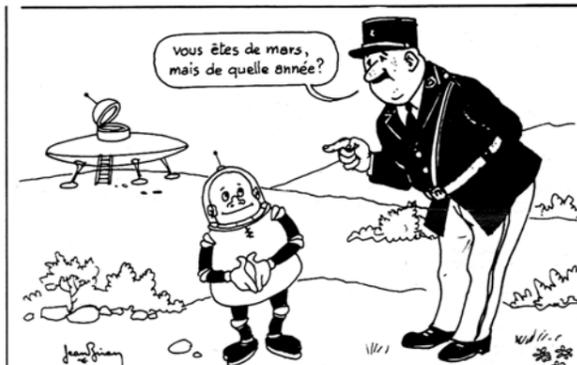
Le nombre des congressistes était alors de l'ordre du sixième de ce qu'il est actuellement (rapport qui ne paraît pas éloigné de celui qui correspond à l'effectif des chercheurs du domaine de l'astronomie) : 300 astronomes, 450 inscrits au total. Il était ainsi possible de donner aux manifestations un éclat qui serait peu concevable aujourd'hui.

Les congressistes furent accueillis au Palais de l'Élysée où le Président de la République, A. Lebrun, leur offrit une garden-party. Ils furent reçus dans les salons de l'Hôtel de Ville, à l'Observatoire de Paris illuminé pour la circonstance, à l'Observatoire de Meudon, ils visitèrent le Palais de Fontainebleau et le Parc du Château de Versailles, dînèrent au Restaurant de la Tour Eiffel, et bénéficièrent des feux d'artifice et des jeux de lumière de la Fête nationale française du 14 juillet (qui, à en croire le témoignage du Président de l'UAI de l'époque, F. Schlessinger, paraissait durer trois jours).

Il y a quarante ans, les discours n'étaient ni plus nombreux ni plus longs que maintenant, mais le style en était peut-être plus littéraire. Mario Roustan, Ministre de l'Instruction publique, parvint à citer, outre dix-sept grands scientifiques du passé (astronomes et mathématiciens, où un entomologiste était égaré), les noms de neuf écrivains : Molière et La Fontaine, Rousseau et Fontenelle, Voltaire et Renan, Lamartine et Boileau, et même Sénèque. Qui battra ce record ? Le Président du Conseil municipal de Paris, J. Chiappe (ex-Préfet de police), combla d'aise les congressistes en les assurant que "leur âme assoiffée de certitude s'élève aux plus hautes spéculations philosophiques" et que, d'après G. d'Annunzio, "pour pouvoir regarder les étoiles, il faut avoir les yeux purs" ; et, bon prophète, il annonça "un jour, dans quelques siècle ou demain, les hommes... s'élanceront, dans l'immensité vierge, à l'assaut des astres" (mais il ajoutait "pour fonder des empires nouveaux"...).

L'Union soviétique et la Chine venaient de s'ajouter à la liste des Etats membres de l'UAI. Le nombre des Commission était de 36, peu inférieur à ce qu'il est aujourd'hui, mais leurs travaux étaient presque entièrement consacrés à l'astronomie de position ou à l'observation des phénomènes physiques ; l'astrophysique théorique apparaissent, timidement, dans trois d'entre elles : nébuleuses et amas, constitution des étoiles et spectrométrie, et déjà la révolution était amorcée.

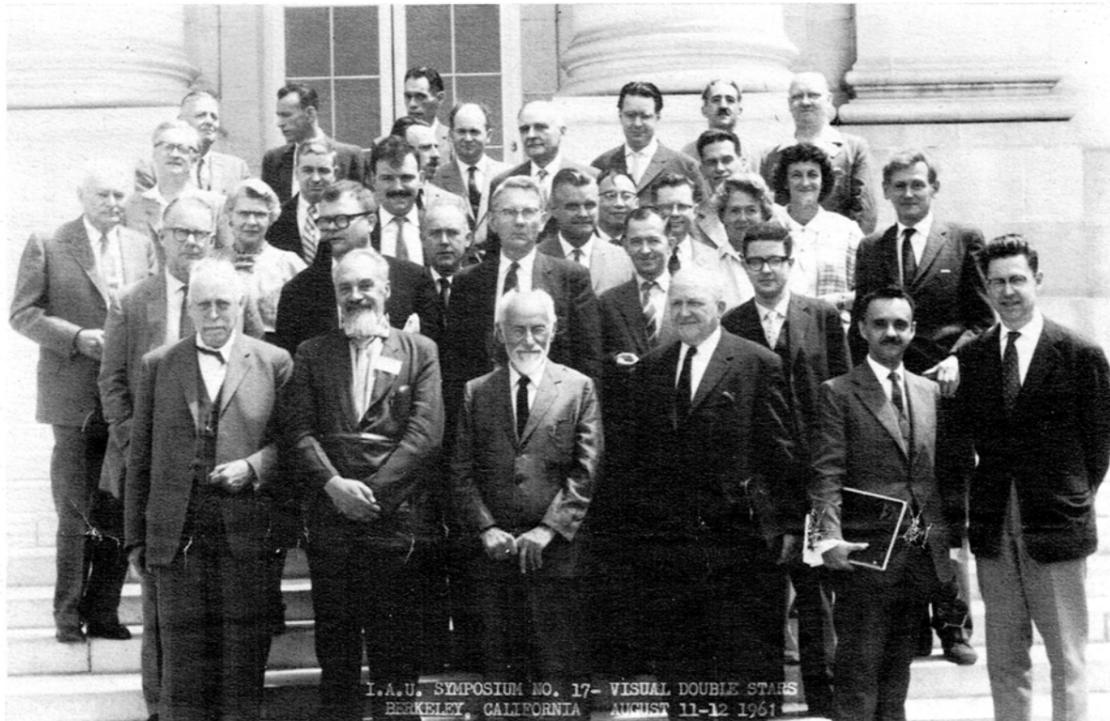
J.L.



IMETAL PENARROYA
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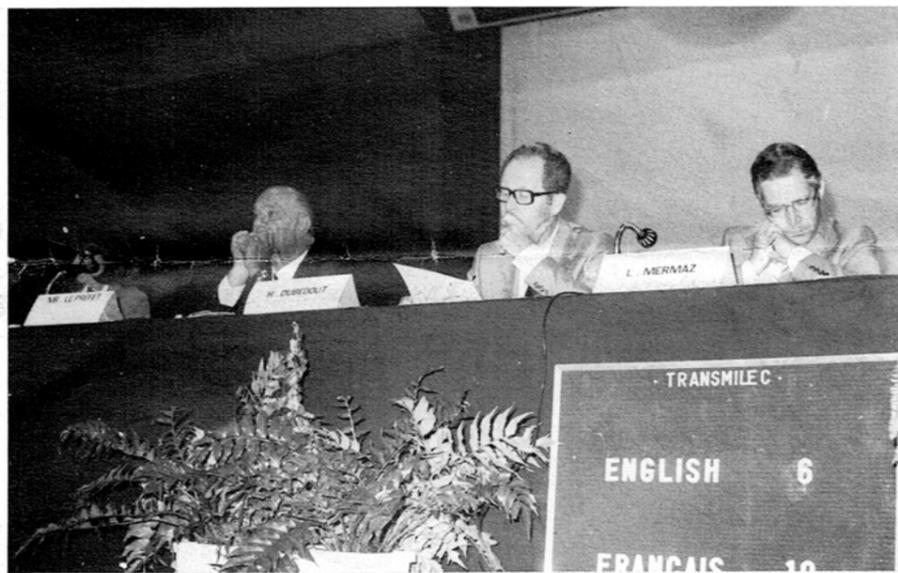
who is who? an IAU contest



- 1 - When, where and on which occasion was this photograph taken?
- 2 - Identify as many participants as you can.
- 3 - How many people will give the right answers to questions 1 and 2?
- 4 - How many people will give the right answer to question 3?

The people that are shown on the photograph are not allowed to take part in the contest, nor are the members of the editorial board of "La Gazette d'Uranie" to whom your answers should be given before August the 27th at 12 h UT.

inaugural ceremony



The inaugural ceremony of the XVIIth General Assembly took place at the Patinoire in Grenoble yesterday at 9.30. On the photograph are seen from left: Mrs Saunier-Seïté, Secretary of State for Universities; M. Janin, Prefect of the Isère; M. Dubedout, Mayor of Grenoble; M. Mermaz, president of the local Council of Isère.

horoscopes

La croyance dans les horoscopes a pris depuis plusieurs années dans le monde, un développement tel que non seulement le public non informé y trouve un intérêt accru, mais que également des hommes réputés cultivés y rapportent parfois leurs décisions.

C'est pourquoi, 186 savants éminents — principalement américains — dont 18 Prix Nobel, ont récemment publié dans la revue "The Humanist", une mise au point formelle contre l'astrologie.

Nombre de personnes s'étonnent toutefois du silence dans lequel semble se cantonner la généralité des astronomes, c'est-à-dire ceux des chercheurs qui, professionnellement, sont parmi les mieux informés de tout ce que la Science permet de connaître sur le cosmos.

Ce silence est souvent considéré comme une reconnaissance de l'astrologie.

Une prise de position commune de la part des astronomes du monde entier, à l'occasion de la présente Assemblée Générale de l'Union Astronomique Internationale apporterait l'information essentielle que le grand public attend et parfois réclame. Cette action se situerait très exactement dans le cadre de la mission éducative dont chaque astronome doit se sentir investi en plus de sa mission de recherche.

Nous vous invitons en conséquence, à signer la déclaration que vous trouverez prochainement dans votre casier.

In recent years, the belief in horoscopes has increased all over the world in such a way that not only the uninformed public has found in it a greater interest, but also certain reputedly cultivated persons refer their decision to it.

Therefore, 186 eminent scientists — principally of the United States — among them 18 Nobel Price Winners, have recently published a strong statement against astrology in the review "The Humanist".

Many people are wondering about the silence in which the astronomers in general seem to hide, i.e. the scientists who are among the best informed professionally, concerning all that research has taught us about the Universe.

Such a silence is often considered as an agreement with astrology.

A joint statement by astronomers from the whole world, on the occasion of the XVIIth General Assembly of the International Astronomical Union, should constitute the essential information desired and sometimes demanded by the public. This action would perfectly fall into the design of the educational mission with which each astronomer should feel himself invested, in addition to his research mission.

Consequently, we invite you to sign the statement you shortly will find in your pigeon hole.



fritz zwicky

UN HERETIQUE
DANS LE MONDE DE L'ASTRONOMIE

Beaucoup de vieux amis, chaque année, nous quittent. Des amis que nous connaissions depuis longtemps, de ceux que nous avons admirés, jeunes, — que nous avons aimé, quand, plus âgés, nous les avons mieux connus, — de ceux que nous regrettons, comme nous regrettons, un peu, notre jeunesse d'astronome.

Pourquoi parler des uns, et pas des autres?... Tant de souvenirs, d'amitiés, tant de personnalités remarquables, tant d'œuvres importantes... Fritz Zwicky, en vérité, fut un ami, d'abord, — et son œuvre, celle d'un hérétique, d'un iconoclaste, apparaît aujourd'hui comme particulièrement enrichissante, riche en enseignements (dont certains à ne pas suivre! — comme lui-même aurait réagi vis-à-vis d'autres leçons, données par de plus anciens que lui —), riche en enseignements, dont le principal est le refus des dogmes, qui fleurissent peut-être trop dans l'astronomie contemporaine, comme dans d'autres aspects des activités humaines.

Zwicky était un astronome paradoxal, sous bien des aspects. International (né à Varna, Bulgarie, en 1898, il se fixa en Californie dès 1925, mais il avait des collègues et des amis partout), il resta cependant toujours, avant tout, profondément attaché à sa Suisse familiale, à son sol, à ses montagnes, à ses prairies, les pieds sur terre; et dans les accents de sa voix, que ce soit en français, en anglais ou en allemand, les échos de son enfance restaient vivants.... Il est difficile, plus de deux ans après sa disparition, le 8 février 1974, d'oublier sa jeunesse, son enthousiasme, ses colères, son rire...

Énumérons ses travaux: l'importance des supernovae dans les galaxies, comme indicateurs de distances et, pour cette raison, entre autres, leur étude systématique; l'existence des amas de galaxies, leur structure, la présence de matière intergalactique absorbante dans ces amas; le doute sur les amas d'amas (ou supergalaxies): un point sur lequel Zwicky fut peut-être trop prudent... pour combien d'autres ou l'audace fut son lot: les ponts de matières entre les galaxies; l'observation inlassable de galaxies étranges, et de groupes bizarres de deux ou trois objets extragalactiques; l'importance des galaxies compactes, notamment les "naines compactes de Zwicky". Le doute quant à la réalité d'un Univers en expansion, et même d'un Univers relativiste: la densité locale lui semblait trop élevée pour qu'il puisse y avoir compatibilité... L'astronomie n'était pas (on a dit ci-dessus "principalement") son seul domaine: structure des cristaux, superconductivité, systèmes de propulsion... Ne fut-il pas le premier à proposer de faire de l'astronomie une science expérimentale, en créant d'artificielles chutes météoritiques? C'était plus de dix ans avant les premiers satellites de l'ère spatiale... Zwicky était un observateur génial; c'était aussi un brillant instrumentaliste: les télescopes de Schmidt, faits pour voir l'univers "par le trou de la serrure", développés — et utilisés! — par lui.

Zwicky l'hérétique était cependant guidé par quelques idées force, qui étaient son orthodoxie à lui: il avait inventé une règle de recherche, la méthode qu'il appelait morphologique, et que d'autres appelleraient peut-être, plus banalement, une exploration cartésienne, systématique, de toutes les voies de développement d'une idée théorique, d'une observation d'un progrès instrumental. Son ouvrage "Morphological Astronomy", où il décrit cette méthode, plus qu'une méthode, décrit sans doute un esprit dont la règle était la curiosité, l'ouverture, le sentiment qu'il y avait toujours des choses à découvrir — sût-on regarder dans la bonne direction! Zwicky avait une confiance considérable dans la force de l'imagination créative, — et il poursuivait de sa vindicte ceux de ses collègues qu'il estimait (souvent injustement, mais toujours sincèrement), égarés sur des sentiers trop battus.

J'avais eu la chance de lire ce livre et de l'aimer — pour son audace, pour sa franchise. Je l'ai dit, dans une revue publiée peu de temps après la publication. J'étais un assez jeune astronome alors... Mais cette notice m'a valu (et j'en suis fier) l'amitié de Zwicky, et la communication, grâce à une correspondance fréquente, de nombreuses opinions sur les faits nouveaux qui modifient aujourd'hui, semble-t-il, notre vision de l'Univers.

Je ne sais si les vues de Zwicky seront, dans l'avenir, largement acceptées, plus que maintenant: qu'il ait eu raison ou tort (notamment en ce qui concerne l'univers en expansion) importe peu, finalement, à mes yeux; ce qui comptait c'est qu'avec lui, aucune idée n'était un dogme, aucune n'était intouchable...

Le monde chaque jour était nouveau. A son sujet, plus sans doute que d'aucun autre astronome de sa génération ou d'aujourd'hui, on pourrait dire que, dans son œuvre si nombreuse, "l'imagination était au pouvoir"...

J.-C. P.



La Gazette d'Uranie

XVI^e Assemblée Générale



XVIth General Assembly

opening ceremony

The opening ceremony of the XVIth General Assembly took place on Tuesday morning, 24th of August at 9.30 at the Skating Rink, in the presence of Mrs. A. Saunier-Seïté, Secretary of State for Universities. The first to deliver a speech is



Mr. H. Dubedout, Member of Parliament and Mayor of Grenoble, who says how glad he is to welcome the participants in this town whose University was created in the 14th century, and is to-day very active in the scientific field. He stresses the fact that if Astronomy is a science of the past, it is also a science of the future towards which many young

people are attracted. Then, Mr. L. Mermaz, President of the Local Council of the Isère department, welcomes the participants. He recalls how important it is to the local government, he presides that Grenoble should develop its scientific assets. He emphasizes the strong link which exists nowadays between sciences and techniques on one side and Astronomy on the other side, as the latter benefits from the developments of the former and contributes to their progress.



Mr. G. Cau, president of the Scientific and Medical University of Grenoble, hopes that active research in Astronomy will take place in Grenoble.

In the name of the Academy of Sciences and the French National Committee for Astronomy, Dr. J. Kovalevsky, president of UAI-France 76, recalls then the long tradition for Astronomy which exists in

France and reminds that IAU met in France for the last time in 1935 in Paris. Few people, unfortunately, can remember this occurrence; only 300 people attended and a lot of them have died since.

Dr Kovalevsky thanks all those who took part in the organisation of the XVIth General Assembly; he thanks also the French government and the private and public firms that have financially contributed.

After Dr. Kovalevsky, Prof. L. Goldberg, president of IAU, in a fine speech delivered in an excellent



French, tells how pleased he is that the XVIth General Assembly takes place in Grenoble, which was at one time under the local government leadership of the famous mathematician Jean-Baptiste Fourier. He tells of the considerable progress made by Astronomy, mainly thanks to artificial satellites of the Earth and computers, since the last general assembly in France in 1935. If the scientific contents of Astronomy change, the



enthusiasm of astronomers for their work and the friendship which unites them remain unaltered.

At last, Mrs A. Saunier-Seïté, Secretary of State for Universities welcomes the participants in the name of the French government whose duty it is to help research in Astronomy, however expensive it is. France has well strived in this field, but has kept in mind international cooperation (Hawai - Franco-Canadian telescope, Franco-German millimetric interferometer, participation with the European Space Agency).

Quoting an ancient author, who affirmed that every theoretician is a social practitioner who does not know himself, the French Minister ends her speech wishing that astronomers do not forget the responsibility endowed by their knowledge. Certainly Astronomy is a pure science, but, she says, to-day there is no science that is pure.

Between the speeches, the participants have the pleasure to listen to three musical interludes played by a local orchestra conducted by Mr. Anneli.

a debussy concert

A concert featuring a selection of late works by Claude Debussy will be offered to the participants at the IAU General Assembly during the evening of Saturday August 28th, at 9 p.m., in the large hall of Alpes-Congrès. The artists are of Belgian and Dutch nationality; they will of course play modern instruments but two of them (Bart and Sigiswald Kuijken) will have been heard playing baroque instruments during the concert of the previous day, and it will be quite interesting to compare the sound of old and modern instruments. The musicians are:

- Francette Bartholomé, piano and harp;
- Pierre Bartholomé, piano;
- Anner Bijlsma, violoncello;
- Bart Kuijken, flute;
- Sigiswald Kuijken, violin and viola.

Claude Debussy was born in 1862 in a non-musical family and came to music rather late. During his musical studies, at the age of 17, he was lucky enough to be engaged as a pianist by a wealthy Russian lady, Nadeja von Meck, the famous platonic lover of Tchaikowsky. He travelled with her through Italy (where he met the aged Wagner), Austria and Russia. In 1884, he won the **Prix de Rome** in composition, but did not enjoy his stay at the Villa Medici in Rome, where the winners have to spend a few years at the expense of the French Government. The musical revolution he was already preparing did not shock his contemporaries as much as one would imagine: only the **première** of his opera, *Pelléas et Mélisande* (1902), was a case for scandal, but even then success came rapidly.

Apart from an unhappy first marriage, the life of Debussy does not offer the remarkable features characteristic of romantic musicians. However, Debussy was very affected by the coming of the first world war, and soon after, in 1914, became attacked by a cancer of the intestine, from which he suffered very much and finally died in 1918. Most of the works which will be heard during the concert, date from this time of moral and physical pains, of which they bear obvious traces. They nevertheless count amongst the greatest masterpieces of the composer.

The production of Debussy during the last four years of his life is not abundant. All of it will actually be given in the present concert, with the exception of a few minor pieces, of the second book of *Etudes* for the piano (1915) and *en Blanc et Noir* for two pianos (1915); a record of this last work will be given by the Ballets Blaska on Tuesday August 31st, since one of their ballets is based upon it.

Many people think of Debussy, like Mozart, as a light and charming musician, but not much more. Nothing is more wrong, especially when considering the late works. We hope that the auditors of the concert will easily be convinced that the delicacy and modesty of Debussy's music hides deep passions, from joy to melancholy, and sometimes bitterness and despair. Debussy also created an entirely novel musical language, with some borrowings to oriental music that he was amongst the first to discover (pentatonic scales, etc.), but also many features of his own: whole-tone scales, successions of parallel chords, sometimes polytonality and atonality, new rhythms and new uses of the instruments. The radical novelty of this language can only be compared to that of Schoenberg and Stravinsky, the younger contemporaries of Debussy. It is interesting to compare dates: Wagner died in 1883; the last great romantic but also pioneer of a new music, Gustav Mahler, was born in 1860 two years before Debussy and died in 1911. Schoenberg was born in 1874 and produced his famous *Pierrot Lunaire* in 1912, ten years after *Pelléas et Mélisande*; his first strictly dodecaphonic piece is dated 1923, five years after the death of Debussy. *Le Sacre du Printemps* (The Rite of Spring) was given by Stravinsky (born 1882) in 1913, and his "Swiss" masterpieces (*Renard*, *Noces*, *l'Histoire du Soldat*) are exactly contemporary of the late works of Debussy. Ravel, born in 1875, produced his dark *Trio* in 1915. This comparison with what can be considered as the most advanced music



of the time emphasizes the novelty of Debussy's production (the first masterpieces like the **Quartette** were written as early as the beginning of the 1890's). Debussy's works have been a constant source of inspiration for later generations of musicians, including the Viennese dodecaphonic school. No other French composer has exerted as strong an influence.

The concert begins with **Syrinx** (1913), a remarkable short piece for flute alone, which shows how well Debussy uses the idiomatic language of the instrument (remember also the **Prélude à l'après-midi d'un faune**). This piece was actually written to illustrate a "tableau vivant" entitled **Psyché**, and the present title was only given by the editor in 1927, long after the death of Debussy.

The **Sonata for Violoncello and Piano** was written in July-August 1915 as the first of an intended series of 6 sonatas for various instrumental combinations. Debussy had not written any pieces of chamber music since the **Quartette** of 1893. Debussy had time to write only three sonatas, which will be given in the concert. This rather short piece is written as a solo sonata **accompanied** by the piano. It fully exploits the possibilities of the cello in a virtuoso style with many special effects (pizzicato, glissando, harmonics, etc.) and is technically very demanding. The mood is well described by the subtitle given by Debussy himself "Pierrot fâché avec la Lune" (Pierrot in dispute with the moon). The **Prologue (lent)** which opens with piano chords, gives the plaintive, dreamy and sometimes sarcastic moods of the whole sonata. The **Sérénade** (modérément animé) features rather fantastic sonorities; but musical sentences turn short — the sorrow of the clown. The **Finale (animé)** recalls the style of a scherzo, with frequent melancholic passages.

The **Trio** for flute, viola and harp was composed immediately after the **Sonata** (Sept.-Oct. 1915) and is considerably developed. The instrumental combination is unusual but quite effective, thanks to the extraordinary skill and sense of color of Debussy, and has been re-used several times since. The initial **Pastoral (lento, dolce rubato)** offers neither bird songs nor charming springs, but is of an elegiac and disenchanted mood. Note how it builds up from tiny pieces. According to Debussy himself, the **Interlude (Tempo di minuetto)** which comes next is "affreuse mélancolique" but clears-up somewhat at the end. The economy of means prefigures that of Schoenberg and Webern. The **Finale (Allegro moderato ma risoluto)** starts with an explosion of joy which quiets-up rapidly. Later, the theme of the initial pastorella is recalled. The piece ends in a spirit of somewhat nervous resolution.

The **six Epigraphes Antiques**, for four-hands piano, open the second part. This is an earlier work which was intended to illustrate a scenography of six poems by Pierre Louys. Pierre Louys, to-day somewhat forgotten, was quite famous at the time, and Debussy wrote melodies on his **Chansons de Bilitis**. His poems are picturesque, often erotic, with a somewhat decadent mood typical of Art Nouveau, and the subjects are taken from an ideal Greek antiquity. The six pieces apparently were written initially in 1900-1901 for a small orchestra (the score has been discovered in 1932) but Debussy published in 1914 a remodelled four-hands piano version which is so well suited to the instrument that one imagines that after all, this was perhaps the initial version. Later, he reduced the work for two-hands piano. The style of the six pieces recalls that of the **Préludes**. Most are clearly divided into three parts.

Pour invoquer Pan, dieu du vent d'été is based in the first and third parts on a pentatonic scale. **Pour un tombeau sans nom** uses the full-tone scale and series of parallel chords so typical of Debussy.

Pour que la nuit soit propice is also based on a pentatonic scale. **Pour la danseuse aux crotales** (the crotales are sorts of antique castanets made of metal) is delicately descriptive. **Pour l'Egyptienne** features a splendid oriental-like melody. **Pour remercier la pluie au matin** is a more descriptive piece which ends by recalling the theme of the initial "épigraphe".

This beautiful work illustrates superbly the novelty of Debussy's art, but is nevertheless rarely played.

The concert ends with the **Sonata for violin and piano** composed during the winter 1916-1917, the last work of Debussy. The writing of the violin part is more classical than that of the cello part in the first sonata, and the piano has a more important role. The sonata starts with a nervous **Allegro vivo**, with succession of enthusiasm, melancholy and deep bitterness. Note the variety of rhythms, and how this piece carefully avoids the symmetry of the classical sonata allegro. The **Intermède (fantasque et léger)**, in a sérénade style, recalls a much earlier piano piece, the **Danse de Puck**, but is considerably better. It is also full of expressive discontinuities. The **Finale (très animé)** starts with a recall of the initial theme of the first movement, from which its own theme is derived. It is a sort of **moto perpetuo** with passages of revolt, anxiousness and anger; one might of course relate the music to the terrible sufferings of the composer at this time; but it is better to listen to it as it stands: this ultimate work is one of the masterpieces of all Music.

J. Lequeux
Observatoire de Meudon



visit of scientific laboratories

Grenoble and its suburbs form one of the most active centers of scientific research in France. Visits of some laboratories featuring particularly spectacular experiments or apparatus have been arranged for the interested astronomers on Monday 30 and Tuesday 31. The program of these visits is the following.

I - Monday 30 - 9.15 AM
High Magnetic Field Laboratory.

II - Monday 30 - 2.00 PM
High Flux Neutron Reactor.

III - Tuesday 31 - 8.30 AM
Aluminium and its Alloys Research Laboratory.

IV - Tuesday 31 - 2.00 PM
Controlled Fusion Laboratory.

I - HIGH MAGNETIC FIELD LABORATORY

This German-French laboratory operates a large magnetic equipment which produces static magnetic fields (up to 200 K Gauss) at variable temperatures. Presently the experiments conducted with this magnet are centered around solid state physics (semiconductors and superconductors), chemistry and biology.

II - HIGH FLUX NEUTRON REACTOR (Institut Laue-Langevin)

This British-French-German Institute operates one of three highest flux reactors used for basic research. This very spectacular machine features some of the best neutron spectrometers which are presently used by physicists, chemists, biologists, for the study of solid and liquid systems under various conditions.

III - PECHINEY ALUMINIUM RESEARCH CENTER

This is a private laboratory specialized in the elaboration and the control of Aluminium based, very high quality, alloys. It emphasizes many very sophisticated equipments for the preparation, physical and chemical analysis of those alloys.

IV - CONTROLLED FUSION LABORATORY

This laboratory is operated by the Commissariat à l'Energie Atomique. It is specialized in the production and heating of high density plasmas for the TOKOMAK and STELERATOR machines, with densities up to 5.10^{13} and electronic temperatures up to 1 KeV. Another group concerns itself with the production of multicharged heavy ions.

Each visit will last approximately 2 h 30 - 3 h (including transportation).

Registrations must be made before Saturday 28 - noon at the bureau for Saturday excursions (welcome office).

The number of participants is limited to 60 for each visit except for III where it is strictly limited to 20.

latest news

— Scientific meeting of Commission 36 scheduled for Thursday August 26, from 14.15 to end of afternoon room P4 instead of Friday 27, room 13. R. Cayrel, Président Commission 36.

— Dr. A. Terzan is in hospital and regrets very much not to be able to attend. He sends his best wishes to his friends and colleagues.

— In connection with the theme "photographic attachments" of the Commission N° 9, ZEISS, Oberkochen, has prepared a brief description on photographic attachments with and without off-set-guiding. The size of plates running from 6 x 6 cm up to 30 x 30 cm. The descriptions are available at the ZEISS-exhibition in the library.

— Commission 6

The time and place for the meeting of Commission 6 have been changed from August 27 a P4 to August 30 b P5. This business session will include a discussion on the question of the moderately rapid publication of short observational notes that are not regarded as appropriate for the IAU **Circulars**.

P. Simon, President
B.G. Marsden, Secretary

— Commission 33

Large-scale distribution of stars and total mass aura lieu vendredi 27 août, salle P2, 14 h 15, et une projection d'un film de M. Miller sur "Three-dimensional modelling of Galaxies", vendredi 27 août, salle P2, 16 h 15.
Perek 7618, Président Commission 33.

Les Astronomes ont besoin d'émulsions de très haute qualité pour l'enregistrement photographique de leurs observations spatiales.

KODAK répond à leurs exigences et met à leur disposition une grande variété de films et plaques couvrant les radiations spectrales de 250 nanomètres jusqu'à 900 nanomètres.

KODAK-PATHE

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8 à 14 rue Villiot
75012 PARIS

RECOMMENDATIONS TO SPEAKERS * AT XVth GENERAL ASSEMBLY OF THE IAU

Speak at a very low voice and disregard any electronic aid available. Speak as fast as you can and try to swallow the last syllables, in particular if you are so fortunate to speak English as your mother tongue. The audience, which is composed of many people for whom English is not the native language, will be very thankful for such a speedy performance which neither offends their ears nor reaches their brains.

If you should take the trouble of showing slides or transparencies please have them prepared on a very small scale with the smallest symbols and letters available and, preferably with light gray ink or pencil which is almost invisible, in particular for the back benchers. The Audience will certainly welcome such careful procedure which provides them with the opportunity for testing and training their eyes or for sleeping without interruption.

When showing mathematical formulae on slides let them pass very fast and do not lose time for explanation. Apart from a few bright experts most of the audience are so inapt that trying to lucidly interpret mathematical products would be a sheer waste of time.

If you should adhere to the primitive way of using the blackboard for mathematical derivations do not forget to speak towards that blackboard with your back to the audience. Further, select the hardest piece of chalk for such exercise which produces very thin hieroglyphes so that they are not readable from the second bench onwards. The audience will appreciate the lack of importance you obviously attach to your own research.

* Written in August 1975 by H.U. Croissant for those attending the XVth General Assembly of IAGU.



HOROSCOPES: The short paper you read yesterday about astrology was signed by the following people:

S. AREND, P. BACCHUS, B. BOK, G. CONTOPOULOS, R. COUTREZ, S. DEBARBAT, C. DE JAGER, C. DE LOORE, A. DELSEMME, J. DOMMANGET, W. IWANOWSKA, I. KING, J. LEVY, S. LIPPINCOTT, E. MENDOZA, P. MULLER, J. PECKER, M. PEIMBERT, L. PEREK, L. RANDIC, E. SCHATZMANN, J.-P. SWINGS, J.-P. WAYMANN,

EXTRAGALACTIC ASTRONOMY FROM SPACE

A meeting sponsored jointly by Commissions 28 and 44 is scheduled for Thursday 26 August at 17.30 in room P4 to discuss technique and scientific programs in extra-galactic astronomy utilizing space telescopes and instrumentation.

FRIDAY 27 AUGUST: 9.15 to 17.30 (Room W1)

REVISED PROGRAMM OF JOINT DISCUSSION N° 3

"Space Missions to the Moon and Planets"

1. Magnetic field of Mercury.
Dr. N. Ness
2. Magnetic field of the Moon.
Professor S.K. Runcorn
3. The magnetosphere of Jupiter and Saturn.
4. Bombardment histories for Mercury, Mars and the Moon.
Dr. W.K. Hartmann
5. Venus atmosphere-results from Venera 9 and 10.
Dr. M. Marov
6. Cloud patterns: waves and convection in the Venus atmosphere; results from Mariner 10.
Prof. J.S. Belton
7. Jupiter atmosphere-results from Pioneer 10 and 11.
Dr. T. Gehrels
8. Preliminary results from Viking mission to Mars.
Dr. S.I. Rasool, Prof. B.A. Smith
9. Future planetary space missions, U.S.A.
Dr. S.I. Rasool

La Gazette d'Uranie

XVI^e Assemblée Générale



XVIth General Assembly

astronomy in the town

L'ASTRONOMIE DANS LA VILLE
(August 20th - September 20th)



The General Assembly of the IAU only addresses specialists. The invited discourses themselves, although open to the public, address essentially research workers with fairly specialised interests, wishing to be informed of the state of knowledge in fields next to theirs.

However, the public at large has a considerable interest in astronomy. The enormous distances, the fate of the stars or the Universe, possible life on other planets: these are some examples of thrilling questions asked.

Consequently, the French astronomers have organised for the inhabitants of Grenoble a congress in the town and not on the campus, a group of exhibitions entitled "L'Astronomie dans la Ville".

Astronomy: observing stars to understand them

The first group of activities was presented in the form of an exhibition prepared in advance. First, an exhibit of the solar system can be seen at the SNCF railway station; then, to see "Our Universe", as it can be seen and understood thanks to the universal laws of physics, you must go to the Maison du Tourisme.



The exhibition at the railway station. The solar system.

The astronomer is distinguished from his physics colleague by not being able to do many experiments, except very recently on the Moon and Mars; his source of information being through observation. The public can learn of the methods and observational techniques in the Town Hall, where there is an exhibition of models of recent instruments or those still being constructed, and a mirror work shop.

Finally, a "Panorama of Astronomy" is displayed at the "Grand Place" commercial centre.

In these different places slides are permanently available for a complementary explanation. Moreover, popular film-shows are planned.



At the Maison du Tourisme the young people of the Pleiades Club (Nice) give explanations to the visitors.

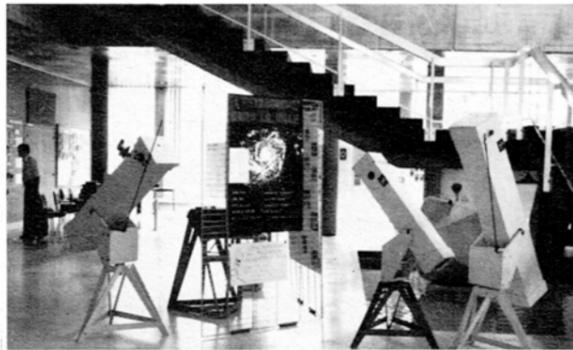
Activity

Astronomers wish to establish direct contact with the public and to favour discussion. To do this, gatherings around amateur telescopes have been planned in the town and the surroundings.

A telescope coupled with a television set allows many people, at Meylan to observe simultaneously. Teams

take turns to answer the questions asked by the visitors.

It must be stressed that most of the preparatory work was done in collaboration with amateurs at the "Maison des Jeunes et de la Culture Gorbella", Nice. Young people from the Pleiades Club at Nice have given their ideas on the history of Astronomy, also the group of Marseille amateurs have given the results of their latest observations.

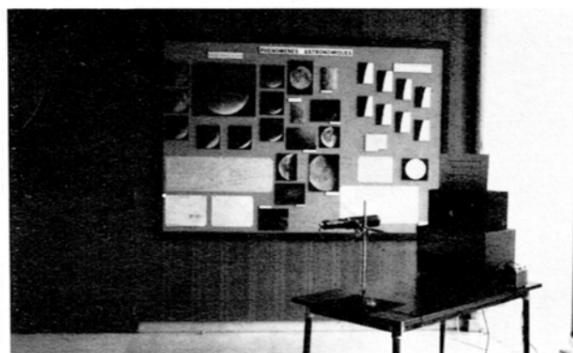


At the Town Hall. A fine show of home made telescopes.

Young people and Astronomy

It is worthy of notice that young and even very young people are often quite aware of the most recent discoveries and also extremely willing to learn more. The drawing contest organised by the astronomers and the firm Paillard in the schools of the Grenoble area was a success: the finest drawings are being exhibited on the Campus to brighten the environment of the participants.

In France, Astronomy is not taught as such in primary or secondary schools. However, many teachers are active in amateur clubs and Astronomy has an important status among the so called "free activities" for which 10 % of the school time is kept.



At the Town Hall. The GAMA Club (Marseilles) have devised this clever experiment which reproduces eclipses circumstances.

Astronomers are more and more asked to join as experts in these activities. This allows them to notice how strongly motivated young people are.

This situation has led them to organise a meeting in Grenoble with teachers of secondary schools on the 2nd of September 1976. More than 150 participants will attend; experiences will be exchanged, wishes will be expressed especially as the curricula are to be altered. Links should be developed. French speaking participants (Belgian, Canadian, Swiss) will tell of their experiences.

Contributions

Many contributed: the "Maison du Tourisme" and Grenoble local Council have offered a friendly and enthusiastic welcome. The "Palais de la Découverte" kindly lent its itinerant exhibition. The whole project was supported by a small budget provided by the "Bureau de l'Information Scientifique et Technique du Ministère de l'Industrie et de la Recherche, Association UAI-France 76", Nice Observatory, the "Société Française de Physique" and the French National Committee for Astronomy.

EXPOSITIONS PERMANENTES

Notre Univers (Our Universe)

20 août - 20 septembre
Maison du Tourisme, 8 h 30 - 19 h, sauf le dimanche.
Réalisation: M.J.C. Gorbella de Nice, Observatoire de Nice.

Histoire de l'Astronomie (History of Astronomy)

20 août - 4 septembre
Maison du Tourisme, 8 h 30 - 19 h, sauf le dimanche.
Réalisation: Groupe des Pléiades, C.E.S. Valéri, Nice.

Méthodes et Techniques (Methods and Techniques)

20 août - 20 septembre
Hôtel de Ville, 9 h - 18 h.
Réalisation: E.S.O., Observatoire de Haute-Provence, Observatoire du Pic du Midi, Laboratoire d'Astronomie Spatiale, Groupe des Amateurs de Marseille, M.J.C. Gorbella de Nice, I.G.N.

Panorama de l'Astronomie (Panorama of Astronomy)

20 août - 20 septembre
Grand' Place.
Réalisation: Palais de la Découverte.

Le Système Solaire (The Solar System)

20 août - 4 septembre
Gare S.N.C.F.
Réalisation: Observatoire de Bordeaux, Observatoire de Nice, M.J.C. Gorbella.

Stations d'Observation (Observing Stations)

24 août - 2 septembre
Meylan, Domaine des Capucins, Chemin des Villaux.
Réalisation: Observatoire de Meudon, Association Astronomique de l'Ain.

ANIMATIONS PREVUES

Projections de films - Observations - Discussions
Allemont-Village, 27 août.
M.J.C. Jouhaux - L'Abbaye, 28 août, 20 h 30.
Vaulnaveys-le-Bas - Village, 1er septembre.

lunar occultation of (89) julia



At 22 h 52. 7 m U.T. of 1976 October 1, the minor planet (89) Julia will disappear behind the dark limb of the first quarter moon at Grenoble. High-speed photoelectric observations of the disappearance would be valuable for accurately measuring Julia's diameter. For example, if the diameter is 137 km, as determined recently from polarimetric observations, 0.49 s will be required for the Moon's limb to cover Julia at Grenoble, where the position angle will be 131°. The Moon will be only 7° above the Southwest horizon, so that observation of 10.3-Mag. Julia will be very difficult at Grenoble. Conditions are better farther West. For example, at Pic du Midi, the altitude will be 12°. Local predictions for several stations are available from David Dunham, Box 3088; some further data are posted on the bulletin board of Commission 20.

Occultations of minor planets, and of stars by minor planets, will be discussed at the meeting of Commission 20 Wednesday morning (September 1). A few days after the 15th general assembly in Sydney, a more favorable lunar occultation of Ceres occurred in South eastern Australia. Unfortunately, all photoelectric attempts were clouded out. Some visual observations implied a diameter of 1200 ± 200 km, and are the only known observations of an occultation of a minor planet by the Moon.

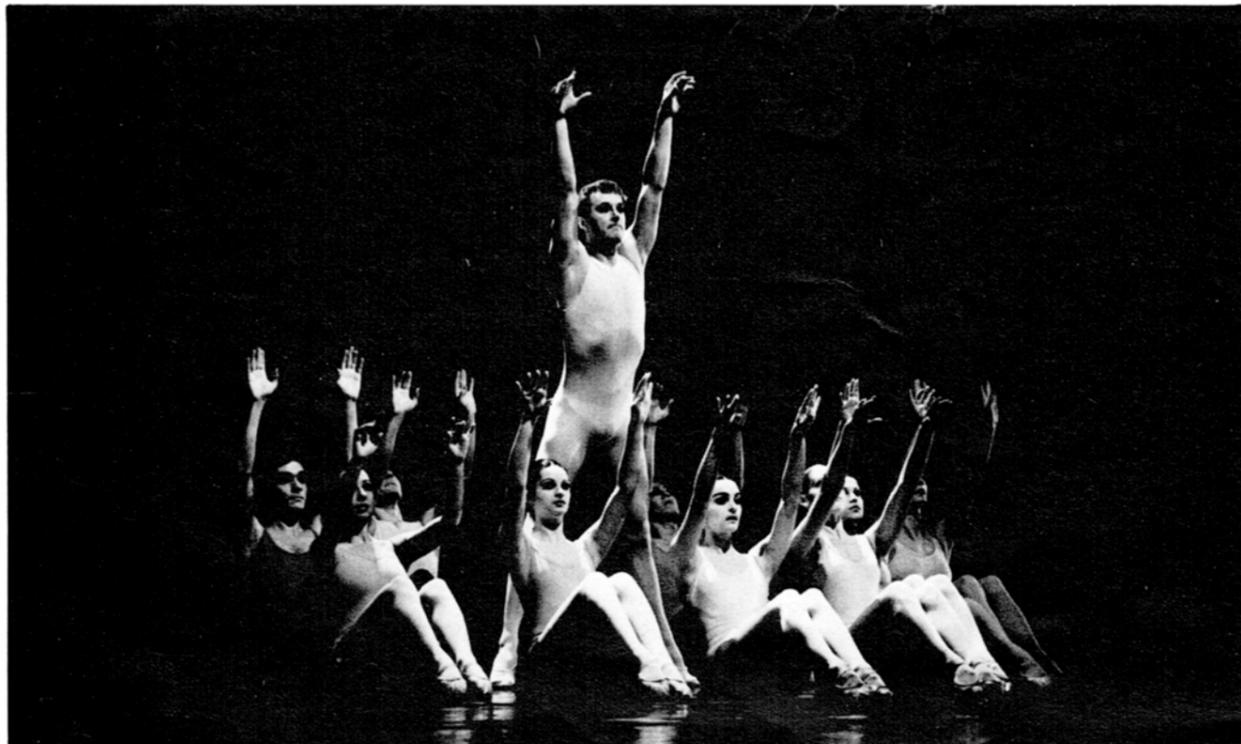
David W. Dunham

rencontre d'uranie et de terpsichore a grenoble



La seizième Assemblée générale de l'UAI se réunit cette année en France, non pas à Paris comme c'eût été le cas dans un passé qui n'est pas si lointain, mais à Grenoble. Serait-ce un effet de l'effort qui est mené depuis des années pour lutter contre le centralisme excessif que le poids des siècles a imposé à ce pays ? Cet effort, dont la moindre des difficultés ne réside pas dans ses aspects politiques et économiques, est vivant depuis longtemps dans le domaine de la culture. Au même moment où renaisait partout en France l'intérêt pour les cultures régionales, nombre de jeunes comédiens et chorégraphes essayaient avec leurs troupes de briser le mythe de la toute-puissance de la capitale, de s'installer "en province" et de se créer un public autonome. En même temps, des efforts locaux, comme la création des Maisons des Jeunes et de la Culture (MJC), tendaient dans la même direction.

cours duquel Blaska déroule au rythme des multiples "tensions" propres à la musique du compositeur, un étrange et fascinant rituel. La troupe reprendra dans le spectacle présenté à l'occasion de l'Assemblée générale de l'UAI une œuvre de Berio, "Contre I". Pourquoi ce titre, choisi, en accord avec le compositeur, par Blaska lui-même ? Ce dernier refuse de répondre : "C'est, dit-il, un histoire que je me suis racontée, mais je ne veux pas l'imposer, je ne veux pas donner d'explications. Il y a d'abord la musique : raconter une histoire devient une aventure que j'aimerais faire vivre au spectateur sans lui donner de limite. Il faut se laisser aller complètement à la chorégraphie". C'est au spectateur de répondre. Félix Blaska a créé en 1974, au Festival de Baalbek, "le Fou d'Elsa", inspiré d'une œuvre maîtresse de Louis Aragon. Son thème est double, historique et politique, par la description de la chute de l'Islam en



Ainsi, Félix Blaska, décidant en 1972 de "décentraliser" sa troupe, l'installait-il à la Maison de la Culture de Grenoble pour y créer un spectacle entièrement nouveau. Ce spectacle fut unanimement salué par la critique, sensible à la maturité et à la créativité du jeune chorégraphe, qui ne perdait pas pour autant un enthousiasme, une vivacité, un éclat, un humour qu'il avait déjà su faire reconnaître. Blaska pouvait se féliciter d'une expérience qui n'était d'ailleurs pas tout à fait nouvelle pour lui. Déjà en 1966, le Ballet-Théâtre Contemporain, qui était alors la seule compagnie chorégraphique attachée à une Maison de la Culture, lui proposait une commande qui se concrétisa en des "Danses Concertantes", sur une musique de Stravinsky, dont le succès dépassa notablement le cadre local. Après ce premier contact avec Grenoble, et de nouveaux succès en France et à l'étranger, Blaska retrouve la Maison de la Culture de Grenoble, en y apportant l'exceptionnelle association qu'il constitue avec le compositeur italien Luciano Berio. Un spectacle entièrement consacré à Berio est monté, au

Espagne, et courtois, par le développement d'un grand poème d'amour qui nous vient du désert préislamique. Ce spectacle met en évidence la rigueur et l'absence de complaisance du chorégraphe. Par des aspects que certains ont pu juger choquants, ou au moins étonnants, il s'inscrit dans une modernité qui rompt avec l'esthétisme et l'harmonie classique de la danse.

Le spectacle qui a été composé pour être présenté cette année, et auquel nous convions nos visiteurs de tous les pays, le 31 Août à la Maison de la Culture, commencera par une pièce descriptive en trois mouvements, "En blanc et noir", qui dépeint les contradictions de la guerre et de l'amour. Puis viendront un certain nombre de pièces pour instruments à vent dues à Stravinsky : la chorégraphie s'inspire ici du fait que cette musique a été dédiée à la mémoire de Claude Debussy, dont elle fait revivre l'âme à travers les gestes des danseurs. Enfin seront présentées l'œuvre de Berio que nous avons citée, et, pour conclure, une suite d'extraits du "Fou d'Elsa".

J.-L. S.



two soviet astronomers

Since the last general assembly of the IAU the astronomical community has lost two prominent soviet astronomers : S.B. Pikel'ner and G.A. Chebotarev. Solomon Borissovitch Pikel'ner who died in November 1975 was born in February 1921 in Bakou. After his studies at the Moscow University and Sternberg Astronomical Institute, S.B. Pikel'ner spent his life first at the Crimean Observatory then, as a Professor of Astronomy, at the University of Moscow. S.B. Pikel'ner first studied the atmosphere of the Sun, then got interested in interstellar matter and gave an explanation for the filamentary structure of the remnant of a supernova explosion. He was among the first to understand how important and significant were plasma physics and magneto-hydrodynamics in astrophysics.

Prof. Pikel'ner studied also the properties of interstellar gas which led him to build a theory of the formation of stars from compact gaseous masses. He was the first in 1951 to use the concept of a galactic halo and, last but not least, studied

cosmology and gave an inferior limit for the value of Hubble's constant.

Prof. S.B. Pikel'ner had been chairman of Commission 34 (interstellar matter) of the IAU. Gleb Alexandrovitch Chebotarev, born in 1913, died in August 1975. He studied at the University of Leningrad and spent some time at the University of Tomsk, at the Institute for Theoretical Astronomy in Leningrad, at the Library of the Academy of Sciences of the USSR then he went back to the Institute for Theoretical Astronomy of which he became director in 1964.

G.A. Chebotarev mainly worked in the field of Celestial Mechanics and studied the motion of asteroids, comets and satellites. He was also interested in the history of Astronomy and devoted part of his time to amateurs. G.A. Chebotarev had been chairman of Commission 20 (positions and motions of minor planets, comets and satellites).

B.M.



MOTS CROISES - N° 1 - SOLUTION (avec commentaires !)

Horizontalement - (a) STARLET - MOPS (roll-mops) - (b) CORONOGRAPHE - (c) ANIMALITE - ER (Ernest Renan) - (d) EU - EON - ANE (diffamé... puisqu'on y compare certains astronomes !) - (e) ARSLE (Arles... en ruines !) - LEON - (f) IO - UBU (...roi !) - NARMA (l'effet Raman, c'est normal ; mais Narma, c'est évidemment anormal) - (g) ISOTROPIE - (h) ELU - CHIENS (de chasse) - (i) LIEU - ANNEE - (j) ABE (pour Abraham, prénom de Lincoln) - URANUS - (k) HD (Henry Draper) - AXE - TS - FK (pour Fundamental Katalog).

Verticalement - (1) SCALAIRE - (2) TON (donner le ton, être dans le ton) - RO - BD (Bonner Durchmusterung) - (3) ARIES (du zodiaque latin) - IULE - (4) ROMULUS - (5) LNA (pour Héléna) - EBOUEUX - (6) EOLE - UT - URE (ancienne espèce d'aurochs) - (7) TGIOD (pour Doigt, dirigé vers le haut) - RC (de bRiC et de bRoC) - (8) RTN (de Triton) - NOHANT (George Sand était la bonne dame de Nohant) - (9) MAE (Mae West) - LAPINUS (l'auteur des mots croisés a en effet posé ici un lapin) - (10) OP (le Pô) - AERIENS - (11) PHENOMENE (un système du monde se devait de "sauver les phénomènes") - (12) SERENA (La Serena ; au Chili, une base de l'ESO) - SERK (île anglo-normande).

MOTS CROISES - CROSSED WORDS PUZZLE N° 2 (ENGLISH) - Solution

Horizontally - (a) ALDEBARAN - (b) SIRIUS - ROSE (the Four Roses bourbon ; the Lancaster and York roses) - (c) TAC (starts the word : tactics) - NORTH (a French colloquial expression is "perdre le Nord", or to lose the North, to say : "to become crazy") - (d) ENTROPY - ANT - (e) URIEL - NEO - (f) OUR - EL - ON - (g) IRUN - NINI - (h) DISPUTE - (i) SC (for Scandium, rather abundant in stellar atmospheres) - LSA (Sail... but in a rather poor condition !) - GIN - (j) INACTION.

Vertically - (1) ASTEROIDS - (2) IAN - URIC (mind the gentleman's gout !) - (3) ARCTURUS - (4) LI (Unit of length in old China) - RR (initiates the noise of thunderstorm) - NPLN (all the consonants of the word Napoléon) - (5) DUNOIS - USA - (6) ESOPE (La Fontaine has written his life ; in English, I believe, his name should be spelled ESOP...) - YTIC (City, written in the wrong sense) - (7) RYLE (Sir Martin) - EAT (or Tea), written by putting the T at the end) - (8) ART - LN (Ellen) - (9) ROHAN (in "Le Collier de la Rein") - IAGO (in Othello) - (10) AS (the French for ace) - NEON - IN (to be "in"...) - (11) NEWTONIAN.

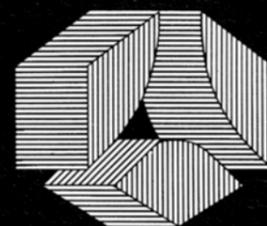
honour list

— We are happy to announce that three distinguished astronomers, C. De Jager, former general secretary of IAU, A. Penzias and M.J. Seaton will be made doctor honoris causa of Paris observatory on the 14th of September.

— Nous sommes heureux d'annoncer que trois éminents astronomes, C. De Jager, ancien secrétaire général de l'UAI, A. Penzias et M.J. Seaton seront faits docteurs honoris causa de l'Observatoire de Paris le 14 septembre.



Electronique française renommée mondiale



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La Gazette d'Uranie

XVI^e Assemblée Générale



XVIth General Assembly

china and the IAU



In his inaugural address Professor Goldberg raised the question of the representation of China in the IAU. We would like to comment on some of the points raised.

It is indeed very sad that China, a country comprising nearly 20 % of the world's population with several flourishing observatories and many hundred astronomers should not be represented in the IAU. We appreciate the considerable efforts to alter this situation made by Professor Goldberg over the last three years. For this, he and the other members of the Executive Committee deserve the highest praise. However, we have some suggestions regarding possible future actions which the IAU should take.

We believe that the decision by the IAU in 1958 to admit "The Republic of China" on Taiwan to membership was a mistake. It is now generally admitted that the application of Taiwan for membership was politically motivated. It was part of a plan by the US State Department under Dulles to gain Taiwan's admission to as many international organizations as possible, thereby isolating the Peoples Republic of China internationally. By then admitting Taiwan (where there was a negligible amount of astronomical activity) to membership, we believe that the IAU unwittingly allowed itself to be used for political ends.

One may argue that this is all past history and is best forgotten. However it is still very real to the Chinese. Those of us who have had personal contacts with astronomers in China recognise that they still regard the IAU's 1958 decision as a slap in the face. To quote from a recent letter from one Chinese astronomer "the very relationship between the IAU and our astronomical community rouse us into unpleasant memory".

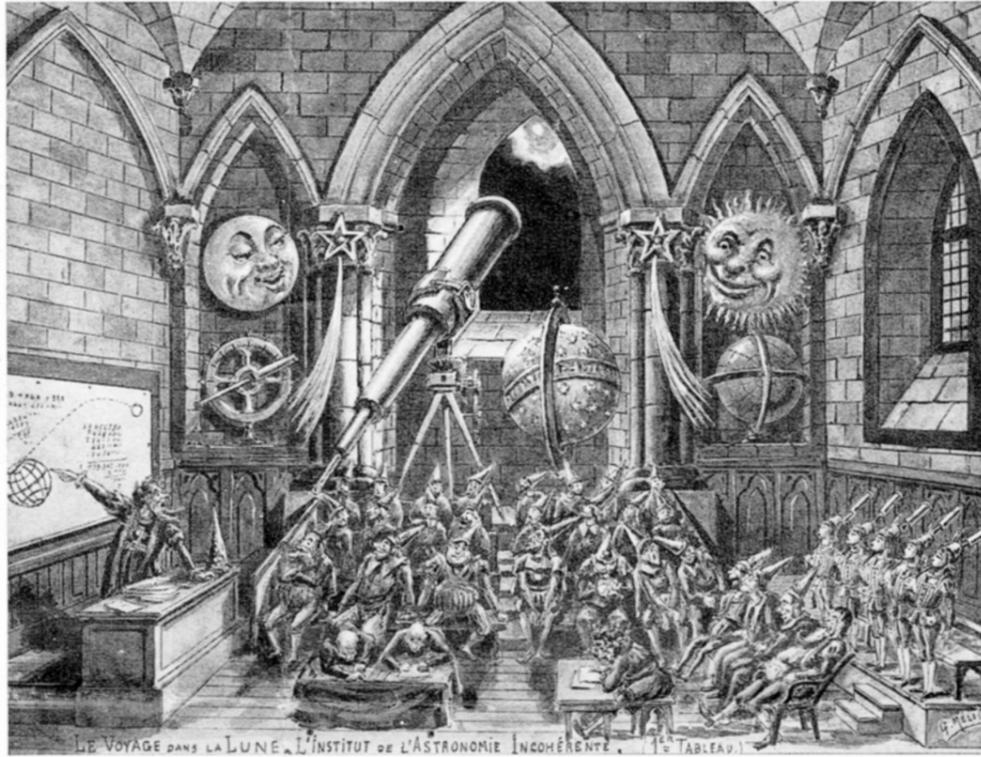
As a first step towards improving relations with China it is surely important to admit that the 1958 decision of the IAU was a mistake. We accept Professor Goldberg's remarks concerning the expulsion of any adhering organization, but believe that the IAU should officially change the title of Taiwan from "The Republic of China" to "Taiwan, Province of China". This would recognize that Taiwan is part of one China, a viewpoint held by both the Peking government and the administration on Taiwan. Further, we feel that the IAU should officially express its intention of working to insure Chinese representation in the International Cultural and Scientific Union (ICSU).

Those who consider our action as "bringing politics into the IAU" should remember that by its very structure (adherence of countries), politics is an unavoidable part of our organization. In fact, by admitting "The Republic of China" on Taiwan to membership at the height of the cold war the IAU took a decision that had wide political consequences.

This is the seventh General Assembly without China. We urge all of you who do not wish to see this embarrassing unjust and unrealistic situation continue, to solicit support for the motion below among astronomers within your country, among your national delegation and among the Executive Committee of the IAU. Please also let us have your reactions and suggestions. Unless the situation has altered, we shall try to coordinate all efforts to ensure the adoption of a resolution by the next General Assembly in 1979.

With thanks,
R.S. Booth, W.N. Christiansen, R. Fanti,
J.M. Greenberg, T. Kiang, G.K. Miley,
M. Rowan Robinson.

réunion de travail à l'U A I ?



The subject of this amusing drawing says: Le voyage dans la Lune. L'Institut de l'Astronomie incohérente (1er tableau) - Voyage to the Moon. The Institute for Absurd Astronomy (1st scene). This was drawn by G. Méliès, who, at the beginning of this century was among the first to make movie films. He produced all sorts of extraordinary films, some dealing with more or less fantastic stories or, even, space exploration as it was imagined at the time, a time close to Jules Verne's.

We urge the Executive Committee of the IAU to adopt the following motion :

Whereas the statutes of the IAU (a) prevent the expulsion of an adhering organization and (b) allow the adherence of a region of a country in which independent astronomical activity has been developed that

(I). The official title of the so called " Republic of China " be changed forthwith to " Province of Taiwan, China ", the adhering organization of which is The Astronomical Society, Taipei, Taiwan, China.

(II). The IAU recognises the offence caused to the Chinese astronomical community by the decision taken in 1958 to allow the Chinese province of Taiwan to adhere as " The Republic of China " and regrets that decision.

(III). The IAU shall exert every effort to ensure that the Peoples Republic of China can resume its rightful place in ICSU as sole representative of China.

ephemerides

It is very useful to many to be able to know where and under what conditions ephemerides of bodies in the solar system, star catalogues or lists of reduced observations are available. The International Information Bureau on Astronomical Ephemerides which was created by IAU six years ago under the auspices of Commission 4, has already been circulating this kind of information to about one hundred and fifty observatories, institutions or individual astronomers. The particulars are given on information cards that are distributed freely to all those interested (seventy seven cards have been issued so far).

If you wish to be put on the mailing list or if you have data that could be of interest to others, please contact Dr B. Morando, director of the Bureau, at the following address :

Dr B. Morando,
Bureau International d'Information
sur les Ephémérides Astronomiques,
77, avenue Denfert-Rochereau, 75014 Paris France.



about grenoble



LES LIAISONS DANGEREUSES

Between 1769 and 1775 a young officer of noble origin lived in Grenoble where his regiment was stationed. He devoted his leisure to the acute observation of the refined and frivolous society which his position made him liable to mix with. Later he wrote a novel which met a tremendous success: this man was Pierre Choderlos de Laclos.

The novel which made him famous is " Les liaisons dangereuses " where we see a Marquise de Merteuil and a Mr de Valmont lay the most clever and cynic snares to delude and deprave virtuous women and naive fiancés. Choderlos de Laclos told a friend that Valmont was in fact a young scientist of his acquaintance, but whom he was never known. The character of Mrs de Merteuil is supposed to depict a lady of Grenoble whom Stendhal pretended to have known.

" Les liaisons dangereuses " through the cleverness of the plot, the audacity of the moral outlook, the subtlety of the psychological situations and the elegance of its beautiful language has remained to our days a masterpiece of French literature.

B.M.

While their parents work in commission meetings, the children enjoy swimming. This is one of the activities of the day camp organised during the general assembly.

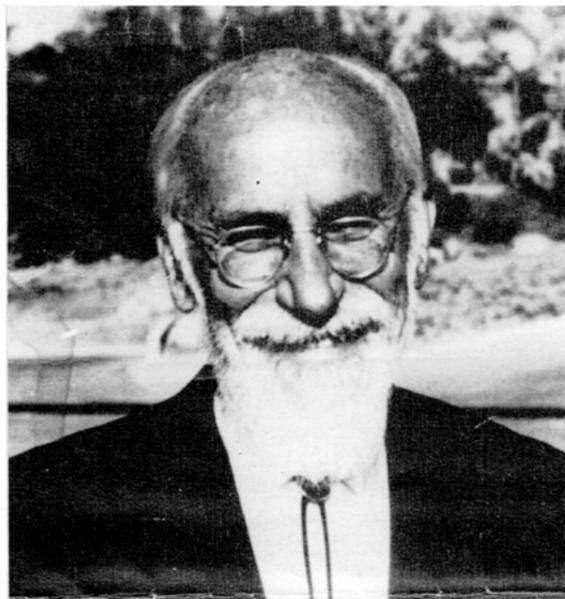


trois amis disparus en 1974:

C'est un fait bien connu que les spécialistes des étoiles doubles se font de plus en plus rares ; comme d'autre part c'est un domaine où tout ce qui reste valable est dû à un petit nombre d'astronomes qui s'y sont voués à peu près exclusivement, il n'est pas étonnant d'y rencontrer des observateurs au travail bien au-delà de leur retraite d'âge, et qui comptent ainsi 30, 40, voire 50 ans d'activité. Mais le jour arrive, pour chacun à son tour, de nous quitter définitivement, laissant peser la tâche sur un groupe à chaque fois un peu plus clairsemé.

g. van biesbroeck,

le plus âgé (né en 1880 à Gand), était aussi celui qui s'illustra dans la plus grande variété de domaines. De formation d'abord technique, il s'était tourné par goût vers l'astronomie, mais ses capacités pratiques et son ingéniosité l'ont toujours servi et beaucoup parmi nous ont pu voir en service l'un ou l'autre de ses dispositifs personnels. Il y joignait une ardeur au travail, une gentillesse et une bonne humeur inaltérables qui en faisaient un collègue entouré de l'affection de tous. Sa carrière, commencée en Europe (à Heidelberg et à Potsdam), se continua aux États-Unis après qu'il eut quitté la



Belgique envahie en 1915 ; il observa les étoiles doubles à Yerkes d'abord, puis aux grands télescopes de Mc Donald et de Kitt Peak. Ses observations, au nombre de plus de 40 000, couvrent 60 années de sa vie ; il était à la retraite depuis 1945 ! Nous ne rappellerons pas ici ses travaux au moins aussi importants dans d'autres domaines : petites planètes, comètes (dont trois découvertes), éclipses de Soleil. Il était encore parmi nous au colloque de la Commission 26 tenu à Sproul Observatory en 1972, et celui qui avait eu lieu en 1966 à Uccle, dans son pays d'origine, lui avait été dédié. Notre ami nous a quittés le 23 février 1974 ; il ne s'était arrêté de travailler qu'à peine un mois auparavant.

w.h. van den bos,

né à Rotterdam en 1896, avait commencé sa carrière à Leyde, et tout de suite par des mesures d'étoiles doubles qui furent déjà le sujet de sa thèse de doctorat. En 1925 il rejoignit l'Afrique du Sud à la demande du Directeur de l'Observatoire de l'Union (devenu Republic Observatory) à Johannesburg, R.T.A. Innes qui était lui-même une

L'année 1974 a été à cet égard particulièrement cruelle, puisque nous avons perdu, en quatre mois à peine, successivement nos amis G. van Biesbroeck, W.H. van den Bos et R. Jonckheere, peut-être trois des tout derniers parmi ceux qui ont fondé la discipline dans son développement actuel. Tous trois étaient doués à la fois de l'habileté, naturelle et acquise, et de l'intransigeante sévérité vis-à-vis de soi qui font les maîtres observateurs, avec une notion aigüe des pièges tendus à quiconque serait tenté de se fier à son seul talent.

autorité mondiale en la matière et qui s'attachait à l'organiser pour le ciel austral. Son séjour était prévu pour trois ans, mais il ne devait plus quitter l'établissement, qu'il dirigea lui-même à partir de 1941. Son œuvre est considérable : outre ses propres mesures (74 000 ce qui constitue un record absolu) et surtout le défrichage du ciel austral parallèlement à l'équipe de Bloemfontein, où son apport est de près de 3000 couples, il calcula un certain nombre d'orbites en appliquant la méthode de Thiele-Innes-van den Bos qui lui doit sa forme définitive. Il tint à jour minutieusement le fichier des étoiles doubles du ciel austral commencé par Innes et qui, joint à celui que gérait H.M. Jeffers à Lick pour le ciel boréal, devait fournir la matière du premier catalogue-index étendu au ciel entier et qui parut sous leurs deux noms en 1963.

Frappé par une attaque en 1966, alors qu'après sa retraite il avait encore réalisé d'importantes séries de mesures aux États-Unis (Lick, Yerkes et Mc Donald), il ne s'en était remis que lentement et en partie, et devait disparaître le 30 mars en laissant le souvenir d'un esprit amical et cultivé, dont le jugement très sûr s'exprimait volontiers sans vains détours et méritait d'être médité par tous. La Commission 26 a eu W.H. van den Bos pour Président de 1938 à 1952 ; elle lui a dédié son colloque de Nice en 1969.

r. jonckheere,

né en 1888 à Roubaix mais de nationalité belge, a eu une carrière très différente puisqu'il a pratiqué l'astronomie, pour la plus grande partie de sa vie active, en amateur et avec des moyens personnels. Doué d'une vue exceptionnelle, il s'était intéressé aux étoiles doubles dès ses débuts, avec une lunette de 22 cm ; il put les observer à partir de 1908 avec la lunette de 35 cm de son observatoire privé de Hem, lequel fut rattaché en 1912 à la proche Université de Lille. R. Jonckheere se proposa la tâche immense et ingrate de défricher le ciel au-delà de la magnitude-limite du catalogue général de l'époque, celui de Burnham qui s'arrêtait à la 9e. Il poursuivit le travail à divers instruments, 12 en tout car il observa aussi à Greenwich, à Strabourg, un peu ailleurs et finalement à Marseille où il fut appelé à un poste d'Etat (dans le cadre du CNRS) en 1942. Son catalogue groupe plus de 3300 couples nouveaux, généralement faibles et dont la difficulté rebute encore maint observateur même mieux armé qu'il ne l'était ; l'ouvrage, qui couronne son œuvre, fut publié en 1962 avec l'aide et sous l'égide de l'Union Astronomique Internationale. Au cours de sa recherche, Jonckheere a découvert, outre ses étoiles doubles, un certain nombre d'autres objets faibles, nébuleuses planétaires et condensations autour de la J 900. A la fin de sa vie, il avait dû renoncer à l'observation et assurait entre autres l'édition du Journal des Observateurs, tout en continuant à suivre l'évolution générale dans le domaine ; il avait pris part encore au colloque de Nice (1969). Il est mort le 27 juin, dernier de nos trois amis ainsi disparus en cette même année.

P. Muller
Président (1952-1958)
Vice-Président (1973-1976) de la Commission 26

— Exchange of Astronomers

Commission 38 plans to continue the IAU exchange of astronomers programme. An increasing number of young astronomers as well as a proliferation of places where astronomy is carried out makes the programme more valid than ever.

New guidelines are being prepared by the Commission and when approved will be available for distribution. Persons who wish to receive these guidelines and other information about the programme should leave their names and addresses in mail box n° 1962, or they may write to Prof. Donald A. Mac Rae, David Dunlap Observatory, Richmond Hill (Box 360), Ontario, Canada.

latest news



— Commission 46 (Teaching of Astronomy)

This Commission is holding its second meeting with school teachers on Thursday 2nd September 1976 from 09.00 to 18.45 in the Physical Sciences Building (P1).

All members of the Union, whether members of Commission 46 or not, are cordially invited to join us after the General Assembly.

The first meeting with school teachers was held at the General Assembly in Sydney. That meeting proved so successful that we are repeating the experiment again in Grenoble. The meetings of teachers with astronomers proved very fruitful and stimulating. We look forward to seeing you.

Dr McNally, President of Commission 46

— We remind you that the General Assembly will meet on Thursday the 2nd of September at the L. Weil theater, on the Campus.

(Nous vous rappelons que l'Assemblée Générale se réunira le jeudi 2 septembre à l'Amphithéâtre L. Weil au Domaine Universitaire).

astronomie et pétrole



le Brissac, de 240 000 T de port en lourd que la société maritime des pétroles BP vient de mettre en service, fait le point par satellites en orbite polaire. Un système de récepteur-calculateur peut donner la position du navire toutes les heures en longitude et en latitude.

Solution in n° 9
Solution dans le n° 9

UNE GRILLE FRANÇAISE

Horizontalement - I. Une couronne pour l'UAI - II. Plateau bien garni - Ondes et corpuscules - III. Nécessaires aux religions - Opposé à West - Drame oriental - IV. Élément - Brille peu d'années - Servi à Londres - V. Sa définition permet la mesure - Règna sur le pétrole - VI. Amateur de pommes - Organisation militaire - VII. Fin ambiguë d'une partie - Prénom féminin - VIII. Venait avec la femme - Le début d'une avenue new-yorkaise - IX. Grain de lumière - Cavalière olympique - X. Ce n'est pas bon marché - Fleuve français - On le dévore comme un loup - XI. En Champagne - Limite d'horizon - Ne céda pas à la toge - XII. Ile d'Extrême-Orient - Plagiat - XIII. Un breuvage à vous rendre alués - Notamment de Nemours - XIV. Tourne avec le gulf - Coule en France.

Horizontalement - I. Crowns our sky - II. Asiatic area - Waves and particles - III. For religious minds - Sunrise - English rebuttal - IV. Element - Bright for billions of years - Served at five o'clock - V. Thus enstrengths... - An arabian king - VI. He was very... attractive? - Military organization going from right to left - VII. Feminine nickname - Famous French opera - VIII. A good Dicken's wife - Characterizes spectral lines of dwarf stars - IX. Carries light energy - Second on the line - X. French river - French river - For drinking - XI. A Champagne - Can make you knurd... - Cedant togae - XII. Island in the far East - To pledgerize - XIII. Can make you completely rk nud - An French duke - XIV. Flows - Flows.

Verticalement - 1. Parfois magic, parfois barnum - Un exament renversé - 2. Chasseur d'étoiles - Aya, dirait-on à Istanbul ! - 3. Ronge - Préfixe - Se boit en France - 4. Se danse un peu partout, même en Angleterre - Trajet astronomique - 5. Garçon de l'air ou de l'eau - Possessif - 6. Rare - Vu en France, conduit par des Anglais - Un élément - 7. Sidéré si on le double - Coule en Espagne - Pour ceux qui ont un poumon malade - 8. Long poème - Ne peut que croître - Son écharpe traverse un ciel pluvieux - 9. Air tout retourné - En Ecosse - 10. Dans le Sussex - Dut être sidéré, si l'on en croit son nom - 11 Nécessaire à l'observateur des éruptions solaires, par exemple - Incroyant épilé - 12. Mesure céleste - Unité photométrique - Tient la jument - 13. Peut avoir deux signes - Prénom très britannique - Tout ça ne le vaut pas - 14. Un lord écrivain - Nous y sommes... -

Verticalement - 1. On the moon - Carries - 2. A star hunter - First name for a greek girl - 3. A nasty guy - Not cut - English article - 4. A dance for lazy dancers - Turn around a center without an unnecessary letter - 5. An american observatory - At the stellar center - 6. Noble - The end of Pitt - An element - 7. How does a battle always start - Spanish flow - Respiratory prefix - 8. Well organised poem - Begins and ends everything normal - Open the eyes - 9. Upside down in the atmosphere - In Scotland - 10. In Sussex - Arabic first name - 11. Often heard on the airport - Preposition - 12. Celestial unit - Photometric unit - Wife to be - 13. Charged - First name - Toujours ? - 14. Falls on mountains - There we are !

Pau-Amma

