XVIIIth General Assembly

Patras, Greece

1982

XVIIIe Assemblée Générale

Patras, Greece

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Resolution No A 1
Ratification of IAU Membership of China
Ratification de l'adhésion de la Chine à l'UAI

Ratification of IAU Membership of China

The General Assembly

noting that progress has been achieved in restoring full adherence to the IAU of China, as was anticipated at the XVIIth General Assembly of 1979 at Montreal, and that agreement was obtained by 1 May 1980 on the mode of listing, in the official list of member countries, two adhering bodies for China as a temporary measure,

ratifies the arrangements made by the Executive Committee for the adherence of China to the Union during the period elapsed since the XVIIth General Assembly.

Ratification de l'adhésion de la Chine à l'UAI

L'Assemblée Générale de l'Union

constatant le progrès accompli pour le rétablissement de la pleine adhésion de la Chine à l'UAI, tel qu'il avait été anticipé à la XVIIème Assemblée Générale de 1979 à Montréal, et l'accord obtenu au 1er Mai 1980 pour la dénomination, dans la liste des pays membres, de deux organisations adhérentes pour la Chine à titre provisoire,

ratifie les accords passés par le Comité Exécutif pour l'adhésion de la Chine à l'Union pendant la période écoulée depuis la XVIIème Assemblée Générale.

Resolution No. A 2
Support of the Meteor Data Center
Aide Financière au Centre de Données sur les Météores

Support of the Meteor Data Center

The General Assembly, following the recommendation of the Executive Committee,

having examined the proposal of the President of Commission 22 to establish a Meteor Data Center of the Commission at the Observatory of Lund in Sweden,

agrees to the allocation of SwFr 1800 per annum as a financial contribution to the costs of such a center, so established, for the period 1983-85.

Aide Financière au Centre de Données sur les Météores

L'Assemblée Générale, sur recommandation du Comité Exécutif,

ayant examiné la proposition du Président de la Commission 22 d'établir un Centre de Données sur les Météores à l'Observatoire de Lund en Suède,

décide d'allouer une somme de 1.800 Francs Suisses par an comme contribution aux frais de ce centre, pour la période 1983-85.

Resolution No. A 3
Contract Scheme for Visiting Lecturers
Un Plan de Contrat pour Conférenciers Visiteurs

Contract Scheme for Visiting Lecturers

The General Assembly, following the recommendation of the Executive Committee,

noting the expressed wish of the official representative of the Swedish National Committee of Astronomy at the XVIIth General Assembly of 1979 at Montreal that fellowships for students from developing countries be encouraged,

and recognizing the valuable discussions carried out in the interim by the Working Group of Commissions 46 and 38 on the Education of Astronomers from Developing Countries,

agrees that a sum of SwFr 35000 be allowed during the period 1983-85 to support the carrying out of a Contract Scheme for Visiting Lecturers with a sponsoring institution in a country newly entering into astronomical work, to be selected before June 1983, as the result of active enquiry within IAU member countries and other selected countries.

Un Plan de Contrat pour Conférenciers Visiteurs

L'Assemblée Générale, sur recommandation du Comité Exécutif,

notant le voeu exprimé par le représentant officiel du Comité National Suédois d'Astronomie à la XVIIème Assemblée Générale de 1979 à Montréal que soient encouragées les bourses pour les étudiants des pays en voie de développement,

et reconnaissant les discussions valables engagées depuis par le Groupe de Travail des Commissions 46 et 38 sur la formation des Astronomes des pays en voie de développement,

décide d'allouer une somme de 35.000 Francs Suisses pour la période 1983-85 destinée à financer un Plan de Contrat pour Conférenciers Visiteurs avec un institut de tutelle dans un pays nouvellement acquis à la recherche astronomique, dont le choix sera arrêté avant Juin 1983 et dépendra d'une enquête approfondie dans les pays membres de l'UAI et dans d'autres pays sélectionnés.

Resolution No. A 4
Creation of Commission 51: Search for Extraterrestrial Life
Créationa de la Commission 51: Recherche de la Vie dans l'Univers

Creation of Commission 51: "Search for Extraterrestrial Life"

The General Assembly, following the recommendation of the Executive Committee,

resolves that a new Commission of the Union be established in respect of the search for life in the Universe, the name of the Commission to be Commission 51 (Search for Extraterrestrial Life).

Création de la Commission 51: "Recherche de la Vie dans l'Univers"

L'Assemblée Générale, sur recommandation du Comité Exécutif,

décide la création d'une nouvelle Commission de l'Union, relative à la recherche de la vie dans l'Univers, le nom de la Commission étant Commission 51 (Recherche de la Vie dans l'Univers).

Resolution No. A 5
Changes of Names of Commissions 26 (Double and Multiple Stars) and 34 (Interstellar Matter)
Changement des Noms des Commission 26 (Etoiles Doubles et Multiples) et 34 (Matière Interstellaire)

Changes of Names of Commissions 26 and 34

The General Assembly, following the recommendation of the Executive Committee,

resolves that Commission 26 (Double Stars) be renamed "Double and Multiple Stars"

Commission 34 (Interstellar Matter and Planetary Nebulae) be renamed "Interstellar Matter"

Changement des Noms des Commissions 26 et 34

L'Assemblée Générale, sur recommandation du Comité Exécutif,

décide que La Commission 26 (Etoiles Doubles) deviendra "Etoiles Doubles et Multiples"

La Commission 34 (Matière Interstellaire et Nébuleuses Planétaires) deviendra "Matière Interstellaire"

Resolution No. R 1
Comet Halley Days
Journées "Comète de Halley"

Comet Halley Days

The International Astronomical Union

recognizing that it is particularly desirable that pre-selected Comet Halley Days for co-ordinated observation over a limited time be supported

recommends that observatory directors and observing program committees give high priority to Comet Halley observation during the interval 1985-87.

Journées "Comète de Halley"

L'Union Astronomique Internationale

estimant qu'il est particulièrement souhaitable que l'on consacre des Journées "Comète de Halley", choisies à l'avance, à des observations coordonnées pendant une durée limitée

recommande que les directeurs d'observatoires et les comités de programme attribuent une forte priorité aux observations de la Comète de Halley dans l'intervalle 1985-87.

Resolution No. R 2
International Halley Watch

International Halley Watch (IHW)

The International Astronomical Union

noting that, in order to organise and marshall ground-based observations of Comet Halley throughout its 1986 perihelion passage and to co-ordinate them with space missions, an international program, the International Halley Watch, has been established

and wishing to avoid duplication of effort at the international level and to encourage participation in this program

endorses the International Halley Watch as the international co-ordinating agency for Comet Halley observations.

L'Union Astronomique Internationale

constatant qu'un programme international de surveillance de la Comète Halley dit "International Halley Watch" a été mis en place afin de préparer et d'orchestrer les observations depuis la Terre de la Comète de Halley tout au long de son passage au périhélie en 1986 et de les coordonner avec les missions spatiales

et désirant éviter la duplication des efforts au niveau international et encourager la participation à cette campagne

reconnaît l'International Halley Watch comme l'organisation internationale coordonnant les observations de la Comète de Halley.

Resolution No. R 3
1980 IAU Theory of Nutation
Théorie de la Nutation UAI 1980

1980 IAU Theory of Nutation

The International Astronomical Union

recognizing that since the Seventeenth General Assembly, Commission 4, 7, 8, 19 and 31 have adopted the 1980 IAU Theory of Nutation in place of the 1979 IAU Theory of Nutation

now endorses the adoption of the 1980 IAU Theory of Nutation.

Théorie de la Nutation UAI 1980

L'Union Astronomique Internationale

considérant que depuis la XVIIème Assemblée Générale, les Commissions 4, 7, 8, 19 et 31 ont adopté la Théorie de la Nutation UAI 1980 en remplacement de la Théorie de la Nutation UAI 1979,

souscrit désormais à l'adoption de la Théorie de la Nutation UAI 1980.

Resolution No. R 4
Synoptic Solar Observations
Observations Synoptiques Solaires

Synoptic Solar Observations

The International Astronomical Union

recognizing that continuing long-term synoptic observations of solar activity are vitally necessary, and that some long-term programs have been lost or are threatened in the present world-wide economic situation,

recommends that all countries endeavour to plan well balanced programs of synoptic solar observations for the sake of future generations.

Observations Synoptiques Solaires

L'Union Astronomique Internationale

reconnaissant que les observations synoptiques continues et de longue durée de l'activité solaire sont d'une nécessité vitale et que certains programmes à long terme ont été perdus ou sont menacés par suite de la situation économique mondiale actuelle,

recommande que tous les pays s'efforcent d'organiser des programmes rationnels d'observation synoptique solaire pour les générations futures.

Resolution No. R 5
MERIT Campaign
Programme MERIT

RESOLUTION R5:

MERIT Campaign

The International Astronomical Union

noting the success of the MERIT short campaign

and recognizing that the results to be obtained during the MERIT main campaign will be of short and long-term benefit for the studies of the planet Earth

supports the following two resolutions adopted by the International Association of Geodesy (IAG) at its General Meeting of Tokyo (May 1982):

IAG Resolution 1

The International Association of Geodesy

noting that the results to be obtained during the MERIT main campaign will be of long-term benefit to geodesy and its applications

strongly endorses the proposals of the COTES and MERIT Working Groups that during the campaign

(a) very long baseline radio interferometric and satellite and lunar laser ranging systems be used for co-located observations of high precision at the recommended sites, and

(b) observations be made intensively for a limited period to detect any short-period variations in the derived earth-rotation parameters

and urges the appropriate resources and facilities be made available for these activities by the countries involved.

IAG Resolution 2

The International Association of Geodesy

considers that it is important that the new terrestrial reference frame to be derived from high-precision observations during the MERIT Main Campaign should be extended and related to existing services as accurately and quickly as possible,

and urges that co-ordinated precise positioning observations be made during the campaign by satellite radio tracking systems at the Very Long Baseline Interferometric, Lunar and Satellite Laser Ranging sites as well as at a larger number of well distributed sites around the world.

recommends (a) that the co-ordinates of the stations of the International Service of Latitude be determined in the Reference System (NW1OF) adopted for the analysis of observations, by the Doppler method of artificial satellite of TRANSIT or NOVA type.

(b) That special support be given to BIH acting as the co-ordinating center for the MERIT international campaign.

Programme MERIT

L'Union Astronomique Internationale

prenant note du succès de la campagne courte du programme MERIT et

reconnaissant que les résultats à obtenir au cours de la Campagne Principale de MERIT seront bénéfiques à long et court terme pour les études de la planète Terre

souscrit aux deux résolutions suivantes adoptées par l'Association Internationale de Géodésie (AIG) lors de sa réunion générale de Tokyo (Mai 1982):

AIG Résolution 1

La Réunion Générale de l'Association Internationale de Géodésie

notant que les résultats que fournira la Campagne MERIT seront d'un profit durable pour la géodésie et ses applications,

approuve fortement les propositions des Groupes de travail COTES et MERIT que, lors de cette Campagne,

(a) les systèmes d'interférométrie à très longue base et de télémétrie laser sur les satellites et la Lune soient utilisés à des observations de haute précision en colocation sur les sites recommandés, et que

(b) des observations intensives soient faites pendant une période limitée afin de détecter des variations à courte période dans les paramètres de rotation de la Terre ainsi déterminés,

et insiste pour que les moyens appropriés soient donnés à ces activités par les pays concernés.

AIG Résolution 2

La Réunion Générale de l'Association Internationale de Géodésie

considérant qu'il est important que les programmes d'observation associés au nouveau repère terrestre qui doit se déduire des mesures de haute précision pendant la Campagne Principale MERIT soient étendus et reliés aux services existants aussi exactement et rapidement que possible,

insiste pour que des observations coordonnées de positionnement précis soient faites pendant cette Campagne par des systèmes de poursuite radioélectrique de satellites aux sites d'interférométrie à très longue base et de télémétrie laser sur la Lune et les satellites, ainsi qu'à un grand nombre de sites bien répartis autour du globe.

recommande

(a) que les coordonnées des stations du Service International des Latitudes soient déterminées dans le système de référence (NWlOF) adopté pour l'analyse des observations par la méthode Doppler des satellites artificiels du type Transit ou Nova.

(b) qu'une aide spéciale soit octroyée au Bureau International de l'Heure (BIH) agissant en qualité de centre coordinateur pour la campagne internationale MERIT.

Resolution No. R 6
AAVSO Data on Cataclysmic Variables
Données AAVSO sur les Variables Cataclysmiques Proposée par le Comité des Résolutions

AAVSO Data on Cataclysmic Variables

The International Astronomical Union

recognizing the recent increased interest in cataclysmic variables and the need for long-term light-curves to make possible the correlation of theoretical and observational research

noting that data collected by AAVSO observers and other groups throughout the world are available on magnetic tape

supports the search for means to publish this valuable reference material.

Données AAVSO sur les Variables Cataclysmiques

L'Union Astronomique Internationale

reconnaissant l'intérêt croissant que présentent les variables cataclysmiques et la nécessité de disposer de courbes de lumière à long terme afin de permettre la corrélation entre la recherche théorique et observationnelle

notant que les données rassemblées par les observateurs AAVSO et par d'autres groupes dans le monde sont disponibles sur bandes magnétiques,

recommande la recherche de moyens en vue de la publication de ces précieuses données de référence.

Resolution No. R 7
Astronomy and Astrophysics Abstracts

Astronomy and Astrophysics Abstracts

The International Astronomical Union

confirming Resolution No. 3 adopted by the XVIth General Assembly in 1976,

considers that Astronomy and Astrophysics Abstracts (AAA) fulfil excellently the specialized needs for an abstracting service in Astronomy and Astrophysics,

and recommends strongly that AAA continued to be produced by the Astronomisches Rechen-Institut, Heidelberg, Fed. Rep. Germany, under the auspices of the IAU.

L'Union Astronomique Internationale

reconfirmant la Résolution No. 3 adoptée par la XVIème Assemblée Générale en 1976

considère que les "Astronomy & Astrophysics Abstracts" (AAA) satisfont pleinement aux besoins spécifiques d'un service chargé des notes abrégées dans le domaine de l'astronomie et de l'astrophysique,

et recommande vivement que les AAA continuent à être publiés par l'Astronomisches Rechen-Institut à Heidelberg (Rép. Féd. d'Allemagne) sous les auspices de l'UAI.

Resolution No. R 8
Very Long Baseline Interferometry
Interférométrie à Très Longue Base

Very Long Baseline Interferometry

The International Astronomical Union

recognizing the importance of interdisciplinary scientific use of large steerable antennas for astrophysical, astrometric and geodetic research in Very Long Baseline Interferometry (VLBI),

endorses the formation of a working group under Commission 40 to collect and disseminate information concerning plans of VLBI experiments in astronomy and geodesy, and to encourage cooperation between observatories internationally.

Interférométrie à Très Longue Base

L'Union Astronomique Internationale

reconnaissant l'importance de l'utilisation scientifique interdisciplinaire de grandes antennes orientables pour la recherche astrophysique, astrométrique et géodésique dans l'Interférométrie à Très Longue Base (VLBI),

souscrit à la création d'un groupe de travail dépendant de la Commission 40 en vue de rassembler et de diffuser l'information concernant les projets d'expériences VLBI en astronomie et en géodésie, et d'encourager la coopération internationale entre les observatoires.

Resolution No. R 9
Protection of Radio Frequency Bands
Protection de Bande de Fréquences Radio

Protection of Radio Frequency Bands

The International Astronomical Union

recalling the considerations (a) to (d) of IAU Resolution No. 3, passed at the XVIIth General Assembly in 1979 concerning harmful interference to radio astronomy observations

and considering the pioneering use by radio astronomers of the radio spectrum at frequencies above 275 GHz,

recommends

1. The provision by national administrations of frequency bands for radio astronomy continuum and polarization measurements at nearly octave intervals throughout the radio spectrum,

2. The provision of bands at the frequencies of the astrophysically most important spectral lines tabulated in the 1982 report of IAU Commission 40, and

3. The protection of these frequency bands from harmful interference from in-band, band-edge and sub-harmonic emissions, especially from space-borne transmitters.

Protection de Bandes de Fréquences Radio

L'Union Astronomique Internationale

rappelant les considérations (a) à (d) de la Résolution UAI No. 3 passée à la XVIIème Assemblée Générale en 1979, relative aux interférences nuisibles aux observations radioastronomiques,

et considérant l'utilisation d'avant-garde faite par les radioastronomes du spectre radio à des fréquences supérieures à 275 GHz,

recommande

1. l'attribution par les administrations nationales de bandes de fréquences destinées aux mesures radioastronomiques du spectre continu et de la polarisation à des intervalles de près d'une octave dans tout le spectre radio,

2. l'attribution de bandes à des fréquences correspondant aux raies spectrales les plus importantes pour l'astrophysique telles qu'elles figurent dans le rapport 1982 de la Commission 40 de l'UAI,

3. la protection de ces bandes de fréquences contre toute interférence nuisible dans la bande, en bord de bande et dans les bandes sous-harmoniques, et en particulier contre toute émission en provenance d'émetteurs embarqués.

Resolution No. R 10
Sydney Observatory Instruments
Les Instruments

Sydney Observatory Instruments

The International Astronomical Union

noting	the decision to terminate scientific work of the Sydney Observatory, and
recognizing	the role of the Sydney Observatory in international campaigns for the improvement of the astrometric reference frame in the Southern Hemisphere,
recommends	that the instruments now at Sydney continue to be made available for astronomical observations.

Les instruments de l'Observatoire de Sydney

L'Union Astronomique Internationale

notant	la décision de mettre fin aux travaux scientifiques de l'Observatoire de Sydney et,
reconnaissant	le rôle de l'Observatoire de Sydney dans les campagnes internationales visant à améliorer le système de référence astrométrique dans l'hémisphère Sud,
recommande	que les instruments se trouvant actuellement à Sydney continuent à être utilisables pour les observations astronomiques.

Resolution No. R 11
Endorsement of Commission Resolution
Adoption des Résolutions des Commissions

Endorsement of Commission Resolutions

The XVIIIth General Assembly of the International Astronomical Union

having	full confidence in its Commissions,
endorses	other resolutions submitted by them to the Resolutions Committee. These will be published in the Official Languages of the Union, French and English, in Transactions IAU XVIIIB.

Adoption des Résolutions des Commissions

La XVIIIème Assemblée Générale de l'UAI

accordant	toute sa confiance dans ses Commissions,
souscrit	aux autres résolutions qu'elles ont soumises au Comité des Résolutions. Ces résolutions seront publiées dans les deux langues officielles de l'Union, le français et l'anglais, dans les Transactions de l'UAI XVIIIB.

Resolution No. C 1
Flexible Image Transport System
Système de Transport d'Image Soupe

Flexible Image Transport System

Commission 5

considering the present unsatisfactory situation of the transfer of astronomical data between astronomical institutions

recommends that all astronomical computer facilities recognize and support the Flexible Image Transport System (FITS) for the interchange of binary data on magnetic tape, as described in Astronomy and Astrophysics Supplement, vol. 44, pp.363 and 371.

Système de Transport d'Image Souple

La Commission 5

considérant la situation actuelle peu satisfaisante de l'échange de données entre instituts d'astronomie

recommande que tous les ordinateurs utilisés en astronomie reconnaissent et adoptent le Système de Transport d'Image Souple pour l'échange de données binaires sur bande magnétique, tel qu'il est décrit dans "Astronomy & Astrophysics Supplement", vol. 44, pp. 363 et 371.

Resolution No. C 2
Introduction of Astronomy
Promotion de l'Astronomie

Introduction of Astronomy

Commission 46

considering that astronomy is an integral part of physical sciences, both in education and in research,

and whereas some countries now without astronomy may desire to introduce astronomy in their educational or scientific institutions,

recommends that the International Astronomical Union supports the introduction of astronomy in such countries and encourages activities by its Commissions towards that purpose.

Promotion de l'Astronomie

La Commission 46

considérant que l'astronomie fait partie intégrante des sciences physiques tant dans l'enseignement que dans la recherche

et alors que certains pays dépourvus d'astronomie peuvent souhaiter promouvoir cette science dans leurs institutions scientifiques ou d'enseignement,

recommande que l'Union Astronomique Internationale soutienne la promotion de l'astronomie dans ces pays et encourage les activités s'y rapportant par l'intermédiaire de ses Commissions.

Resolution No. C 3
UTI in Air and Nautical Almanacs
UTI dans les Annuaires Aéronautiques et Nautiques

UT1 in Air and Nautical Almanacs

Commissions 4 and 31

noting that the present method of keeping UTC within $0^{s}.9$ of UT1 by means of leap seconds both provides the second of SI and meets the need for safe celestial navigation,

recommend that the Air and Nautical Almanacs continue to be published with UT1 as the argument.

UT1 dans les Annuaires Aéronautiques et Nautiques

Les Commissions 4 et 31

notant que la méthode actuelle consistant à conserver l'écart entre le UTC et le UT1, dans les limites de $0^{s}.9$, au moyen de secondes intercalaires, fournit à la fois la seconde de SI et satisfait aux besoins de la securité de la navigation par les méthodes astronomiques,

recommandent que les annuaires aéronautiques et nautiques continuent d'être publiés avec le UT1 comme argument.

Resolution No. C 4
Sign of Terrestrial Longitude
Sign de Longitude Terrestre

Sign of Terrestrial Longitude

Commissions 4, 19, 31

noting that the International Meridian Conference held in Washington in October 1884 adopted a resolution that from the meridian of the Observatory of Greenwich "longitude shall be counted in two directions up to 180 degrees, east longitude being plus and west longitude minus",

and noting that there is an increasing interaction between astronomy and geodesy, a field in which the sign convention "east longitude is positive" is in common use,

recommend that as soon as practicable all national ephemerides and other astronomical publications adopt the convention that terrestrial longitude be measured positively to the east.

Signe de Longitude Terrestre

Les Commissions 4, 19 et 31

notant que la Conférence du Méridien international tenue à Washington en Octobre 1884 a adopté une résolution selon laquelle à partir du méridien de l'Observatoire de Greenwich "la longitude sera comptée dans deux directions jusqu'à 180°, la longitude Est étant positive et la longitude Ouest étant négative",

et notant qu'il existe une interaction croissante entre l'astronomie et la géodesie dans lequel la convention de signe "longitude positive vers l'Est" est d'un usage courant,

recommandent que toutes les éphémérides nationales et autres publications astronomiques adoptent dès que possible la convention selon laquelle la longitude terrestre soit comptée positivement vers l'Est.

Resolution No. C 5
UTI and Greenwich Mean Sidereal Time
UTI et Temps Moyen Sidéral de Greenwich

UT1 and Greenwich Mean Sidereal Time

Commissions 4, 19 and 31

considering Commission resolution (4) of the XVIIth General Assembly and that it is planned to introduce the IAU (1976) System of Astronomical Constants, the 1980 IAU Theory of Nutation, and the equinox of the FK5 on 1984 January 1,

recommend that (a) the relationship between mean sidereal time and UT1 be modified so that there is no change in either value or rate of UT1, as determined from stellar observations, due to a correction to the zero point of right ascensions of the FK4 or to a correction for the motion of the zero point, both to be introduced in FK5 (b) the new expression for Greenwich mean sidereal time of 0^mUT1 be

$$\text{GMST of } 0^h\text{UT1} = 6^h41^m50^s.54841 + 8640184^s.812866\ T_u + 0^s.093104\ T_u^2 - 6^s.2 \times 10^{-6}\ T$$

where T_u is the number of Julian centuries of 36525 days of universal time elapsed since 2000 January 1, 12^h UT1 (JD 2451545.0).

UT1 et Temps Moyen Sidéral de Greenwich

Les Commissions 4, 19 et 31

considérant la Résolution 3 de la Commission 4 prise lors de la XVIIème Assemblée Générale et qu'il est prévu d'introduire le Système des Constantes Astronomiques de l'UAI 1976, la Théorie de la Nutation UAI 1980 et l'équinoxe du FK5 au 1er Janvier 1984.

recommandent (a) de modifier la relation existant entre le temps sidéral moyen et le UT1 de façon à ne changer ni la valeur ni le taux de UT1, déterminés à partir d'observations stellaires et introduits, par suite d'une correction à l'origine des ascensions droites du FK4 et du mouvement de cette origine, toutes deux étant apportées au FK5.

(b) que la nouvelle relation du temps sidéral moyen de Greenwich à 0h UT1 soit de

$$\text{GMST à 0hUT1} = 6^h41^m50^s.54841 + 8640184^s.812866\ TU + 0^s093104\ TU^2 - 6^s.2 \times 10^{-6} TU^3$$

où TU est le nombre de siècles juliens de 36525 jours de temps universel écoulés depuis le 1er Janvier 2000, à 12h UT1 (JD 2451545, 0).

Resolution No. C 6

Positional Astronomy and Fundamental Reference System

Astronomie de Position et Système de Référence Fondamental

Positional Astronomy and Fundamental Reference System

Commission 8

considering that the determination of the equinox and equator will remain an important task of positional astronomy

recommends that

(a) the Sun, major and minor planets be included in observational programs with transit circles.

(b) the Sun, and major planets be included in programs with astrolabes.

(c) minor planets be included in programs of photographic astrometry,

so that from differential and/or absolute observations the positions can be rigorously referred to the fundamental reference system and thus serve for further improvements of the zero points of this system.

Astronomie de Position et Système de Référence Fondamental

La Commission 8

considérant que la détermination de l'équinoxe et de l'équateur resteront une tâche importante pour l'astronomie de position,

recommande que

(a) le Soleil, les grosses et les petites planètes soient incluses dans les programmes d'observation au moyen d'instruments de passage

(b) le Soleil et les grosses planètes soient incluses dans les programmes d'astrolabe et

(c) les petites planètes soient incluses dans les programmes d'astronomie photographiques

en sorte qu'à partir d'observations différentielles et/ou absolues, les positions puissent être rigoureusement rattachées au système de référence fondamental et servir à améliorer les origines de ce système.

Resolution No. C 7
Solar Seismology
Siemologie Solaire

Solar Seismology

Commission 12

recognizing — the extreme importance of the observation of solar seismology

strongly supports — international cooperation in establishing a world-wide network of observing stations.

Sismologie Solaire

La Commission 12

reconnaissant — l'extrême importance de l'observation de sismologie solaire,

encourage — vivement la coopération internationale par la mise en place d'un réseau mondial de stations d'observation.

Resolution No. C 8
Dangers to Astronomy from Space Techniques
Dangers que font courir à l'Stronomie certains projets spatiaux

Dangers to Astronomy from Space Techniques

Commission 50

viewing — with deep concern the proposals for a Satellite Power System which would place very large structures into Earth orbit with the potential of destroying the conditions for a major part of astronomical research in many regions of the electromagnetic spectrum,

recommends — national representatives to bring this concern to the notice of space agencies in their countries, and to ensure that the IAU is kept fully informed of proposed developments in space techniques which would involve dangers to astronomy.

Dangers que font courir à l'Astronomie certains projets spatiaux

La Commission 50

considérant avec une profonde inquiétude les propositions relatives à un système de centrale d'énergie sur satellite qui placerait en orbite autour de la Terre d'importantes structures ayant la capacité de détruire les conditions d'observation pour une grande partie des recherches astronomiques, et ceci dans de nombreuses régions du spectre électromagnétique,

recommande aux représentants nationaux d'attirer l'attention des agences spatiales de leur pays sur ce problème, et de s'assurer que l'UAI est tenue informée des projets proposés dans le domaine spatial qui impliqueraient des dangers pour la recherche astronomique.

Resolution No. C 9
Zonal Tides
Marées Zonales

Zonal Tides (Table on p. 52)

Commissions 19 and 31

considering the need, in the processing and publication of the universal time, to clarify the role of the zonal tide,

recommend

1. that when the effect of the short period zonal tides, i.e. periods less than 35 days, is computed for the above purposes, the attached tabulation based on Yoder, Williams and Parke (J. Geophys. Res. 86, 881, 1981) be used, and
2. that the letter R be added to the notation of the relevant quantities to indicate that the correction for the short period zonal terms has been made (for instance UT1R).

Marées Zonales

Les Commissions 19 et 31

considérant le besoin de représenter clairement le rôle des marées zonales dans le calcul et la publication du temps universel,

recommandent

1. que lorsque l'effet des marées zonales à court terme (période inférieure à 35 jours) est calculé dans les buts précités, on utilise le tableau ci-joint, tiré des travaux de Yoder, Williams et Parke (J. Geophys. Res. 86, 881, 1981), et
2. que le suffixe R soit ajouté à la notation des quantités concernées pour signifier que la correction des effets à court terme a été effectuée (exemple: UT1R).

Resolution No. C 10
Value of k
Valeur de k

Value of k

Commission 4

considering that it is planned to introduce the IAU (1976) System of Astronomical Constants, the 1980 IAU Theory of Nutation, and the equinox of the FK5 on 1984 January 1,

recommends that in the calculation of lunar and solar eclipses, there be a single value for k, the ratio of the radius of the lunar profile to the Earth's radius, and that it correspond to the mean radius of Watt's datum as determined by observation of occultations and to the adopted radius of the Earth; the value of k = 0.2725076.

Valeur de k

La Commission 4

considérant qu'il est prévu d'introduire le Système des Constantes Astronomiques UAI 1976, la Théorie de la Nutation UAI 1980 et l'équinoxe du FK5 au 1er Janvier 1984,

recommande qu'il y ait, dans le calcul des éclipses lunaires et solaires, une seule valeur pour k, rapport du rayon du profil lunaire au rayon de la Terre, et que ce rapport corresponde au rayon moyen de la donnée de Watts déterminée par observation d'occultations et au rayon qui a été adopté pour la Terre; cette valeur est k = 0,2725076.

Terms Due to Zonal Tides, with Periods up to 35 Days

Based on Yoder, Williams, and Parke: 1981, J. of Geophys. Res., Vol. 86, 881 with K/C = 0.94

UT1R, DR, ωR represent the corrected forms of UT1, of the duration of the day D and of the angular velocity of the Earth ω.

The units are 10^{-4}s for UT, 10^{-5}s for D, and 10^{-14}Rad/s for ω

Value of k
Valeur de k

N	ℓ	ℓ'	F	$\mathcal{D}$	Ω	PERIOD DAYS	UT1-UT1R COEFFICIENT OF SIN (ARGUMENT)	D-DR COEFFICIENT OF COS (ARGUMENT)	$\omega-\omega R$
1	1	0	2	2	2	5.64	-0.02	0.3	-0.2
2	2	0	2	0	1	6.85	-0.04	0.4	-0.3
3	2	0	2	0	2	6.86	-0.10	0.9	-0.8
4	0	0	2	2	1	7.09	-0.05	0.4	-0.4
5	0	0	2	2	2	7.10	-0.12	1.1	-0.9
6	1	0	2	0	0	9.11	-0.04	0.3	-0.2
7	1	0	2	0	1	9.12	-0.41	2.8	-2.4
8	1	0	2	0	2	9.13	-0.99	6.8	-5.8
9	3	0	0	0	0	9.18	-0.02	0.1	-0.1
10	-1	0	2	2	1	9.54	-0.08	0.5	-0.5
11	-1	0	2	2	2	9.56	-0.20	1.3	-1.1
12	1	0	0	2	0	9.61	-0.08	0.5	-0.4
13	2	0	2	-2	2	12.81	0.02	-0.1	0.1
14	0	1	2	0	2	13.17	0.03	-0.1	0.1
15	0	0	2	0	0	13.61	-0.30	1.4	-1.2
16	0	0	2	0	1	13.63	-3.21	14.8	-12.5
17	0	0	2	0	2	13.66	-7.76	35.7	-30.1
18	2	0	0	0	-1	13.75	0.02	-0.1	0.1
19	2	0	0	0	0	13.78	-0.34	1.5	-1.3
20	2	0	0	0	1	13.81	0.02	-0.1	0.1
21	0	-1	2	0	2	14.19	-0.02	0.1	-0.1
22	0	0	0	2	-1	14.73	0.05	-0.2	0.2
23	0	0	0	2	0	14.77	-0.73	3.1	-2.6
24	0	0	0	2	1	14.80	-0.05	0.2	-0.2
25	0	-1	0	2	0	15.39	-0.05	0.2	-0.2
26	1	0	2	-2	1	23.86	0.05	-0.1	0.1
27	1	0	2	-2	2	23.94	0.10	-0.3	0.2
28	1	1	0	0	0	25.62	0.04	-0.1	0.1
29	-1	0	2	0	0	26.88	0.05	-0.1	0.1
30	-1	0	2	0	1	26.98	0.18	-0.4	0.3
31	-1	0	2	0	2	27.09	0.44	-1.0	0.9
32	1	0	0	0	-1	27.44	0.53	-1.2	1.0
33	1	0	0	0	0	27.56	-8.26	18.8	-15.9
34	1	0	0	0	1	27.67	0.54	-1.2	1.0
35	0	0	0	1	0	29.53	0.05	-0.1	0.1
36	1	-1	0	0	0	29.80	-0.06	0.1	-0.1
37	-1	0	0	2	-1	31.66	0.12	-0.2	0.2
38	-1	0	0	2	0	31.81	-1.82	3.6	-3.0
39	-1	0	0	2	1	31.96	0.13	-0.3	0.2
40	1	0	-2	2	-1	32.61	0.02	-0.0	0.0
41	-1	-1	0	2	0	34.85	-0.09	0.2	-0.1

ℓ = 134°.96 + 13°.064993(MJD-51544.5) MEAN ANOMALY OF THE MOON
ℓ' = 357°.53 + 0°.985600(MJD-51544.5) MEAN ANOMALY OF THE SUN
F = 93°.27 + 13°.229350(MJD-51544.5) L - Ω: L : MEAN LONGITUDE OF THE MOON
$\mathcal{D}$ = 297°.85 + 12°.190749(MJD-51544.5) MEAN ELONGATION OF THE MOON FROM THE SUN
Ω = 125°.04 - 0°.052954(MJD-51544.5) MEAN LONGITUDE OF THE ASCENDING NODE OF THE MOON

Resolution No. C 11
Proper Motions of High Luminosity Stars
Mouvements Propres d'Etoiles très lumineuses

Proper Motions of High Luminosity Stars

Commission 8

in view — of the importance of accurate positions and proper motions of High Luminosity Stars for galactic research

reaffirms — its previous recommendation that such stars be included in transit circle programmes.

Mouvements propres d'étoiles très lumineuses

La Commission 8

étant donné — l'importance des positions et mouvements propres précis d'étoiles très lumineuses pour la recherche galactique,

reconfirme — sa recommandation antérieure selon laquelle ces étoiles soient incluses dans des programmes d'instruments méridiens.

Resolution No. C 12
Transit Circle Observations of Subset of HIPPARCOS Stars
Observations par instuments méridiens du sous-ensemble d'Etoiles HIPPARCOS

Transit Circle Observations of Subset of HIPPARCOS Stars

Commission 8

recommends — the observation by transit circle of the subset of stars requested by the HIPPARCOS Input Catalogue Consortium. The positions should be available before 1985.5. A moderate accuracy of ± 1.0 arcsec at that epoch is required; however ± 0.3 arcsec (in the FK4 system) is desirable.

Observations par instruments méridiens du sous-ensemble d'étoiles HIPPARCOS

La Commission 8

recommande — d'observer par instruments méridiens le sous-ensemble d'étoiles demandé par le HIPPARCOS Input Catalogue Consortium. Les positions devraient être disponibles avant 1985.5. Une précision modérée de ± 1,0 arcsec est requise à cette époque; toutefois, ± 0,3 arcsec (dans le système FK4) est souhaitable.

Resolution No. C 13
Meridan Positions of Subsets of HIPPARCOS Stars
Positions Méridienne des sous-ensembles d'Etoiles HIPPARCOS

Meridian Positions of Subsets of HIPPARCOS Stars

Commission 8

noting — that the HIPPARCOS stars will be selected for their astrophysical and/or astrometric interest and that such stars would traditionally be included in meridian observing programmes, and that very accurate meridian positions of suitable subsets of the HIPPARCOS stars would give checks of the space observations and calibration of the ground-based instruments,

recommends — that such subsets, e.g. faint fundamental stars and International Reference Stars be observed.

Positions méridiennes des sous-ensembles d'étoiles HIPPARCOS

La Commission 8

notant — que les étoiles HIPPARCOS seront sélectionnées pour l'intérêt qu'elles présentent du point de vue astrophysique et/ou astrométrique et que ces étoiles devraient, selon l'usage, être incluses dans les programmes d'observation méridienne, et que les positions méridiennes très précises des sous-ensembles appropriés d'étoiles HIPPARCOS permettraient d'effectuer des sondages sur les observations effectuées dans l'espace et sur la calibration d'instruments au sol, il est

recommandé — d'observer de tels sous-ensembles, c'est-à-dire les étoiles fondamentales faibles et les Etoiles de Référence Internationale.

Resolution No. C 14
International Heliospheric Study
L'Etude Héliosphériques Internationale

International Heliospheric Study

Commission 49

noting — decision 5/82 adopted at the XXIVth COSPAR meeting in May 1982,

recommends — the introduction of the International Heliospheric Study during January 1988 - December 1990 as an IAU activity conducted under the auspices of COSPAR in conjunction with other appropriate ICSU bodies.

L'Etude Héliosphérique Internationale

La Commission 49

notant la décision 5/82 adoptée à la XXIVème réunion du COSPAR tenue en Mai 1982,

recommande d'introduire l'Etude Héliosphérique Internationale de Janvier 1988 à Décembre 1990 parmi les activités de l'UAI, sous les auspices du COSPAR, conjointement aux autres organismes appropriés de l'ICSU.

Resolution No. C 15
Fireball Networks
Réseaux de Bolides

Fireball Networks

Commission 22

noting the importance of the recent contributions from the Canadian and European Fireball Networks

recommends that continued support be provided for these observational programs in order that a more extensive body of reliable data may be gathered for critical analysis

note: The recovery of meteorites from these two major camera networks is likely to remain limited to rare events; progress in the interpretation of fireball data is now leading to significant studies of both the astronomical properties of meteorites and the physics of their atmospheric interaction.

Réseaux de Bolides

La Commission 22

notant l'importance des récentes réalisations des Réseaux de Bolides Canadiens et Européens,

recommande de poursuivre sans discontinuer l'aide apportée à ces programmes d'observation afin qu'un plus vaste ensemble de données fiables puisse être rassemblé en vue d'une analyse critique,

note que la récupération des météorites au moyen de ces deux principaux réseaux restera vraisemblablement limitée à quelques cas rares; les progrès realisés dans l'interprétation des données relatives aux bolides permet actuellement d'entreprendre des études sérieuses à la fois sur les propriétés astronomiques des météorites et sur la physique de leur interaction dans l'atmosphère.

Resolution No. C 16
Austrian Stations of the European Fireball Networks
Stations Autrichiennes du Réseau Européen des Bolides

Austrian Stations of the European Fireball Networks

Commission 22

recognizing the key position of the two Austrian stations of the European Fireball Network and their essential role in the location and recovery of meteorites which fall on Austrian soil,

recommends that the University Observatory of Vienna give its fullest support to the continued operation of these stations.

Stations Autrichiennes du Réseau Européen des Bolides

La Commission 22

reconnaissant la position clé des deux stations autrichiennes du Réseau Européen des Bolides et leur rôle fondamental dans la localisation et la récupération des météorites tombant sur le sol autrichien,

recommande à l'Observatoire de l'Université de Vienne d'accorder son soutien le plus total à la poursuite des activités de ces deux stations.

Commission 4 (Ephemerides/Ephémérides)

Resolution 1 of Commission 4 on the value of the ratio of the radius of the lunar profile to the Earth's radius.

Commission 4 considering

that it is planned to introduce the IAU (1976) System of Astronomical Constants, the 1980 IAU Theory of Nutation, and the equinox of the FK5 on 1984 January 1,

recommends

that in the calculation of lunar and solar eclipses, there be a single value for k, the ratio of the radius of the lunar profile to the Earth's radius, and that it correspond to the mean radius of Watts' datum as determined by observation of occultations and to the adopted radius of the Earth. The value is k = 0.2725076.

Resolution 2 of Commissions 4, 7, 8, 19 and 31 on the 1980 IAU Theory of Nutation.

Commissions 4, 7, 8, 19 and 31 recognizing

that since the Seventeenth General Assembly of the IAU, Commissions 4, 7, 8, 19 and 31 have adopted the 1980 IAU Theory of Nutation in place of the 1979 IAU Theory of Nutation,

endorse

the adoption of the 1980 IAU Theory of Nutation.

Resolution 3 of Commissions 4, 19 and 31 on the expression for GMST at 0^h UT1.

This resolution is an amendment to the provisional part of Resolution 3 of Commissions 4, 19 and 31 made at the Seventeenth General Assembly of the IAU.

Commissions 4, 19 and 31 considering

that it is planned to introduce the IAU (1976) System of Astronomical Constants, the 1980 IAU Theory of Nutation, and the equinox of the FK5 on 1984 January 1,

recommend

that (a) the relationship between mean sidereal time and UT1 be modified so that there is no change in either value or rate of UT1 with respect to the stellar reference system, due to a correction to the zero point of right ascensions of the FK4 and to a correction for the motion of the zero point to be introduced in FK5,

(b) the new expression for Greenwich mean sidereal time of 0^h UT1 be

$$\text{GMST of } 0^h \text{ UT1} = 6^h\ 41^m\ 50^s.548\ 41 + 8\ 640\ 184^s.812\ 866\ T_u + 0^s.093\ 104\ T_u^2 - 6^s.2 \times 10^{-6}\ T_u^3$$

where T_u is the number of Julian centuries of 36525 days of Universal Time elapsed since 2000 January 1, 12^h UT1 (JD 245 1545.0).

Resolution 4 of Commissions 4, 19 and 31 on the sign convention for terrestrial longitude.

Commissions 4, 19 and 31 noting

that the International Meridian Conference held in Washington in October 1884 adopted a resolution that from the meridian of the Observatory of Greenwich "longitude shall be counted in two directions up to 180 degrees, east longitude being plus and west longitude minus",

noting

that there is an increasing interaction between astronomy and geodesy in which field the sign convention "east longitude is positive" is in common use,

recommend

that as soon as practicable all national ephemerides and other astronomical publications adopt the convention that terrestrial longitude be measured positively to the east.

Commission 8 (Positional Astronomy/L'Astronomie Position)

Proposed resolutions on the observation of planets, of high luminosity stars and of HIPPARCOS stars were presented to the Commission and adopted in principle. A committee of W Fricke, J A Hughes, E Høg and Y Requieme was given the task of formulation. After a meeting in the afternoon the following resolutions were written and were later endorsed by the IAU.

1. In considering that the determination of the equinox and equator will remain to be an important task of positional astronomy, it is recommended that
   (a) the Sun and major and minor planets are included in observational programs with transit circles,
   (b) the Sun and major planets are included in programs with astrolabes, and
   (c) minor planets are included in programs of photographic astrometry,
   such that from differential and/or absolute observations the positions can be rigorously referred to the fundamental reference system and serve for further improvements of the zero points of this system.

2. In view of the importance of accurate positions and proper motions of High Luminosity Stars for galactic research the Commission reaffirms its previous recommendation that such stars be included in transit circle programmes.

3. It is recommended to observe the subset of stars requested by the HIPPARCOS Input Catalogue Consortium. The positions should be available before 1985.5. A moderate accuracy of ±1.0 arcsec at that epoch is required, however ±0.3 arcsec (in the FK4 system) is desirable.

4. Noting that the HIPPARCOS stars will be selected for their astrophysical and/or astrometric interest and that such stars would traditionally be included in meridian observing programmes, and
noting that very accurate meridian positions of suitable subsets of the HIPPARCOS stars would give checks of the space observations and calibration of the ground-based instruments
it is recommended that such subsets, e.g. faint fundamental stars and International Reference Stars be observed.

5. A fifth resolution in support of the Sydney Observatory was formulated and later passed in agreement with Commissions 24 and 40.

Commission 12 (Radiation and Structure of the Solar Atmosphere/Radiation et Structure de l'atmosphère Solaire)

The Commission supported the following resolution :
"Commission 12, recognizing the importance of the observation of solar seismology, strongly supports international cooperation in establishing a world-wide network of observing stations.

Commission 20 (Minor Planets, Comets and Satellites/Petites Planètes, Comètes et Satellites)

The Commission then approved the following recommendation in support of further efforts to recover lost numbered minor planets:

"Commission 20 encourages the accurate measurement of positions of minor planets from the extensive plate collections such as those at the Budapest, Goethe Link, Johannesburg, Lowell, Simeis and Turku observatories. Specifically, there is a need for measurement of plates of unnumbered minor planets for which only approximate positions were previously available. Further, in order to support the current efforts to recover the few remaining lost minor planets or to make a linkage with a possible accidental rediscovery, Commission 20 encourages the early reexamination and remeasurement of all existing plates that contain or may contain images of those lost planets and the prompt publication of the results in the Minor Planet Circulars. Commission 20 notes with appreciation that Richard M West, Garching, has volunteered to process plates of the lost numbered planets should the original observatories be unable to do so."

Noting that a large number of IAU symposia and colloquia were already under consideration for the 1982-85 triennium, Roemer invited those planning meetings of potention interest to members of the Commission, or with proposals for meetings farther in the future, to inform her.

Commission 22 (Meteors and Interplanetary Dust/Météores et la Poussière Interplanétaire)

1. Resolutions concerning the European and Canadian Fireball Networks

Noting the importance of the recent contributions from the Canadian and European Fireball Networks, Commission 22
(a) recommends that continued support be provided for these observational programs in order that a more extensive body of reliable data may be gathered for critical analysis. Although the recovery of meteorites from these two major camera networks is likely to remain limited to rare events, progress in the interpretation of fireball data is now leading to significant studies of both the astronomical properties of meteorites and the physics of their atmospheric interaction.
(b) recommends that the University Observatory of Vienna should give its fullest support to the continuation of operation of the two Austrian stations of the European Fireball Network because of their key position in the Network and their essential role in the location and recovery of meteorites which fall on Austrian soil.

2. Resolution concerning International Halley Watch

Noting the major effort which will be made to observe Comet Halley, organized by the International Halley Watch, Commission 22
recommends that meteor astronomers pay particular attention to meteor showers associated with the comet, the Orionid and Eta-Aquarid showers, since a better understanding of the meteroids from the comet can contribute to an increased knowledge of the comet itself.

3. Resolutions concerning project GLOBMET

Noting the request from SCOSTEP for comments on the GLOBMET document, and recognizing that data from GLOBMET can be of astronomical importance, Commission 22
recommends that,
(1) the GLOBMET document emphasize that the data requirements for astronomical purposes may differ from those for geophysical purposes,
(2) the Manual on Meteor Radar Observations include a section on Parameters of Astronomical Importance,
(3) a list of the parameters of astronomical importance prepared by the Working Party be sent to the convenors of the GLOBMET project.

TERMS DUE TO ZONAL TIDES, WITH PERIODS UP TO 35 DAYS

Based on Yoder, Williams and Parke: 1981, J. Geophys Res., Vol 86, 881 with $\kappa/C = 0.94$:

UT1R, ΔR, ωR represents the regularized forms of UT1, of the duration of the day Δ, and of the angular velocity of the Earth, ω.

The units are 10^{-4} s for UT, 10^{-5} s for Δ, and 10^{-14} rad/s for ω.

	ARGUMENT					PERIOD	UT1-UT1R	$\Delta - \Delta R$	$\omega - \omega R$
N	l	l'	F	D	Ω	Days	Coefficient of Sin (Argument)	Coefficient of Cos (Argument)	
1	1	0	2	2	2	5.64	-0.02	0.3	- 0.2
2	2	0	2	0	1	6.85	-0.04	0.4	- 0.3
3	2	0	2	0	2	6.86	-0.10	0.9	- 0.8
4	0	0	2	2	1	7.09	-0.05	0.4	- 0.4
5	0	0	2	2	2	7.10	-0.12	1.1	- 0.9
6	1	0	2	0	0	9.11	-0.04	0.3	- 0.2
7	1	0	2	0	1	9.12	-0.41	2.8	- 2.4
8	1	0	2	0	2	9.13	-0.99	6.8	- 5.8
9	3	0	0	0	0	9.18	-0.02	0.1	- 0.1
10	-1	0	2	2	1	9.54	-0.08	0.5	- 0.5
11	-1	0	2	2	2	9.56	-0.20	1.3	- 1.1
12	1	0	0	2	0	9.61	-0.08	0.5	- 0.4
13	2	0	2	-2	2	12.81	0.02	-0.1	0.1
14	0	1	2	0	2	13.17	0.03	-0.1	0.1
15	0	0	2	0	0	13.61	-0.30	1.4	-1.2
16	0	0	2	0	1	13.63	-3.21	14.8	-12.5
17	0	0	2	0	2	13.66	-7.76	35.7	-30.1
18	2	0	0	0	-1	13.75	0.02	-0.1	0.1
19	2	0	0	0	0	13.78	-0.34	1.5	-1.3
20	2	0	0	0	1	13.81	0.02	-0.1	0.1
21	0	-1	2	0	2	14.19	-0.02	0.1	-0.1
22	0	0	0	2	-1	14.73	0.05	-0.2	0.2
23	0	0	0	2	0	14.77	-0.73	3.1	-2.0
24	0	0	0	2	1	14.80	-0.05	0.2	-0.2
25	0	-1	0	2	0	15.39	-0.05	0.2	-0.2
26	1	0	2	-2	1	23.86	0.05	-0.1	0.1
27	1	0	2	-2	2	23.94	0.10	-0.3	0.2
28	1	1	0	0	0	25.62	0.04	-0.1	0.1
29	-1	0	2	0	0	26.88	0.05	-0.1	0.1
30	-1	0	2	0	1	26.98	0.18	-0.4	0.3
31	-1	0	2	0	2	27.09	0.44	-1.0	0.9
32	1	0	0	0	-1	27.44	0.53	-1.2	1.0
33	1	0	0	0	0	27.56	-8.26	18.8	-15.9
34	1	0	0	0	1	27.67	0.54	-1.2	1.0
35	0	0	0	1	0	29.53	0.05	-0.1	0.1
36	1	-1	0	0	0	29.80	-0.06	0.1	-0.1
37	-1	0	0	2	-1	31.66	0.12	-0.2	0.2
38	-1	0	0	2	0	31.81	-1.82	3.6	-3.0
39	-1	0	0	2	1	31.96	0.13	-0.3	0.2
40	1	0	-2	2	-1	32.61	0.02	-0.0	0.0
41	-1	-1	0	2	0	34.85	-0.09	0.2	-0.1

l = 134°.96 + 13°.064993(MJD-51544.5) Mean Anomaly of the Moon
l' = 357°.53 + 0°.985600(MJD-51544.5) Mean Anomaly of the Sun
F = 93°.27 + 13°.229350(MJD-51544.5) L - Ω; L: Mean Longitude of the Moon
D = 297°.85 + 12°.190749(MJD-51544.5) Mean Elongation of the Moon from the Sun
Ω = 125°.04 - 0°.052954(MJD-51544.5) Mean Longitude of the Ascending Node of the Moon

The International Astronomical Union

taking note of the success of the MERIT short campaign, and

recognizing that the results to be obtained during the MERIT main campaign will be of short and long-term benefit for the studies of the planet Earth

endorses the following two resolutions adopted by the International Association of Geodesy (IAG), at its General Meeting at Tokyo (May 1982):

l'Union Astronomique Internationale

prenant note du succes de la campagne courte du programme MERIT et

reconnaissant que les résultats à obtenir au cours de la campagne principale de MERIT apporteront des contributions à long et à court termes pour les etudes de la planète Terre

souscrit aux deux résolutions suivantes adoptées par l'Association Internationale de Géodésie (AIG) lors de sa réunion générale de Tokyo (Mai 1982):

AIG Resolution 1

The International Association of Geodesy

noting that the results to be obtained during the MERIT main campaign will be of long-term benefit to geodesy and its applications

strongly endorses the proposals of the COTES and MERIT Working Groups that during the campaign (a) very long baseline radio interferometric and satellite and lunar laser ranging systems be used for co-located observations of high precision at the recommended sites, and (b) observations be made intensively for a limited period to detect any short-period variations in the derived Earth-rotation parameters, and

urges that the appropriate resources and facilities be made available for these activities by the countries involved.

AIG Resolution 2

The International Association of Geodesy

considers that it is important that the new terrestrial reference frame to be derived from high-precision observations during the MERIT Main Campaign should be extended and related to existing services as accurately and quickly as possible, and

urges that coordinated precise positioning observations be made during the campaign by satellite radio-tracking systems at the Very Long Baseline Interferometric, Lunar and Satellite Laser Ranging sites as well as at a larger number of well distributed sites around the world.

It recommends (a) that the coordinates of the stations of the International Latitude Service be determined in the Reference System (NWL 10F) adopted for the analysis of observations by the Doppler method of artificial satellite of TRANSIT or NOVA type, and (b) that special support be given to BIH acting as the coordinating center for the MERIT international campaign.

International Astronomical Union Commissions 19 and 31

considering the need to clarify the role of the zonal tides in the processing and publication of Universal Time

recommend (1) that, when the effect of the short period zonal tides, i.e., with (periods less than 35 days), is computed for the above purposes, the attached expression based on Yoder, Williams and Parkes study (J. Geophys Res., 86, 881 1981) be used, and (2) that the letter R be added to the notation of the relevant quantities to indicate that the correction for the short period zonal terms has been made (for instance UT1R).

l'Union Astronomique Internationale Commissions 19 et 31

Considerant le besoin de représenter clairement le rôle des marées zonales dans le calcul et la publication de temps universel,

recommandent que lorsque l'effet des marées zonales à court terme (période inferieure à 35 jours) est calculé dans les buts précités, on utilise l'expression ci-jointe, tirée des travaux de Yoder, Williams et Parke (J. Geophys Res., 86, 881 (1981), et que le suffixe R soit ajouté à la notation des quantities concernées pour signifier que la correction des effets à court terme a été effectuée (exemple: UT1R).

International Astronomical Union Commissions 4 and 31

Noting that the present method of keeping UTC within $0^{s}.9$ of UT1 by means of leap seconds both provides the second of SI and meets the needs for safe celestial navigation,

Recommend that the Air and Nautical Almanacs continue to be published with UT1 as the argument.

Explanatory Note This resolution concerns only the continued use of UT1 as the argument of navigational almanacs. It does not deal with the use of less precisely defined terms, such as GMT and UT, which are used as tabular headings in the sense of UT1. Recommendations concerning their use were made in Resolution Number 1, adopted by Commissions 4 and 31 in 1976 at Grenoble.

l'Union Astronomique Internationale Commissions 4 et 31

notant que la methode actuelle qui maintient le UTC a moins de 0.9s du UT1 au moyen de secondes intercalaires procure la seconde du S1 et remplit les besoins pour une navigation astronomique sure,

recommandent que les éphémérides aeronautiques et nautiques, continuent à être publiées en utilisant UT1 comme argument.

Note d'explication Cette résolution ne se rapporte qu'á la poursuite de l'usage de UT1 comme argument des éphémérides de navigation. Elle ne traite pas de l'usage de termes moins précisement definis, tels que GMT, UT qui sont utilisés dans les tables avec les sens de UT1. Des recommandations sour l'emploi de ces termes apparaissent dans la Résolution no 1, adoptée par les commissions 4 et 31, en 1976, à Grenoble.

Commission 44 (Astronomical Observations from outside the Terrestrial Atmosphere/Observations astronomiques au-dehors de l'atmosphère terrestre)

Commission 44 agreed to endorse the following resolution. "Commission 44 strongly supports the use of the Space Shuttle science payload for observing Comet Halley during its 1985-86 apparition. Space Shuttle observations can be carried out when the Comet's position is near the sun and other means of observations are not feasible. Such measurements will be a valuable complement to ground-based observations and cometary missions. Multiple launches of the Shuttle cometary science payload will make a significant contribution to the world-wide efforts to study Comet Halley."

Commission 46 (Teaching of Astronomy/Enseignement de l'Astronomie)

Resolution: Whereas astronomy is an integral part of the physical sciences, both in education and in research, and whereas some countries now without astronomy may desire to introduce astronomy in their educational or scientific institutions, be it resolved that the IAU supports the introduction of astronomy in these countries and encourages activities by its Commissions toward this goal.

The following text was approved in principle at the joint Commission meeting, then worked out with the officers of Commission 46 and approved by a later meeting of Commission 38.

"Commissions 38 and 46 adopted the report of the joint Working Group on the Education of Astronomers from developing countries. The Working Group, having completed its charge, was formally terminated.

Commissions 38 and 46 resolved to establish a sub-committee to implement the recommendations of the Visiting Lecturers Program in the report of the Working Group and in Agenda item 13(d)2 of the 18th General Assembly of the IAU. Initially the membership of the committee is J. Delhaye (38), S. Ferraz-Mello (46), D. G. Wentzel (46, Chairman), and F. B. Wood (38). The membership will be subsequently expanded to ensure active participation from Developing Countries in its work, with advice and consent from the Organizing Committees of Commissions 38 and 46.

The terms of reference for the sub-committee will be: a) to seek individuals and their institutions willing to host a Visiting Lecturers Program; b) to identify the local procedures to support the program; in particular, the local body with whom any future contracts should be made; c) to outline a Visiting Lecturers Program agreeable to both host and sub-committee; at this time the sub-committee should identify several possible lecturers with experience in the field of the agreed program, known experience of the developing world and preferably fluency in the local language; (It is recognized that such an identification will not limit final selections.); d) to submit, in light of c) above, a formal proposal to the IAU Executive Committee for a visiting Lecturers Program in a named Developing Country, to be based on a named host institution; e) to submit at the time of d) above, the outline of a second program, such that the General Secretary may seek support through a UNESCO contract; f) and to establish, at the time of d) above, an advisory panel with experience of local conditions, developing countries and the type of program envisaged, in order to advise the Executive Committee on the final selection of lecturers and on the articulation and oversight of the program."

Commission 50 (Identification and Protection of Existing and Potential Observatory Sites/Protection des Sites d'Observatoire existant et Potentiels)

A draft resolution for submission to the General Assembly stating :
"Commission 50,

considering with deep concern the proposals for a Satellite Power System which would place very large structures into Earth orbit with the potential of destroying the conditions for a major part of astronomical research in many regions of the electromagnetic spectrum,

recommends national representatives to bring this concern to the notice of space agencies in their countries, and to ensure that the IAU is kept fully informed of proposed developments in space techniques which would involve dangers to astronomy."

was adopted unanimously. F.G. Smith said that the president of Commission 50 would be dealing with the administrative matters concerning this.