

## 6. ASTRONOMICAL TELEGRAMS (TÉLÉGRAMMES ASTRONOMIQUES)

(Committee of the Executive Committee)

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### 1. Introduction

As noted below in the report of the Central Bureau, a number of changes have been introduced in the technical and business operations of the Bureau during the triennium. Some of the changes follow from the transfer of the IAU Minor Planet Center to the Smithsonian Astrophysical Observatory. For example the Minor Planet Circulars now offer an alternate avenue of publication for less time-urgent data concerning comets as well as minor planets. Changes at the communications center of the Smithsonian Astrophysical Observatory have made it less costly, as well as more efficient, for the Central Bureau to maintain its own communications equipment. At the same time, in the face of generally rising costs, and after careful investigation of alternatives, it has become necessary for users to assume an increased share in underwriting the operating expenses of the Bureau.

These changes have been introduced with substantial support from among members of the Commission, who have been consulted by the Director of the Bureau during the consideration of possible courses of action. The dedication of Dr. Marsden in maintaining the efficient operation of the Bureau in support of a great diversity of astronomical activity, done in the face of a variety of difficulties, is to be commended.

E. ROEMER  
President of the Commission

### 2. Report of the Central Bureau for Astronomical Telegrams

The general level of activity has remained much the same as during the preceding triennium, the number of occasions on which "telegram books" and Circulars were issued being:

	<u>Telegrams</u>	<u>Circulars</u>
1976	25	70 (Nos. 2894-3024)
1977	44	78 (Nos. 3025-3156)
1978 (to 31 Oct.)	40	73 (Nos. 3157-3297)

The two most significant events reported in the Circulars referred to discoveries in the outer part of the solar system, namely, the Uranian rings and the distant object 1977 UB = (2060) Chiron that orbits the sun between Saturn and Uranus. Comet discoveries were not quite so numerous as during 1973-1975, although the 11

recoveries that supplemented the eight discoveries of 1977 made that a record year as regards the number of comets given designations. At least 11 new comets were discovered during 1978, six of them during as many weeks in September-October. Since two new Apollo objects and a near-naked-eye nova were discovered during the same interval, this was an exceptionally busy time for the Bureau. No fewer than six other new Apollo objects and six other new novae were announced during the triennium, but the number of extragalactic supernovae reported was substantially smaller than in the recent past. Among other specific items documented by the Bureau were the splitting into four parts of comet West (1976 VI), the probable satellite of Pluto, and the developing story of the x-ray burst sources, notably the Rapid Burster MKB1730-335.

The ad hoc committee appointed at the Grenoble meeting of Commission 6 examined further the problems presented by those items submitted for publication on the Circulars that do not have quite the urgency of those that report the discovery of a comet or nova. It is simply not practicable to accept or reject an item according to its pertinence to a "transient" phenomenon. It was decided to continue to publish most of the material submitted for publication, with professional contributors being charged (generally \$25.00 per item plus \$5.00 per line) for all items referring to non-optical observations and for optical observations other than discovery announcements of comets, fast-moving minor planets, planetary satellites, novae, and supernovae. There have been few objections, either from contributors or users, and while time does not usually permit the items to be refereed in the formal sense, there is some screening to ensure that they are reasonably likely to be correct. This arrangement was put into practice in October 1977.

One particular obstacle to enacting the above fully has been that the IAU Circulars have traditionally published astrometric observations of a comet long after a satisfactory orbit has been obtained. This obstacle has now been overcome by expanding the content of the Minor Planet Circulars to include cometary data. This change was effected in July 1978 when the Minor Planet Center moved from the Cincinnati Observatory to the Smithsonian Astrophysical Observatory.

Rising costs of operation made it necessary to increase the regular subscription rate to the Circulars in progressive steps to 30¢ as of October 1977. At the same time the special rate became 20¢. Revenue from the line charges has made further increases unnecessary, but it can be noted that the increase in the special rate is significantly less than would be dictated by general inflation. The number of subscribers to the Circulars, 875 in December 1975, reached 974 in May 1978 but had declined somewhat to 911 by November 1978.

An important change in the manner of telegram transmission was made in July 1978, when the Central Bureau acquired its own TWX equipment. Messages can now be received automatically at any time. It is preferable for contributors to send a message to the TWX machine rather than to telephone the Bureau. As for outgoing telegrams, these are now sent directly to subscribers in Europe, rather than via the Meudon Observatory. The Bureau greatly appreciates the dedication with which Dr. P. Simon has relayed the telegrams since 1965, but it appears that the saving in cost of a European relay point is minimal, and by sending the messages directly from Cambridge there is often a considerable saving in time. Distribution in Australia and New Zealand is still efficiently handled via World Data Center A for Solar-Terrestrial Physics, Boulder, and Mr. F. E. Cook at the Ionospheric Prediction Service, Sydney. Telegram subscribers in North America are no longer serviced collect, but, like subscribers elsewhere, they are billed amounts that help defray the expense of operating the Bureau's TWX equipment.

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