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*The Japanese Ephemeris* has continued to be published for the years 1963 to 1965. The ephemerides of the Sun, Moon, and planets have been reproduced from the advanced proofs of the *Astronomical Ephemeris* provided by H.M. Nautical Almanac Office, while the remaining parts have been computed in the Hydrographic Office.

The value of  $\Delta T$  for use in predictions of eclipses has been settled by arrangement with the Tokyo Astronomical Observatory each year.

From the 1963 volume onwards, the mean places of the stars have been substituted for the apparent places. Day Numbers have been presented in the computation system of so-called 'A, B-first', and  $\tau$  has been counted backwards and forwards from the middle of the year.

*The Nautical Almanac* and *The Abridged Nautical Almanac* for the years 1962 to 1964 have continued to be published without substantial change.

*The Polaris Almanac* has been published annually for the purpose of surveying. In this almanac, the use of sidereal time is completely avoided and all quantities are given for the argument of Japanese Standard Time.

As a result of omission of apparent places of stars from the Japanese Ephemeris, a small ephemeris, provisionally named *Abstract from the Japanese Ephemeris*, which includes apparent places of bright stars and some quantities of the Sun, has been compiled for the years from 1963 onwards, at the request of the National Defence Agency. This ephemeris is expected to be refined into a more practical form in the near future.

In March 1963, a medium-size computer, HIPAC 103, was installed in the Astronomical Section of the Office. The output data from the computer for the computations of most parts of the almanacs and some parts of the Japanese Ephemeris are directly reproduced lithographically for printing.

For the purpose of the determination of ephemeris time, photo-electric observations of lunar occultation have been carried out as a routine. The resulting values of  $\Delta T$ , with accuracy of  $\pm 0.2$  sec, seem satisfactory (1, 2).

A committee on navigational satellites established by the Agency for Science and Technology has given the Office charge of research on satellite ephemerides.

The following ephemeris computations have been made at the Tokyo Astronomical Observatory:

Local predictions of the total eclipses of the Sun, 1962, February 4-5, and 1963, July 20.

Prediction of the total eclipse of the Moon, 1963, December 30.

Prediction of the partial eclipse of the Sun, 1964, December 4, and of the annular eclipse of the Sun, 1965, September 23.

At the International Latitude Observatory, Mizusawa, Hurukawa (3) has developed a set of formulae to compute apparent places of stars rigorously with rectangular co-ordinates.

At the Central Bureau of the International Polar Motion Service, Mizusawa, apparent declinations of the star pairs have been computed for latitude observations at five International Latitude Observatories.

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Since the presentation of the last report in 1961 three more volumes of the *Indian Ephemeris and Nautical Almanac*, viz. for 1962, 1963 and 1964, have each been published almost a year in advance. The edition for 1965 has been published in January 1964.

No substantial change has been made in the contents of the above publication except that the *Fourth Fundamental Catalogue* (FK4) has been adopted for mean places and annual proper motions of stars with effect from the 1964 issue. A new table has been added from the 1963 issue on incorporating precessional elements for reduction of mean places of stars to some back epochs.

The usual computations of the additional items for inclusion in the above publication have been continued. Among the new items of work undertaken in the intervening period mention may be made of an analysis carried out for re-fixation of the arcs of visibility for the calculation of heliacal rising and setting of the five principal planets on the basis of observations recorded at the Nizamiah Observatory, Hyderabad and the Kodaikanal Astrophysical Observatory. From the 1964 issue dates for the above phenomena have been computed on the basis of the revised values.

The work relating to the publication of a booklet *Tables of Sunrise, Sunset and Moonrise, Moonset*, being a reprint from the *Indian Ephemeris and Nautical Almanac*, is done annually.

In addition to the main publication, *Rashtriya Panchangs* giving all details of the Indian Calendar are published in English, Sanskrit, Hindi and nine regional languages, viz., Urdu, Bengali, Oriya, Telugu, Tamil, Malayalam, Kannada, Marathi and Gujarati. The issues for 1885 Saka era (1963-64) have been published in 1963.

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