Ephemeride des Planeten (481) [1902 HP].

Der folgenden Ephemeride für 12^h M. Z. Berlin liegen meine Elemente in A. N. 3828 mit einer Verbesserung von μ um +1.715 zugrunde.

1905	α vera	δ vera	$\log r$	$\log A$	1905-06	α vera	δ vera	$\log r$	$\log A$
Dez. 4	3 ^h 17 ^m 39 ^s	+16° 7.7	0.3655	0.1377	Dez. 20	3 ^h 7 ^m 32 ^s	+16° 56.5	0.3661	0.1693
6	16 0	16 12.9			22	6 49	17 3.9		
8	14 28	16 18.4			24	6 13	17 11.5		
10	13 2	16 24.0			26	5 45	17 19.5		
12	11 42	16 29.9	0.3657	0.1516	28	5 25	17 27.8	0.3666	0.1898
14	10 29	16 36.1			30	5 13	17 36.4		
16	9 23	16 42.6			Jan. 1	5 9	17 45.4		
18	8 24	16 49.4			3	5 12	17 54.6		
20	3 7 32	+16 56.5	0.3661	0.1693	5	3 5 23	+18 4.0	0.3671	0.2120

Gr. 10.7 bis 11.1. Korr. der Ephemeride Nov. 3 und 20: $\Delta\alpha$ 0^m 0 $\Delta\delta$ -2'.

Bremen, 1905 Dez. 6.

Hans Osten.

Obituary Notice.

Ralph Copeland, Ph. D., Astronomer Royal for Scotland and Professor of Astronomy in the University of Edinburgh died on the 27th October after a long and painful illness.

Born on September 3, 1837, near Woodplumpton, in Lancashire, he received his early education at the Grammar School of Kirkham. Already as a youth of thirteen, however, he emigrated to Australia, where he spent eight years in most varied conditions and heterogeneous vocations. After his return to England, in 1858, he was apprenticed to a firm of locomotive engineers, and in this employment he found the first opportunities for developing his remarkable mechanical gifts which afterwards became so helpful to him in his career as a practical astronomer.

His innate love for astronomy, already awakened in the adventurous days of his Australian life and now stimulated by propitious external conditions, induced him, in 1865, to abandon the engineering profession and henceforth to devote his energies to a systematic training in practical astronomy. With this set purpose he entered the University of Göttingen, and after a two years' course in astronomy and allied sciences, specially under Klinkerfues and Listing, he was appointed assistant at the Göttingen Observatory. In co-operation with his colleague and friend Carl Börgen he undertook, in 1867, the observation and reduction of a zone of stars between -0° and -1° declination, known as the Göttingen star catalogue, a work which was completed already in 1869, and which bears witness to his genuine qualities as an observer and a practical computer. By the careful execution of this work he materially assisted in writing a most valuable preface to the present monumental star-encyclopedia of the Astronomische Gesellschaft.

In 1869 Dr. Copeland, again with his friend Dr. Börgen, took part in the German Arctic Expedition to East Greenland as a member of the scientific staff. With regard to the manifold important scientific results of this expedition, astronomical as well as magnetic and meteorological, it may suffice here to draw attention to the preliminary geodetic survey of East Greenland, a work highly appreciated by the leading geographers and astronomers of that time. For his valuable services Dr. Copeland received the distinction of the Order of the Red Eagle from the King of Prussia.

Soon after his return from Greenland Dr. Copeland left Germany and was appointed astronomer to the Earl of Rosse, at Birr Castle in Ireland. His chief work at that Observatory were the measurement of the moon's radiant heat with the 3-foot reflector, and visual observations of nebulae with the 6-foot reflector.

In 1874 he accepted the invitation of Lord Lindsay, afterwards the Earl of Crawford, to take part in an expedition for the observation of the transit of Venus on the island of Mauritius. This expedition, unfortunately, proved unsuccessful. Good fortune, however, attended his second transit-of-Venus expedition in 1882 to Jamaica. In connection herewith his excursion into the Andes of Peru and Bolivia ought to be mentioned; a journey undertaken with the view of studying, for astronomical purposes, the atmospheric conditions at high-level stations. Besides thus acting as a pioneer in a most important inquiry which now justly claims the foremost attention in the selection of sites for new observatories, Dr. Copeland, at the same time, succeeded in securing valuable astrophysical observations which have considerably increased our knowledge in regard to the classification of star-spectra.

After an assistantship, from 1874 to 1876, at the Dunsink Observatory in Dublin he was appointed astronomer to the Earl of Crawford at Dunecht in Aberdeenshire. It is impossible to enumerate in detail his various activities and the results of his successful career as an observer and discoverer in the astrophysical