Beobachtungen des Cometen IV. 1854, der Proserpina, der Egeria und des neuen von Herrn *Ferguson* entdeckten Planeten, von Herrn Director *Rümker*.

Comet IV. 1854.

				Angenommene sch. Örter der Vergl.-Sterne.		
		Hamb. m. Zt.	AR. ☿	Decl. ☿	Vergl.	AR. Decl.
1854 Sept.	15	8 ^h 39 ^m 4 ^s .4	133° 48' 22".9	+73° 0' 27".4	6	8 ^h 55 ^m 13 ^s .645 +72° 53' 0".0
	17	7 49 25,2	141 35 42,6	71 9 22,4	2	8 55 13,409 73 0 27,3
	19	8 27 28,0	148 4 53,0	69 0 21,9	5	9 30 59,241 71 5 32,5
	21	8 11 19,0	153 18 5,4	66 41 58,9	5	9 57 5,545 69 8 58,9
	23	8 2 29,3	157 31 24,8	64 17 46,3	2	10 14 29,971 66 38 39,7
	25	8 5 16,0	161 2 40,8	61 48 35,9	3	10 25 55,587 64 20 34,8
	27	7 37 49,1	163 56 49,4	59 18 50,4	8	10 43 38,607 61 51 33,8
	28	7 39 18,5	165 14 20,3	58 2 49,2	7	10 53 22,581 59 26 54,6
	29	7 51 44,1	166 27 7,4	+56 45 46,0	4	10 57 56,115 57 50 14,4
						11 0 24,839 58 24 19,6
						11 10 46,294 +56 41 43,1

P r o s e r p i n a.

1854 Sept.	12	9 8 5,0	340 40 6,1	—13 41 32,4	6	22 45 9,438	—13 52 11,9
	15	10 16 16,0	340 2 21,7	13 51 59,0:	1	derselbe.	
	19	9 47 10,6	339 17 14,7	14 3 38,6:	1	22 41 54,106	14 21 29,7
	21	9 31 16,2	338 55 45,4	14 8 26,0	6	22 38 31,194	14 17 23,6
	27	8 47 55,5	337 57 39,8	—14 20 58,6	6	23 32 23,825	—14 22 55,4

E g e r i a.

1854 Sept.	29	9 22 32,2	23 51 47,5	— 3 39 55,2	4	1 34 16,045	— 3 41 41,2
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Der neue von *Ferguson* entdeckte Planet.

1854 Octbr.	1	9 21 18,3	22 57 26,7	— 2 31 46,5	10	1 30 49,695	— 2 29 45,9
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Der Planet erschien 12. Grösse und folgte zur Mittel-Zeit der Beobachtung 3 Zeitsecunden auf einem Sterne 10. Grösse, welcher 1½' nördlich vom Planeten war.

Hamburg 1854, October 6.

C. Rümker.

Auszug aus einem Schreiben des Herrn *J. R. Hind* an Herrn Professor *Hansen*.

Mr. *Bishop's* Observatory, Regent's Park, London 1854, Septbr. 27.

The following observations of the comet discovered on the 11th inst. have been taken at this observatory:

		Greenw. M. T.	☿ α.	☿ δ.
1854 Sept.	20	8 ^h 22 ^m 4 ^s	150° 54' 17"	+67° 49' 51"
	21	7 50 25	153 19 38	+66 41 7
	24	12 42 44	159 44 56	+62 46 52

The brightest part appeared to me to follow the centre of the whole nebosity, but the absence of a well-marked nucleus rendered the observations somewhat difficult and uncertain in an illuminated field.

From the Berlin observation of Sept. 12 and the above on the 20th and 24th I have calculated the subjoined approximation to the orbit of this comet.

Per. Passage 1854 October 27,5448 Greenw. M. T.

π	94° 43' 2"	} App. Equinox Sept. 20.
Ω	324 38 12	
i	40 58 31	
log. q	9,90142.	Direct.

$$x = r.[9,96623].\sin(\nu + 191^{\circ} 53' 8)$$

$$y = r.[9,78652].\sin(\nu + 69 51,3)$$

$$z = r.[9,94323].\sin(\nu + 114 51,4)$$

The elements bear some resemblance to those of Mr. *d'Arrest's* comet, discovered in December 1844.

Dr. *Gould's* announcement of Mr. *Ferguson's* discovery of a new planet close to Egeria on the 1st of the present month will no doubt have reached you. It will be a source of great satisfaction to Astronomers, and particularly to those who have interested themselves more especially about the minor planets, that the first American planetary discovery should have been made by the able observer, who has laboured so diligently to render service in this department of Astronomy, by following these bodies into the strong western twilight, at the cost I am sure, of great trouble and patience, and thereby enabling the calculator to provide better ephemerides for the ensuing opposition than could otherwise have been prepared.

Another curious instance of the close approach of two minor planets occurred on the 4th of March 1854, at 19^h m. t. Irene was in conjunction with Euterpe and south of her only 0'6.

There is a telescopic variable star in AR. 21^h 13^m 44^s, N.P.D. 105° 47' 6 for 1850. On 1852 November 3, I saw it of the tenth magnitude, while on the 21st of the present month there was not the slightest appearance of it, though the night was very clear. I find it in the Markree catalogue as an 8th magnitude on 1850 August 5, the magnitudes adopted in this catalogue are higher than in *Bessel's* scale, which I have endeavoured to follow, so that the brightness of the star would probably be 9 or a little under, in *Bessel's* estimation. We may therefore set this star down as variable from 9 to invisibility.

I have good reason to suspect variability (9th—11th) in a star AR. 20^h 33^m 0^s, N.P.D. 109° 34' 9 for 1850, the preceding one of two almost on the same parallel. I had noted both of the 11th or 10.11th magnitude, till August 24th 1854, when *a* was a 9th and *b* a 10.11th.

The motion of Neptune's satellite appears to be retrograde. I have deduced the following elements from Mr. *Lassell's* Malta observations in 1852, already published in the „Astronomische Nachrichten“. Further measures however are required for a trustworthy determination of the amount of excentricity and position of the perihelion, Ω and *i* must be pretty near the truth.

Epoch 1852 November 0,0 M.T. at Greenwich.

Mean Anomaly 243° 32'

$\pi - \Omega$	1 50
Ω	175 40
<i>i</i>	151 0
<i>e</i>	0,1060
<i>T</i>	5 ^d 8769

The mass resulting from the ensemble of Mr. *Lassell's* observations will not differ much from $\frac{1}{17000}$ but I have not had leisure to work it out exactly.

From the Malta observations of the two brighter satellites of Uranus I have obtained the following numbers, for November 10, 1852.

1. By measures of Oberon.

$$\begin{aligned} a &= 44''3 & b &= 33''6 \\ \Omega &= 165^\circ 28' & i &= 100^\circ 34' \\ \text{Mass of } \textcircled{U} &\dots\dots \frac{1}{20642}. \end{aligned}$$

2. By measures of Titania.

$$\begin{aligned} a &= 33''2 & b &= 25''2 \\ \Omega &= 165^\circ 25' & i &= 100^\circ 34' \\ \text{Mass of } \textcircled{U} &\dots\dots \frac{1}{20605}. \end{aligned}$$

Whence as a mean result the mass may be taken = $\frac{1}{20570}$.

We have lately completed Ecliptical charts for Hours 5, 8, 14, 19 and 20; the latter two are in the engravers hands.

J. R. Hind.

Fortsetzung der Beobachtungen des Cometen III. 1854 und Beobachtungen des Cometen IV. 1854,
von Herrn Professor *Reslhuber*.

Komet III. 1854.

	M. Zt. Kremsm.	α . ☾	δ . ☾		M. Zt. Kremsm.	α . ☾	δ . ☾
Juli 16	10 ^h 40 ^m 8 ^s .46	10 ^h 4 ^m 43 ^s .16	+38° 42' 17".2	Juli 25	9 ^h 46 ^m 50 ^s .49	10 ^h 29 ^m 2 ^s .43	+30° 11' 38".8
17	10 58 19,91	8 12,73	37 37 35,0	26	9 36 40,59	31 2,33	29 22 10,8
22	9 39 48,18	22 18,82	32 48 5,6	29	9 37 27,01	36 31,37	27 3 11,3
23	10 15 39,47	24 44,21	31 53 10,4	30	9 43 34,01	10 38 14,21	+26 19 27,5
24	10 14 3,92	10 26 57,69	+31 1 28,3				