Date	<i>M</i>		Obs.	Remarks	<i>E-M</i>	
	α	δ			α	δ
1882 March 11	170.5	+ 3.5	S	<i>rd</i>	+1.7	-0.2
13	170.5	+ 3.5	S	<i>rd</i>	+3.5	-0.9
14	173.0	+ 3.0	S	<i>pd</i>	+2.0	-0.8
17	176.0	+ 2.5	S	<i>cp</i>	+1.8	-1.1
19	180.5	+ 1.0	S	<i>cm</i>	-1.0	-0.8
22	182.5	- 3.0	S	<i>cm</i>	-0.3	+2.0
April 8	197.5	- 7.5	S	<i>cm</i>	+0.3	0.0
12	207.0	-10.0	S	<i>m</i>	-5.5	+1.0
15	211.8	-10.0	S	<i>m</i>	-7.6	-0.1
17	214.0	-11.5	S	<i>md</i>	-8.0	+0.7
18	216.0	-12.5	S	<i>md</i>	-9.0	+1.3

The principal difficulty in observations of this kind seems to be the presence of faint bands and patches of light as permanent features of the sky. Without close attention to these, I find myself unable to make up my mind about the presence of »Gegenschein« on any particular occasion. The band from the Pleiades mentioned in my former communications (A. N. Nr. 2358, 2376) seems to me a serious impediment to observations of »Gegenschein« in that region. A somewhat similar band connects Coma Berenices with the Milky Way, passing southward to τ Leonis, and thence along the zodiac, but still inclining towards its southern side. After passing α Leonis, it turns more northward and ends at Praesepe, which is more obviously

connected with the Milky Way by a rather bright region. Again, near α Virginis the sky is lighter than it is in Corvus or near δ Virginis. I have recorded many observations of this kind, but my conclusions are not yet as definite as they may perhaps become by additional experience.

If »Gegenschein« really exists, its cause may possibly be sought in the perturbation by the Earth of meteoric matter forming a permanent part of the Solar System. Astronomers of experience in the computation of planetary perturbations may perhaps be able to decide at once whether the effect of these perturbations is in general to retain the disturbed body in the neighborhood of the other, at the time of their conjunction, longer than would otherwise be the case. There is, at all events, one special case in the problem of three bodies, in which a satellite might remain in opposition unless disturbed by some additional cause. A discussion of this subject occurs in Price's Treatise on Infinitesimal Calculus Vol. III, pp. 524-531. If we can suppose that meteoric particles occasionally accompany the Earth for a time, a slight aggregation of this kind, perpetually breaking up, and renewed by additional meteors, might account for a little light opposite the Sun. But this is a mere speculation, and the serious investigation of the question would probably be too laborious to be undertaken when the facts to be explained are as yet so ill established.

Cambridge, U. S., 1882 June 2.

Arthur Searle,

Assistant at Harvard College Observatory.

Elliptisches Elementen-System des Cometen Wells.

Aus 4 Normalörtern, die theilweise mit noch ungenauen Elementen berechnet sind, theilweise auf wenigen Beobachtungen beruhen:

		α	δ
1. März	22.5	269° 49' 29.00	+34° 54' 36.70
2. April	20.5	288 47 38.40	+57 21 29.20
3. Mai	19.5	39 47 51.45	+68 37 39.50
4. Juni	2.0	66 14 10.31	+45 43 38.39

habe ich durch Variation der Distanzen das folgende (Aequatorial) Elementen-System abgeleitet.

$$\begin{aligned}
 T &= 1882 \text{ Juni } 10.567344 \text{ m. Z. Berlin.} \\
 \pi' &= 47^\circ 20' 24.38 \\
 \delta' &= 210 28 8.34 \\
 i' &= 52 56 46.03
 \end{aligned}
 \left. \vphantom{\begin{aligned} T \\ \pi' \\ \delta' \\ i' \end{aligned}} \right\} \text{Mittl. Aeq. 1882.0}$$

$$\begin{aligned}
 \log e &= 9.9999754 \\
 \log q &= 8.7834855 \\
 \log a &= 3.0305008 \\
 \log(1-e) &= 5.7529847.
 \end{aligned}$$

Ich habe hier den Unterschied $(1-e)$ besonders mit angeführt, weil diese kleine Differenz mit gewöhnlichen Logarithmen berechnet allzu ungenau sich ergibt und hier

nach anderen Methoden schärfer bestimmt ist. Dargestellt mit den Aequatorial-Constanten

$$\begin{aligned}
 x &= r[9.9611643] \sin(126^\circ 23' 25.79 + v) \\
 y &= r[9.8608436] \sin(61 11 8.05 + v) \\
 z &= r[9.9020406] \sin(196 52 16.04 + v)
 \end{aligned}$$

liessen die mittleren Oerter die Fehler übrig:

	$d\alpha \cos \delta$	$d\delta$
April 20.5	+ 5.47	- 12.26
Mai 19.5	- 4.68	- 1.29

Indem ich ausserdem noch 3 Oerter darstellte, fand sich für

März 30.0	- 2.14	- 4.35
April 7.0	- 9.03	- 9.68
Mai 30.5	- 1.62	- 9.28

Die Umlaufszeit würde hiernach sich auf 3617 siderische Jahre belaufen, ein reines Rechnungsergebnis, das natürlich noch sehr schwankt, indess wohl mit einiger Sicherheit andeutet, dass der Comet unserm Sonnen-System angehört.

Dingelstaedt (Thüringen) 1882 Juni 27.

A. Thraen.