

Comparaison des observations avec des éphémérides (O - C).

1906	$\Delta\alpha$	$\Delta\delta$
(68) Leto. [B. J. 1908].		
Janv. 14	+10 ^s 29	-44 ["] 5
31	+10.23	-40.2

Genève, 14 avril 1906.

1906	$\Delta\alpha$	$\Delta\delta$
(3) Juno. [N. A. 1906].		
Mars 7	-0 ^s 04	+1 ["] 6
7	-0.27	+0.8

J. Pidoux, astronome.

Osservazioni di comete fatte a Padova.

1906	T.m. Padova	$\Delta\alpha$	$\Delta\delta$	Cf.	α app.	$\log p.A$	δ app.	$\log p.A$	Red. ad l. app.	*	
Cometa 1905 c.											
Febb. 17	7 ^h 4 ^m 59 ^s	-0 ^m 39 ^s 29	—	5,-	0 ^h 41 ^m 18 ^s 99	9.577	—	—	-1 ^s 26	—	1
17	7 12 21	—	-7' 49" 9	-3	—	—	-14° 24' 32" 9	0.828	—	-12" 6	1
18	6 54 42	+1 23.03	-0 57.7	10,10	0 47 56.34	9.562	-13 38 45.8	0.832	-1.24	-12.6	2
19	6 59 34	+1 31.51	-7 23.1	8,8	0 54 23.79	9.564	-12 52 49.2	0.830	-1.22	-12.7	3
22	6 47 33	-0 9.07	—	6,-	1 12 21.03	9.539	—	—	-1.14	—	4
22	6 53 44	—	+1 16.9	-2	—	—	-10 39 49.7	0.833	—	-12.9	4

Cometa 1905 VI (1906 a).												
Febb.17	10 54 1	+1 3.85	—	6,-	10 22 53.35	0.288 _n	—	—	+8.92	—	5	
17	11 15 6	—	-4 32.2	-5	—	—	+84 48 9.4	0.718 _n	—	- 5.4	5	
18	9 27 51	+1 17.02	-1 30.6	8,8	9 5 28.04	0.260 _n	+84 11 51.7	0.688 _n	+8.46	- 0.8	6	
19	9 49 57	-1 4.19	-2 8.8	10,10	8 5 11.00	9.461 _n	+82 59 23.0	0.728 _n	+6.70	+ 2.5	7	

Stelle di confronto.

*	α 1906.0	δ 1906.0	Autorità	*	α 1906.0	δ 1906.0	Autorità
1	0 ^h 41 ^m 59 ^s 54	-14° 16' 30 ["] 4	AG. Wash. Z. 80, 144	5	10 ^h 21 ^m 40 ^s 58	+84° 52' 47 ["] 0	Carrington 1540
2	0 46 34.55	-13 37 35.5	AG. Wash. Z. 80, 144	6	9 4 2.56	+84 13 23.1	» 1308
3	0 52 53.50	-12 45 13.4	BB. VI	7	8 6 8.49	+83 1 29.3	» 1163
4	1 12 31.24	-10 40 53.7	San ₃ 98				

Padova, Osservatorio astronomico, Marzo 1906.

A. Antoniazzi.

On the elements of the orbit of β 733 = 85 Pegasi.

Von W. Doberck.

The sixth magnitude star, 85 Pegasi, has an eleventh magnitude companion discovered by Burnham in 1878. It is a most difficult object at all times and when the distance decreases below 0["]40 the companion cannot be seen in any telescope. The areas described by the radius vector are not quite proportional to the times, but this is evidently caused by systematic errors in the measures. The following elements have been determined from all the observations, allowing great weight to the distances:

$$\begin{aligned}\Omega &= 106^{\circ} 20' & P &= 25736 \\ \lambda &= 267 54 & T &= 1908.38 \\ \gamma &= 52 50 & a &= 0["]841 \\ e &= 0.3872\end{aligned}$$

The following short ephemeris has been calculated from the formulae:

$$\begin{aligned}q_c \cos \theta_c &= -0["]1918 + 0["]5353 \sin (E + 112^{\circ} 1') \\ q_c \sin \theta_c &= -0.0437 + 0.7567 \sin (E + 8 35) \\ \pm z &= +0.2590 - 0.6705 \sin (E + 87 59)\end{aligned}$$

1906.7	$\theta_c = 308^{\circ}5$	$q_c = 0"521$	$z = 0"260$
1907.7	338.1	0.367	0.379
1908.7	31.0	0.320	0.409
1909.7	71.8	0.448	0.335
1910.7	92.4	0.602	0.191
1911.7	105.3	0.716	0.018

The hypothetical parallax is 0["]097.

The probable errors of the annual means of several observers' measures are given in the following table, but they are more or less uncertain in this instance:

Observer	Angle P. E.			Distance		
	Deg. at 0".75	arc	<i>n</i>	Constant	P. E.	<i>n</i>
Burnham	$\pm 1^{\circ}80$	$\pm 0^{\circ}023$	9	$+0^{\circ}047$	$\pm 0^{\circ}064$	9
Hall	± 2.61	± 0.034	3	$+0.033$	± 0.025	3
Schiaparelli	± 1.65	± 0.021	12	-0.082	± 0.044	12
H. Struve	± 5.30	± 0.069	3	-0.083	± 0.065	3
Schäberle	± 0.85	± 0.011	5	$+0.152$	± 0.070	5
Barnard	± 1.47	± 0.019	4	$+0.087$	± 0.056	4
Aitken	± 5.35	± 0.069	7	-0.014	± 0.072	7
Gledhill	± 5.95	± 0.077	3	$+0.010$	± 0.055	3
Lewis	± 6.25	± 0.081	6	-0.105	± 0.067	6
Doolittle	± 8.50	± 0.113	5	-0.064	± 0.124	5

By decreasing Aitken's angles by 6° the P. E. of the angles measured by him would be reduced to $\pm 0^{\circ}012$ in arc. The probable errors which result for Lewis and Doolittle are very likely also too large.

Observer	Epoch	θ_c	ϱ_c	$\theta_o - \theta_c$	$\varrho_o - \varrho_c$	Observer	Epoch	θ_c	ϱ_c	$\theta_o - \theta_c$	$\varrho_o - \varrho_c$
Burnham	1878.73	274.5	0.78	- 0.5	- 0".11	See	1895.73	193.2	0.71	+ 5.2	+ 0".02
"	79.46	282.2	0.74	+ 2.4	+ 0.01	Moulton	95.74	193.3	"	+ 11.5	+ 0.04
"	80.59	295.9	0.62	+ 2.4	+ 0.03	Lewis	95.86	194.7	"	+ 1.6	- 0.24
Hall	80.79	298.9	0.59	- 1.7	+ 0.07	Schiaparelli	96.04	196.7	"	+ 4.9	+ 0.02
Burnham	81.54	313.3	0.48	- 1.8	+ 0.10	Aitken	96.75	204.7	"	- 3.9	- 0.17
O. Struve	82.62	351.0	0.33	+ 98.4	+ 0.31	Schäberle	96.82	205.4	"	+ 0.1	+ 0.05
Burnham	83.75	51.2	0.36	- 78.2	-	Hussey	96.86	205.9	"	+ 2.7	- 0.11
H. Struve	85.93	100.5	0.68	+ 6.5	- 0.18	Gledhill	96.87	206.0	"	+ 2.0	+ 0.09
"	86.81	110.2	0.75	+ 4.8	- 0.06	Schäberle	97.59	214.0	0.72	- 1.5	+ 0.07
Hall	86.91	111.1	0.76	- 1.4	+ 0.03	Gledhill	97.64	214.5	"	+ 8.8	- 0.02
Schiaparelli	86.98	111.8	0.76	- 0.8	- 0.18	Doberck	97.70	215.2	"	- 7.7	+ 0.17
"	87.91	120.2	0.81	- 0.9	- 0.15	Aitken	97.72	215.4	"	- 5.5	- 0.02
Burnham	88.69	126.6	0.83	+ 0.1	+ 0.12	Doolittle	97.74	215.6	"	+ 12.6	+ 0.11
Hall	88.96	128.8	"	- 4.7	0.00	Hussey	97.75	215.7	"	- 5.8	+ 0.02
Schiaparelli	88.96	"	"	- 0.5	- 0.13	Schiaparelli	97.96	218.0	0.73	0.0	- 0.12
Burnham	89.59	134.0	"	+ 0.7	+ 0.11	Lewis	97.98	218.2	"	- 2.1	+ 0.03
H. Struve	89.81	135.7	"	- 3.5	- 0.01	Aitken	98.44	223.1	"	- 5.6	+ 0.06
Schiaparelli	89.90	136.5	"	+ 0.5	- 0.13	Lewis	98.80	226.8	0.74	- 1.3	- 0.15
Burnham	90.55	141.8	0.81	- 2.8	- 0.03	Gledhill	98.82	227.0	"	+ 7.4	- 0.04
Schiaparelli	90.96	145.3	0.80	+ 1.1	- 0.09	Doolittle	98.89	227.7	"	- 2.9	- 0.24
Burnham	91.56	150.7	0.79	+ 1.1	0.00	Schiaparelli	98.94	228.3	"	- 2.5	- 0.07
Schiaparelli	91.94	154.1	"	- 1.4	- 0.01	Aitken	99.51	234.0	0.76	- 8.4	+ 0.02
Barnard	92.88	162.9	0.76	+ 2.5	- 0.03	Brown	99.80	236.8	"	- 2.2	+ 0.07
Schiaparelli	92.97	163.7	0.75	+ 3.6	- 0.02	See	99.82	237.0	"	+ 0.5	+ 0.06
Schäberle	93.64	170.5	0.74	- 2.2	+ 0.16	Doolittle	99.82	"	"	- 3.9	+ 0.08
Barnard	93.92	173.4	"	+ 0.6	+ 0.14	Aitken	1900.59	244.2	0.78	- 5.6	- 0.11
Schiaparelli	93.96	173.8	0.73	+ 2.3	- 0.04	Burnham	00.85	246.6	"	+ 6.4	+ 0.19
Barnard	94.53	180.0	0.72	- 1.4	+ 0.12	Aitken	01.51	252.4	0.80	- 5.5	- 0.03
Schäberle	94.59	180.6	"	+ 0.7	+ 0.17	Lewis	01.59	253.1	"	- 13.5	- 0.14
Schiaparelli	94.93	184.3	"	+ 4.3	- 0.07	Doolittle	02.81	263.7	0.81	- 13.3	- 0.22
Lewis	94.98	184.9	"	- 7.3	- 0.07	Lewis	02.91	264.6	"	- 14.9	- 0.06
Schäberle	95.53	191.0	0.71	+ 0.2	+ 0.31	Doolittle	03.71	271.6	0.79	- 11.8	- 0.05
Barnard	95.64	192.2	"	- 1.7	+ 0.12	Biesbroeck	04.00	274.4	0.78	+ 6.7	- 0.01
Aitken	95.71	193.0	"	- 7.2	+ 0.15						

Hongkong Observatory, 1906 March 26.

W. Doberck.