

The asteroid was compared in the finder of the 40-inch, for brightness, with the following stars

BD. +28°611	Egeria fainter	0 ^m .5	Resulting mag. of Egeria =	8 ^m .9
» +28 612	» »	0.2	» » » » =	9.3
» +28 615	» brighter	0.2	» » » » =	9.2
» +28 617	» fainter	0.3	» » » » =	9.3
» +28 618	» »	0.5	» » » » =	9.3
Mean for mag. of Egeria =				9.2

This magnitude is of course on the BD. scale.

Verkes Observatory, 1906 March 16.

E. E. Barnard.

On a planetary nebula.

One of my plates with the 10-inch Brashear lens of the Bruce photographic telescope shows a fine planetary nebula which does not appear to be in the catalogues.

This object is quite large for a nebula of this class; the photograph shows it to be about $2\frac{1}{2}'$ in diameter. With the 40-inch telescope its planetary character is not readily seen because of the faintness of its outer portions; when best seen, however, the outlines are quite distinct. It has a bright but ill-defined nucleus at the center, which is not stellar. On the south edge of the nebula is a 15^m star.

The nucleus of the nebula was compared with the north one of two bright 10th magnitude stars preceding (these stars are 4' apart north and south)

$$\Delta\alpha = +0^m57^s.75 \text{ (4 transits)}$$

$$\Delta\delta = -0'12''.6 \text{ (2 measures).}$$

The position of this nebula for 1855.0 is approximately

$$\alpha = 11^h7^m \quad \delta = +15^\circ42'.$$

There is quite a number of other nebulae on this plate — mainly spiral nebulae and nebulous stars.

Verkes Observatory, 1906 April 23.

E. E. Barnard.

Elliptic elements of 1905 SF.

By *Herbert R. Morgan.*

This asteroid was discovered by Dr. J. H. Metcalf, Taunton, Mass., Dec. 5, 1905, on a photographic plate. There are some indications of a variation in its magnitude. It has been followed micrometrically at Rome and Vienna. Four observations at Rome Jan. 0, Jan. 25, Febr. 17, and Mar. 14, 1906, were used for the elements.

Epoch 1906 Jan. 0.5 Berlin M. T.				Residuals (O—C).	
$M = 302^\circ 39' 32''.2$					
$\omega = 62 \ 35 \ 41.4$	1906.0	$\varphi = 9^\circ 21' 6''.0$		Jan. 25	Febr. 17
$\Omega = 86 \ 36 \ 25.6$		$\mu = 633''.233$	$\cos \beta \Delta\lambda = 0''.0$	+0''.3	
$i = 11 \ 36 \ 16.4$		$a = 3.154728$	$\Delta\beta = -5.3$	+1.8	

The planet 1905 SF is probably not a new one, but identical with (488) Kreusa.

Morrison Observatory, Glasgow, Mo., 1906 June 1.

Bemerkungen über Planet 1905 SF = (488) Kreusa.

Von *A. Berberich.*

Die von Herrn Morgan berechneten Bahnelemente von 1905 SF deuten auf die Identität dieses Planeten mit (488) Kreusa hin. In der Tat werden die Beobachtungen von (488) durch eine Ephemeride von SF nahe dargestellt, wenn an die genannten Elemente die Korrektur $dM = +127'$ angebracht wird. Damit ergaben sich folgende Differenzen (B—R):

1902 Juni 11	Königst.	$\Delta\alpha = +0^s.4$	$\Delta\delta = +5.8$
» 27	»	$= +1.4$	$= +5.2$
Juli 7	Wien	$= +2.4$	$= +4.8$

Aber auch meine früheren, wegen einiger Zweifel nicht veröffentlichten Rechnungen über Kreusa bestätigen die Identität. Aus Juni 11 u. 27 Königstuhl, Juli 7 Wien hatte ich folgende

Elementensysteme II und III berechnet, III mit Anbringung einer empirischen Korrektur von $-0^s.6$, entsprechend dem Gang des Ephemeridenfehlers bei II, an den mittleren Ort:

II		III	
Epocbe 1902 Juni 11.5		1902 Juni 11.5	
$M = 75^\circ 18' 53''.7$		$75^\circ 18' 37''.0$	1902.0
$\omega = 63 \ 50 \ 41.4$		$63 \ 40 \ 24.4$	
$\Omega = 86 \ 57 \ 45.0$		$87 \ 10 \ 47.5$	
$i = 11 \ 33 \ 48.9$		$11 \ 27 \ 12.9$	
$\varphi = 9 \ 1 \ 30.7$		$9 \ 1 \ 25.1$	
$\mu = 633''.906$		$638''.073$	
$\log a = 0.498654$		0.496757	