

tabular form. 294 cometic orbits are more or less well known: of these, 221 have parabolic orbits, and of the elliptic orbits

7 have a period from 10,000 to 50,000 years.						
23	"	"	"	1,000	"	10,000
6	"	"	"	500	"	1,000
9	"	"	"	100	"	500
6	"	"	"	50	"	100
5	"	"	"	10	"	50
17	"	"	"	—	"	10

All the comets whose periods are under 10 years, have *direct* motion, and of the 28 comets whose periods are under 100 years, only 3 have retrograde motion.

An interesting table of comets with similar orbits which are yet not identical, is also given: and further a table of those comets which are related to each other in groups, so that all their orbits intersect in a line. These comets may be supposed to have had a common origin.

A NEW AND FAINT NEBULA.

I have discovered a new and exceedingly faint nebula in

$$\left. \begin{array}{l} \alpha = 17^{\text{h}} 16^{\text{m}} 45^{\text{s}}.8 \\ \delta = -33^{\circ} 26' 18'' \end{array} \right\} 1884.0.$$

It is a small and faint object with 6-inch telescope. The light seems to be of an even tint.

It lies $2^{\text{m}} 22^{\text{s}}$ following, and $3^{\circ}.9$ south of General Catalogue No. 4290. The place is the mean of three equatorial pointings.

General Catalogue, No. 4290, I make the place of this object to be

$$\left. \begin{array}{l} \alpha = 17^{\text{h}} 14^{\text{m}} 24^{\text{s}} \\ \delta = -33^{\circ} 22' 24'' \end{array} \right\} 1884.0.$$

This place is the mean of four careful equatorial pointings. It is exceedingly faint with 6 inches, and precedes two 9^{m} stars by a few minutes of arc.

There is a faint star or so, close south which confuse the light of the nebula. The description of this object in General Catalogue is "!!!; ☉; eF; S; amSt." It was impossible to make out its annular character.

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Mr. H. H. WARD has recently published a pamphlet of sixteen pages, in which he sets out a new theory of cometary tails. Briefly enunciated the hypothesis is this:—"A comet's tail is the comet's own light transmitted through, and made co-extensively visible by the cometary shadow." Four arguments are given in support of the theory:

1. Comet's cast shadows;
2. Comet's are self-luminous chiefly;
3. Cometary light would itself be visible in transmission through the