DATA DICTIONARY

Column	Heading	Descriptions	Data Types
1.	Catalog Number	Sequential number of the eclipse in the catalog links to the map published in the Five Millennium Canon of Solar Eclipses: -1999 to +3000.	int64
2.	Calendar Date	Calendar Date at instant of Greatest Eclipse. Gregorian Calendar is used for dates after 1582 Oct 15. Julian Calendar is used for dates before 1582 Oct 04.	object
3.	TD of Greatest Eclipse	Dynamical Time (TD) of Greatest Eclipse, the instant when the axis of the Moon's shadow cone passes closest to Earth's center.	object
4.	ΔT	Delta T (ΔT) is the arithmetic difference between Dynamical Time and Universal Time. It is a measure of the accumulated clock error due to the variable rotation period of Earth.	int64
5.	Luna Num	Lunation Number is the number of synodic months since New Moon of 2000 Jan 06. The Brown Lunation Number can be determined by adding 953.	int64
6.	Saros Num	Saros series number of eclipse. (Each eclipse in a Saros is separated by an interval of 18 years 11.3 days.)	int64
7.	Ecl. Type	Eclipse Type where: P = Partial Eclipse, A = Annular Eclipse, T = Total Eclipse, H = Hybrid or Annular/Total Eclipse. Second character in Eclipse Type: "m" = Middle eclipse of Saros series, "n" = Central eclipse with no northern limit, "s" = Central eclipse with no southern limit, "+" = Non-central eclipse with no northern limit, "-" = Non-central eclipse with no southern limit "2" = Hybrid path begins total and ends annular. "3" = Hybrid path begins annular and ends total., "b" = Saros series begins (first eclipse in series). "e" = Saros series ends (last eclipse in series).	object
8.	Gamma	Distance of the shadow cone axis from the center of Earth (units of equatorial radii) at the instant of greatest eclipse	float64
9.	Ecl. Mag.	Eclipse magnitude is the fraction of the Sun's diameter obscured by the Moon. For annular, total and hybrid eclipses, this value is actually the diameter ratio of Moon/Sun.	float64
10.	Lat.	Latitude where greatest eclipse is seen.	object
11.	Long.	Longitude where greatest eclipse is seen.	object
12.	Sun Alt	Sun's altitude at greatest eclipse	int64
13.	Sun Azm	Sun's azimuth at greatest eclipse.	int64
14.	Path Width	Width of the path of totality or annularity at greatest eclipse (kilometers)	object
15.	Central Dur.	Central Line Duration of total or annular phase at greatest eclipse	object