

CEAMIG – MINAS GERAIS ASTRONOMICAL STUDIES CENTER

PRELIMINARY REPORT TOTAL LUNAR ECLIPSE IN 2010, DEC.

1st) - Observer´s Team: Antônio Rosa Campos
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2nd) - Observational site : Lat.: 19° 53' 15.0" S;
Long: 43° 55' 12.6" W;
Heigth.: 897. meters

3rd) - Instruments: 1 - MEADE ETX 105 EC; 58.7 amplify with Moon filter
MEADE 4000 series 4000 ND96 (0.9);
2 - Newt. 140mm, 70 Instruments;
3 – Binocular MEADE 9 x 63;
4 - Casio chronometer 617 WL-100

4th) - Signal Time : Observatório Nacional - RJ – Time Service Division - DSHO.

5th) - Registers Features:

A) = Disappearance of Star (Occutation)
132 Tau (4.8) = 06:10:46:99 (Universal Time = UT)

B) - First Contact (U1) = 06:32:36:58 (UT)

C) ENTRY

Features	(UT)	Features	(UT)
Riccioli	06:37:27:33	Grimaldi	06:38:09:67
Billy	06:40:40:41	Gassendi	06:44:01:62
Reiner	06:47:04:53	Seleucus	06:49:34:94
Kepler	06:51:39:75	Tycho	06:52:27:18
Aristarchus	06:55:55:60	Copernicus	07:00:06:13
Pytheas	07:04:36:41	Eratosthenes	07:05:57:50
Timocharis	07:10:12:79	Dionysius	07:15:44:34
Menelaus	07:18:38:78	Pico	07:20:10:12
Plinius	07:21:42:27	Plato	07:23:06:65
Langrenus	07:26:49:06	Taruntius	07:27:30:72
Hercules	07:33:42:26	Endymion	07:37:14:92

Table. 1

D) Second Contact (U2) = 07:40:15:13 (UT)

6th) - Estimates Danjon Numbers

- 1st Evaluation: 07:43 (TU) = Danjon Number = 1: Lunar border W and 2 = Danjon number for Lunar border O.

- 2nd Evaluation: 07:52 (TU) = 0.5.

7th) - Lunar Magnitude

-2.5 (estimative) used with an binocular inverted.

Stars for referency: Betelgeuse = (0.5 - M2); Sirius (-1,4 - A0) and Pollux (1.2 - K0).

8th) - Reference:

- **Espenak**, Fred – NASA's GFSC – Total lunar Eclipse of 2010 Dec 21.

- **Soulsby**, Byron – Theodore Lunar Observatory – Predictions for Total Lunar Eclipse 2010 December 21.

- **Campos**, Antônio Rosa – Almanaque Astronômico Brasileiro 2010 – pág. 22.