

IOTA2008 Report format for lunar occultation observations

VERSION 1.0 1 September 2008

* Header group. *

Byte(s): (Format) Description

Line 1

- 1- 10: (A10) Literal 'Place name'
16- 65: (A50) Name of closest town or landmark to site, and Country - comma separated.
[Note 50 characters is the Archive allocation]
66- 67: (A2) CR/LF sequence

Line 2

- 1- 13: (A13) Literal 'Email address'
16- 75: (A60) Email address (Required for return of reduction. Not archived)
76- 77: (A2) CR/LF sequence

Line 3

- 1- 14: (A14) Literal 'Representative'
16- 75: (A60) Name of person submitting the report - not archived
76- 77: (A2) CR/LF sequence

Line 4+

- Optional Message
1- 14: (A14) Literal 'Message '
16- 75: (A60) Text of a message intended for the person receiving the report - not archived
76- 77: (A2) CR/LF sequence
NOTE - the Message line can appear any number of times, on consecutive lines.

* Site group *

Byte(s): (Format) Description

- 1 : (A1) Literal 'T'
2 : (A1) Site link code (A-Z, a-z)
3- 4: Blank
5 : (A1) Type of telescope
R Refractor [including achromatic, apochromatic, binoculars, and camera lenses]
N Newtonian reflector [including Dobsonian, Schmidt-Newtonian, Maksutov-Newtonian, Jones-Bird, Schiefspiegler]
C Cassegrain, [including Schmidt-Cassegrain, Maksutov, Ritchy-Chretien, Dall-Kirkham]
O Other, including naked eye.
<> not known
6 : (A1) Mounting
<> not known
E Equatorial mounting
A Alt-Azimuth mounting
7 : (A1) Driving
<> not known
D Driven
M Manual
8 : Blank
9- 12: (I4) Telescope aperture (cm) - rounded to the nearest cm.
13- 14: Blank
15- 18: (I4) Telescope focal length (cm) - rounded to the nearest cm.
19- 20: Blank
21 : (A1) Sign of longitude, +'ve to East. Blank treated as '+'
22- 24: (I3) degrees of longitude
25- 26: (I2) minutes of longitude
27- 31: (F5.2) seconds of longitude. The location is for the intersection of the telescope with its declination or altitude axis. Only to 1 decimal place, unless the position has been measured by a surveyor.
32: Blank
33 : (A1) Sign of latitude, +'ve to North. Blank treated as '+'
34- 35: (I2) degrees of latitude
36- 37: (I2) minutes of latitude
38- 42: (F5.2) seconds of latitude. The location is for the intersection of the telescope with its declination or altitude axis. Only to 1 decimal place, unless the position has been measured by a surveyor.
43: Blank
44- 45: (I2) Horizontal datum code
84 WGS84 and equivalents [preferred horizontal datum]
(This includes all national datums dated 1983 or later, and native GPS output)
10 Measured using Google Earth
<> not known
46: Blank
47- 52: (F6.1) Altitude (meters) [range -999.9 to +9999.9]. The elevation is for the intersection

of the telescope with its declination or altitude axis. Only to the nearest meter unless the elevation has been measured by a surveyor.

- 53 : (A1) Vertical datum code
 - M Mean Sea Level [preferred vertical datum]
 - E Ellipsoid (or equivalent) ellipsoid [for use when a GPS unit does not correct computed elevations for the difference between the Ellipsoid and Mean Sea Level.]
- <> not known
- 54- 55: (A2) CR/LF sequence

* Observer group *

- Byte(s): (Format) Description
- 1 : (A1) Literal 'O'
 - 2 : (A1) Observer link code (A-Z, a-z)
 - 3- 4: Blank
 - 5- 29: (A25) Name of observer. If more than one observer, specify main observer. Names need to be specified in simple ASCII characters (without accents).
 - 30 : Blank
 - 31- 75: (A45) Email address of the observer. If email address requires more than 45 characters the field is expanded as required.
 - 76- 77: (A2) CR/LF sequence

* Observation group *

This group contains the observations. There is no limit on the number of events that can be included in a single report.

- Byte(s): (Format) Description
- 1- 4: (I4) Year [Note: full year required - such as '2008']
 - 5- 6: (I2) Month
 - 7- 8: (I2) Day
 - 9- 10: (I2) Hours
 - 11- 12: (I2) Minutes
 - 13- 18: (F6.3) Seconds. Specify decimal places according to accuracy.
[Visual - 1 decimal place; video - 2 decimal places]
 - 19 : (A1) Star catalogue / object type
 - R Zodiacal Catalogue
 - S SAO catalogue
 - X XZ80Q catalogue
 - A Numbered asteroid
 - P Planet and planet satellites
 - U Unidentified star
 - 20- 25: (I6) Number in catalogue
 - For an Unidentified star - blank
 - For planets, number is formed as pmmm, where:
 - p = planet number
 - mmm = moon number. Set to 000 for occultation of planet.
 - e.g. Mercury = 1000, Jupiter = 5000, Ganymede = 5003, Titan = 6006
 - For asteroids: asteroid number. [Unnumbered asteroids cannot be specified]
 - 26 : (A1) WDS double star component identifier (A - Z, a - z)
 - 27 : (A1) Phenomena
 - D Disappear
 - R Reappear
 - B Blink. The mid-time of a blink event. Usually only occurs during a graze, but can occur in near-graze situations. Duration is specified at column 48.
(video) partial disappearance (always >25% of full light).
(visual) a short disappearance-reappearance - too close to separately time.
 - F Flash. The mid-time of a flash event. Usually only occurs during a graze, but can occur in near-graze situations. Duration is specified at column 48.
(video) partial reappearance (always <25% of full light).
(visual) a short reappearance-disappearance - too close to separately time.
 - M Miss. The time when the star was adjacent the highest point on the observed or predicted graze profile. Only used when other observers in a graze observation have recorded D &/or R events
 - S Start or resume. Only used in a graze observation, to indicate periods

when the observer was observing.
E End or pause. Only used in a graze observation, to indicate periods when the observer was not observing.
O Other [used by ILOC instead of S or E]

28 : (A1) Limb
D Dark limb
B Bright limb (including lunar eclipse penumbra)
U Umbra of lunar eclipse

29 : (A1) Graze flag
G Graze event
<> Ordinary occultation

30- 33: (F4.2) Personal equation. Range 0.00 to 9.99 sec. Blank if PE not applicable.

34 : (A1) Application of Personal equation
S Personal equation has been subtracted from the observed time.
A = S, but PE listed is an assumed value. [compatibility for ILOC observations]
B = S, but the value of the PE applied is unknown. [compatibility for RGO observations]
U Personal equation has not been subtracted from the reported time.
E Personal equation not relevant to the method of timing (e.g. video, eye-ear)
X Not known whether any PE has been applied.

35 : (A1) Method of timing and recording
G Video with time insertion, times extracted by frame analysis
V Video with other time linking, times extracted by frame analysis
M Video with other time linking, times extracted by replay
S Stopwatch (visual)
T Tape recorder (visual)
E Eye and ear
P Photoelectric
K Key-tapping - including computer keyboards
X Chronograph
C Camera and clock

36 : (A1) Method of timing and recording (2)
Same definitions as for (35), plus the following. Blank if no second method was used.
A Time base corrected using adjacent observers

37 : (A1) Time source
G GPS (using 1PPS output, NOT GPS screen display)
R Radio signal (standard time signal)
N Network Time Protocol (using NTP software)
C Clock (adjusted by standard time signal)
T Telephone
M Some medium related with standard time signal
O GPS screen display, computer clock not using NTP software (poor accuracy).

38- 42: (F5.3) Accuracy of time. Range 0.000 to 9.999. Blank if no figure provided.

43 : (A1) Certainty
1 Sure
2 Possibly spurious
3 Most likely spurious

44- 46: (F3.1) Signal-to-Noise ratio (for video & photoelectric). Range 0.0 to 9.9. Blank if not relevant, or not provided.

47 : (A1) Double star
<> No double star effect noted
W Proceeding (west) component
E Following (east) component
N North component
S South component
B Brighter component
F Fainter component

48- 52: (F5.3) Duration of non-instantaneous event. Range 0.000 to 9.999 secs. Blank if not relevant.

53 : (A1) Light level used to define event time (for video & photoelectric, if event is non-instantaneous)
<> Not specified / not relevant
T 25% light level (consistent with Fresnel diffraction)
F 50% light level (consistent with stellar diameter effects)

54 : (A1) Sky stability
<> Not specified
1 Good
2 Fair
3 Poor

55 : (A1) Sky transparency
 <> Not specified
 1 Good
 2 Fair
 3 Poor

56 : (A1) Remarkable circumstances
 <> No remarkable circumstances
 1 Gradual[not instantaneous] event
 2 Dark limb visible
 3 By averted vision
 4 Star faint
 5 Through thin cloud
 6 Many clouds
 7 Strong wind
 8 In strong twilight
 9 In daylight (sun altitude >-6 deg {civil twilight})

57- 59: (I3) Temperature in Centigrade. Range -49 to 50. Blank if not known.

60 : (A1) Site link code (A-Z, a-z)

61 : (A1) Observer link code (A-Z, a-z)

62- 63: (A2) CR/LF sequence

**** Comment Line ****

Any event line may have a 'Comment Line' containing free text. The comment line follows immediately after the relevant observation line, and is formatted as follows:

1- 4: (A4) Literal - 4 spaces (marker for a comment line)

5- 59: (A55) Free-text comments

60- 61: (A2) CR/LF sequence

An optional format, used to specify a GSC star identifier:

1- 4: (A4) Literal - 4 spaces (marker for a comment line)

5 : (A1) Literal "G"

6- 9: (I4) GSC Field number

10- 14: (I5) GSC Number within the field.

15- 59: (A45) Free-text comments

60- 61: (A2) CR/LF sequence

*** Important: The comment line is not included when the observation is Archived. ***

NOTES

All Text fields [Ax] are left justified.
 All integer fields [Ix] are right justified.
 All floating point fields are aligned by the decimal point.
 For floating point fields, the number of decimal places used is determined by the accuracy of the reported data. The remainder of the field is padded with spaces, not zeros.
 There is no limit to the number of observations that can be present in a report file.
 Blocks of data optionally may be separated by an empty line (that is, a line containing only a CR/LF sequence).

VERSION history

V 1.0 1 September 2008
 Released
