

BRITISH ASTRONOMICAL ASSOCIATION



LUNAR SECTION CIRCULAR

Director Alan Wells
Assistant Director/Editor John Pedler

Volume 41 No. 1 Data on pages 7-8 are for February 2004 Lunations 1003-1004 Jan. 2004

TOPOGRAPHICAL SUB-SECTION

COLIN EBDON

I must start this column with best wishes for a Happy New year to all readers, and thanks to all those who contributed to this page and *'The New Moon'* in 2003.

On the subject of contributions I know that I will be echoing the Editor's oft-made plea if I ask for more of the membership to provide material for these pages in general, and for the topographical sub-section in particular. However, there is probably no better time than the start of a New Year to make the point again.

Whilst there may be some who prefer to stay in the background or who do not wish to, or cannot, for one reason or another, provide observational material, I am convinced that there are many of you out there with telescopes who probably look at the Moon quite a bit but do not let us hear of your efforts. That is fine too for those who prefer to keep their own counsel.

The important point is, however, that I would not like anyone to be put off either because they feel that they do not have either the artistic skills to match some of the fine drawings by seasoned observers in these pages, or perhaps are unsure of just where and how to make a start.

With regard to the former, no one should feel daunted or challenged beyond their capabilities by the fact that some of our membership happen to be fine draftsmen as well as observers. To some extent, the two factors go hand in hand.; the small core of the membership whose drawings usually grace these pages have honed their skills through refining their chosen drawing techniques and also the practical skill of making outline drawings and notes at the telescope. I am sure that they will all agree with me that if they have gained in the ability to produce fine lunar images with a pen or pencil, it is precisely because they are the observers putting in the most time at the eyepiece.

Practice really does make perfect in this area. I can state without fear of contradiction (see **Fig 1** below which proves it) that my own early efforts at drawing the moon were completely feeble compared to the drawings I am able to produce now, and I still feel I have a long way to go compared to the work of others.

Secondly, as I have said many times before, we are an astronomical group and not a sketch club. Whilst some, myself included, find great satisfaction in both drawing and observing (and even more so when undertaken together) this is not a pre-requisite for the making of helpful or useful observations, and in any case, it is just not for everyone. Simple line drawings, or even written descriptions can be just as valid if accurately and carefully made. Brendan Shaw for example has sent me some excellent descriptive work which raises a lot of interesting issues about what he has observed at the telescope - e.g the way a shadow seems to fall at an odd angle, an unusual looking feature etc.

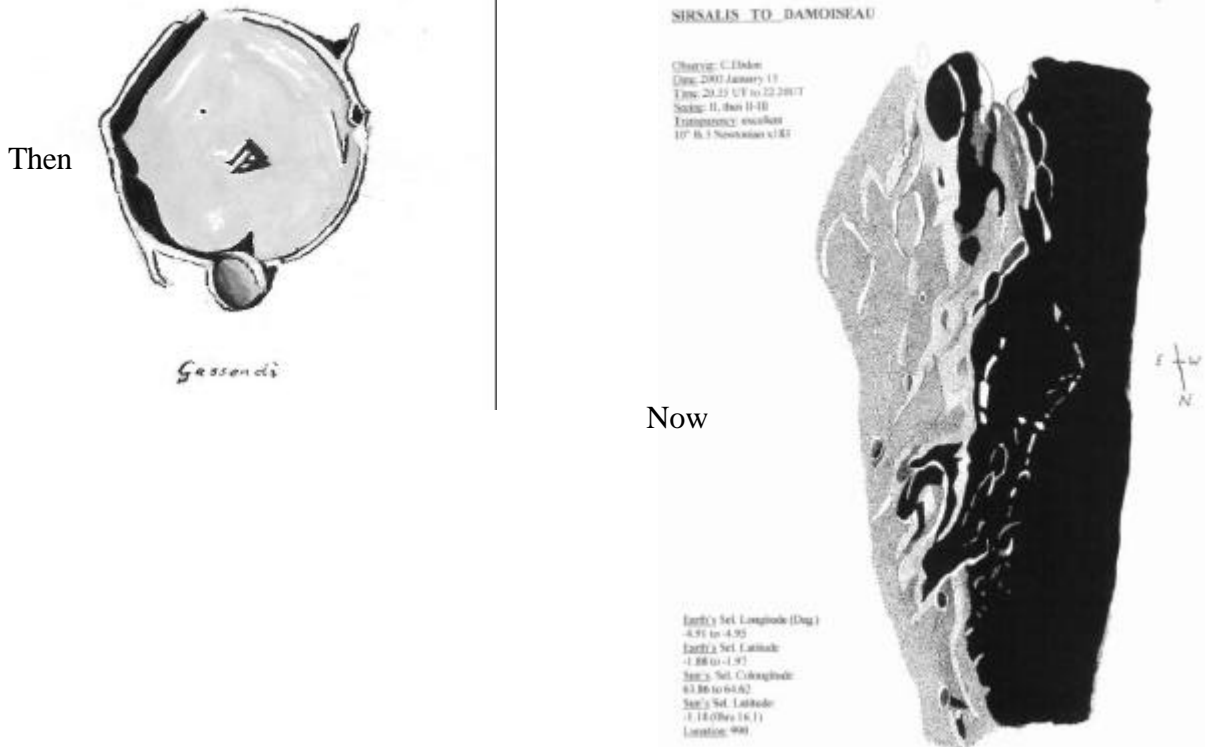
Lastly, if you are a true 'Armchair Astronomer' but happen to have a fine library of books or Broadband Inter-

net access, why not do some background research into the topographical issues raised here and in 'TNM' and let me know what you find out.

Above all, enjoy what you do!

FIG.1

Two drawings by Colin Ebdon about 10 years and several hundred observations apart



BAA/ALPO TRANSIENT LUNAR PHENOMENA

Tony Cook 2004 Jan

New year greetings for 2004! For November, observations have been received from: myself (UK), Clive Brook (Plymouth, UK), Maurice Collins (New Zealand), Marie Cook (Frimley, UK), David Darling (Sun Prairie, USA) Fernando Ferri (UAI, Italy), Robin Gray (Winnmucca, USA), Walter Haas (Las Cruces, USA), Raffaello Lena (GLR, Italy), Antonio Marino (UAI, Italy), Gerald North (Narborough, UK), and Brendan Shaw (UK).

On Nov 05, Brendan Shaw took images of Cape La Place and picked up a shadow even though the terminator was as far as 17 deg away. This was under identical illumination to a shadow seen in 1970 Aug 13 by Beraud, hence this original observation was not a TLP. On Nov 01 Marie Cook noticed what appeared to be a large ghost crater in the Torricelli area and secondly a very dark spot within this (17:45-17:50 UTC, 90mm Questar x80, seeing: Antoniadi III, transparency was poor). From Long Eaton, the Moon was below my usual safety net of 20 deg altitude, but I managed to capture some video through a 20cm Dobsonian - seeing was Antoniadi V. The image below (left) is at 19:59UTC and confirms the ghost crater (this is normal) and also the dark interior shadow to Torricelli. Now the Sun's altitude was 29 deg above the horizon at Torricelli and the crater is 2.1 km deep and 23km in diameter. Some simple maths will show that the shadow should not be filling "most" of the floor. Indeed, Hypatia A to the west is 15km in diameter and deeper at 2.5 km, but clearly has less shadow! Could seeing be to blame? Possibly not as the seeing in Frimley was III and the video was captured by me later has the apparent extensive dark shadow on many frames. Now one possible explanation is that the apparent large shadow might be the result of micro-shadowing on the floor of Torricelli – but this requires bumpy regolith with effective surface slopes of > 29 deg. However Plate 15a in the Hatfield Photographic Atlas is taken under similar illumination conditions to the image below, but does not show such an extensive shadow. So I would like to ask members to check any observations they have of the area close to colongitudes 359 to 1, to see if you can confirm/refute this extensive shadow covering.

Finally, if you have video of the Nov 09 lunar eclipse, please check for flashes seen at the following UTC times (taken off Brian Cudnik's web site): 00:30 (Darling: 480km W of Tycho), 00:40 (UAI: near S-W Moon border), 00:44 (Darling/Weier: Tycho), 00:46 (Darling: Tycho), 01:06 (Darling/Weire: Tycho), and 01:17 (Darling: 320km SW of Tycho).

The following repeat illumination and libration events occur for January:

- Event: Aristarchus (Jean, 1967 Dec 13) can be seen on/from (UTC): 2004 Jan 04 Germany, Italy (16:00-16:25) – [*Look for colour on rim*]
Event: Plato (Amery/Foley, 1981 Jun 15) can be seen on/from (UTC): 2004 Jan 05/06 Puerto Rico (22:00-23:25); Phoenix (02:18-03:00) – [*Look for a dark patch or smudge*]
Event: Aristarchus (Foley, 1975 Oct 18) can be seen on/from (UTC): 2004 Jan 06 LA (02:18-03:15); Las Cruces (02:18-02:44); Winnemucca (02:18-03:04) – [*Check for deep blue-violet colour in NW(NE?) interior corner*]
Event: Aristarchus (Cook, 1989 Oct 13) can be seen on/from (UTC): 2004 Jan 06 Atlanta, LA, Las Cruces, Madison, Pittsburgh, Phoenix, Winnemucca (08:03-11:55); DC, Harrisburg, Houston, Orlando (08:03-10:59); Puerto Rico 08:03-09:56) – [*image, sketch and monitor the brightness of bright blob/ghost-like crater on E. exterior of Aristarchus*]
Event: Lichtenberg (Baum, 1951 Jan 21) can be seen on/from (UTC): 2004 Jan 06 New Zealand (08:00-08:23) – [*Look for a temporary tiny red spot at 31.40N, 66.17W*]
Event: Aristarchus (Kelsey, 1967 Feb 24) can be seen on/from (UTC): 2004 Jan 06/07 Puerto Rico (23:01-01:57) – [*Check for colour on wall*]
Event: Aristarchus (Granger, 1961 Jun 28) can be seen on/from (UTC): 2004 Jan 06/07 Germany, Italy, UK (22:59-04:52); Atlanta, DC, Harrisburg, Madison, New York, Orlando, Pittsburgh, Puerto Rico (23:56-04:52) – [*Check for enhancement towards the violet/UV end of the spectrum*]
Event: Aristarchus vicinity (Gruihuisen, 1842 Oct 18) can be seen on/from (UTC): 2004 Jan 07 Atlanta, Houston, Las Cruces, Orlando, Phoenix (01:42-04:30); Puerto Rico (01:04-04:30) – [*Check for colours in small spots in W & NW of crater*]
Event: Aristarchus (Bartlett, 1955 Oct 31) can be seen on/from (UTC): 2004 Jan 07 UK (07:51-07:55); Madison (08:56-12:59) – [*Check for blue/violet glare, especially on E, NE, rim*]
Event: Plato (Klein, 1878 Nov 09) can be seen on/from (UTC): 2004 Jan 07 New Zealand (09:00-10:28) – [*Look for faint white cloud-like feature*]
Event: Aristarchus (Farrant, 1967 Dec 16) can be seen on/from (UTC): 2004 Jan 07 Germany, Italy (16:00-16:46); Madison (12:49-12:59); Las Cruces, Phoenix (12:49-13:59); LA, Winnemucca (12:49-14:57) – [*Check for colour on NE and NW walls*]
Event: Aristarchus (Bartlett, 1955 Oct 02) can be seen on/from (UTC): 2004 Jan 08 Germany, UK (01:45-06:59); Italy (01:45-05:59); Atlanta, Orlando (02:20-07:05); DC, Harrisburg, New York, Pittsburgh (01:45-07:05); Madison, Puerto Rico (02:03-07:05); Houston, LA, Las Cruces, Phoenix, Winnemucca (02:46-07:05) – [*Look for violet glare on E, NE rim and check sharpness of crater*]
Event: Torricelli B (Foley, 1985 Dec 27) can be seen on/from (UTC): 2004 Jan 08 Germany (03:51-06:59); Italy (03:51-05:59); UK, Atlanta, DC, Harrisburg, Houston, LA, Las Cruces, Madison, New York, Orlando, Phoenix, Pittsburgh, Winnemucca (03:51-07:48); Puerto Rico (03:51-07:17) – [*Monitor relative intensity over time*]
Event: Aristarchus (Pasternak, 1973 Oct 12) can be seen on/from (UTC): 2004 Jan 08 Germany (06:45-06:59); UK (06:45-07:59) – [*Is there any hint of red in the bright region of the S. of the crater?*]
Event: Aristarchus, Bullialdus & Kepler (Wildevy, 1962 May 20) can be seen on/from (UTC): 2004 Jan 08 Atlanta, DC, Harrisburg, New York, Orlando, Pittsburgh (09:48-11:59); Madison (09:48-12:59); Puerto Rico (09:48-09:59); Houston (09:48-10:59); LA, Las Cruces, Phoenix, Winnemucca (09:48-13:42) – [*Are these craters especially bright. Does Aristarchus have a red colour?*]
Event: Aristarchus and Ray near Bessel (Granger, 1961 May 31) can be seen on/from (UTC): 2004 Jan 08 Germany (16:00-16:03) – [*Check enhancement of UV/blue end of spectrum*]
Event: West Limb (Jean, 1967 Dec 17) can be seen on/from (UTC): 2004 Jan 08 Germany (16:00-17:56); Italy, UK (17:00-17:56) – [*Original observation doubtful! - reported a transient violet glow*]
Event: Proclus (Bartlett, 1956 Jul 25) can be seen on/from (UTC): 2004 Jan 09 Italy (18:00-20:48) – [*Check visibility of central spot (pseudo peak) within floor shadow*]
Event: Plato (Haas, 1938 Jul 15) can be seen on/from (UTC): 2004 Jan 10 Atlanta, DC, Madison, Orlando, Pittsburgh (01:00-04:19); Harrisburg, New York (00:22-04:19); Puerto-Rico (00:22-03:35); Houston (02:00-04:19); Las Cruces, Phoenix, Winnemucca (03:00-04:19); LA (04:00-04:19) – [*Check colour and brightness of floor*]
Event: Mader (Wildevy, 1962 Apr 22) can be seen on/from (UTC): 2004 Jan 09/10 Germany, Italy, UK (22:06-05:25); Atlanta, DC, Madison, Orlando, Pittsburgh (01:00-01:59); Harrisburg, New York (00:00-02:00); Houston (~02:00) – [*Monitor brightness of crater over time - is it brighter or fainter than normal?*]
Event: Plinius (Haas, 1937 Jul 27) can be seen on/from (UTC): 2004 Jan 11 Phoenix (08:01-11:05); LA (08:01-11:32); Winnemucca (08:01-11:53) – [*Check brightness of E. end of central peak*]
Event: Aristarchus (Bartlett, 1956 Jun 28) can be seen on/from (UTC): 2004 Jan 12 Atlanta, DC, Harrisburg, New York, Orlando, Pittsburgh (03:29-07:12); Las Cruces, Madison, Phoenix (05:00-07:13); Puerto Rico (03:29-06:38); Houston (07:00-07:13); LA, Winnemucca (06:00-07:13) – [*Observe interior detail appearance and check crater for violet glare*]
Event: Aristarchus (Bartlett, 1956 Jun 29) can be seen on/from (UTC): 2004 Jan 13 Puerto Rico (04:21-06:40) – [*Check for faint blue/violet colour*]
Event: Near Ross D {24E, 11N} (Harris, 1964 Mar 21) can be seen on/from (UTC): 2004 Jan 29 Germany (16:00-17:50); Italy, UK (17:00-17:50) – [*No details given - possibly unreliable observation?*]
Event: Eratosthenes (Bartlett, 1976 Aug 04) can be seen on/from (UTC): 2004 Jan 30 Germany (16:00-17:08); Italy, UK (17:00-17:08) – [*Can you see the central peak? Also check inner NW wall for blue radiance*]

Further predictions, including the more numerous illumination only events can be found on the following web site: <http://www.lpl.arizona.edu/~rhill/alpo/lunarstuff/ltp.html>. For members who do not have access to the internet, please drop me a line and I will post predictions to you. If you would like to join the TLP telephone alert team, please let me know your phone No. and how late you wish to be contacted. If in the unlikely event you see a TLP, please give me a call on my cell phone: +44 (0)798 505 5681 and I will alert other observers. Note when telephoning from outside the UK you must not use the (0). When phoning from within the UK please do not use the +44!

Dr Anthony Cook, School of Computer Science & IT, Nottingham University, Jubilee Campus, Wollaton Road, Nottingham, NG6 1BB, UNITED KINGDOM. Email: acc@cs.nott.ac.uk

I have now received the data for the 2004 grazing occultations and include the graze track list and chart for the first half of the year in this Circular. Grazes are predicted for stars down to magnitude 7.5. There are rather a lot this year although about half of them are not easily observable. Of the six predicted for January, only track 4 on January 25 passes over a reasonably populous area, including Reading. Please let me know if you want predictions.

I have one success to report, although not a lunar occultation. After 18 years of looking for asteroid occultations, I finally obtained a positive video-recording of the occultation of a magnitude 11 star by asteroid 102 Miriam on November 23. All being well, the video will be shown at the BAA meeting on January 10. Let's hope it won't be another 18 years before the next!

Best wishes and clear skies for your observing efforts in 2004.

Predictions for 52°27'41.4"N 1°44'44.0"W Birmingham

February 2004

Day	Time-UT	P	Object	O	Max Sp	%	Elg	Sn	Mn	Mn	CA	PA	Watts	a	b	Star's	apparent		
	H	M	S	D	Reference	V	Mag	Snlt	Alt	Alt	Az		Angle	Min/°		RA	Dec		
FEBRUARY																			
1/22	57	07	/D	PPM 94355	45	8.0	F5	82+	130	54	235	85N	84	87	-1.3	-.8	52616.9	254554	
2/04	18	31	/DV	PPM 94557	55	6.3	F5	84+	132	9	301	43N	44	45	-.1	-.7	53645.6	255640	
3/20	47	32	/D	PPM 97160	76	6.8	K0	94+	151	58	135	74N	89	81	-1.4	.8	71145.7	262402	
4/00	20	52	/D	PPM 97304	85	7.4	K0	94+	152	57	229	45N	61	53	-1.7	.3	71731.4	262128	
8/03	16	21	/RK	PPM 127764	96	6.8	K0	97-	159	45	212	64N	306	285	-.9	-1.5	105122.0	113323	
9/00	47	21	/R	PPM 158024	96	7.0	K0	92-	147	39	146	47S	244	222	-2.3	2.8	113647.3	60458	
9/01	13	25	/R	PPM 158035	86	7.0	A2	92-	147	41	154	71N	306	284	-1.0	-.4	113731.0	61447	
10/01	56	10	/RM	PPM 178790	85	7.7	A5	85-	135	35	155	81S	282	260	-1.3	.3	122658.7	-1225	
10/06	59	38	/R	PPM 178820	87	7.1	K2	84-	132	-6	20	239	77N	304	282	-.6	-1.8	123436.0	-12552
14/03	06	04	/RL	FK5 594	89	2.5	B0	43-	82	3	133	17N	354	345	.6	-1.3	160033.6	-223802	
14/04	52	45	/R	PPM 265043	65	7.7	A2	43-	82	11	156	86N	285	275	-1.1	.6	160259.1	-231134	
14/06	44	36	/R	PPM 265112	67	5.9	B8	42-	81	-7	14	181	73S	263	254	-1.5	.0	160620.1	-233704
15/05	56	34	/RV	PPM 266398	75	6.9	G5	31-	68	8	158	84S	268	265	-1.3	.8	170619.4	-263513	
ABOVE STAR IS A VARIABLE STAR -- MINIMUM MAGNITUDE = 7.7.																			
15/06	18	01	/R	FK5 1447	77	6.2	A0	31-	68	-11	9	162	72N	293	289	-1.1	.3	170707.2	-263109
24/17	59	31	/D	FK5 60	49	4.5	K0	19+	52	-4	38	227	31N	11	31	-.6	2.3	14535.3	91037
ABOVE STAR IS A VARIABLE STAR																			
24/18	48	19	/R	FK5 60	47	4.5	K0	19+	52	-12	32	240	-52N	288	307	-1.3	-2.7	14535.3	91037
24/19	57	18	/D	PPM 145006	45	8.5	F8	20+	53	23	255	61S	99	119	-.8	-2.5	14922.5	91746	
25/20	01	39	/D	PPM 118351	15	8.7	F8	29+	65	33	250	84N	66	82	-.9	-.8	23517.1	143407	
25/22	14	31	/DP	PPM 118406	16	7.0	K0	30+	66	13	277	84S	79	95	-.2	-1.7	23912.1	145239	
26/18	59	44	/D	PPM 119021	15	8.8	K0	38+	75	49	225	70S	95	109	-1.5	-1.3	32059.5	184509	
27/15	38	06	/D	FK5 1112	17	4.5	K0	46+	85	16	51	129	70N	59	68	-1.0	2.1	40455.5	220539
27/16	56	29	/R	FK5 1112	16	4.5	K0	46+	85	6	58	159	-84S	253	262	-1.4	1.0	40455.5	220539
27/21	37	50	/D	PPM 93349	15	8.6	A0	48+	87	38	257	85S	85	94	-.9	-1.5	41413.0	224311	
27/23	52	56	/DO	PPM 93402	15	7.5	F5	48+	88	19	284	70S	101	109	.1	-2.4	41828.6	224905	
28/18	36	27	/D	PPM 93958	15	8.5	G5	56+	.97	-9	63	180	80N	75	79	-1.5	.6	50032.2	250839
29/18	36	13	/D	PPM 95018	15	8.1	B3	65+	108	-8	62	156	49S	131	131	-1.6	-1.5	55321.3	262654
ABOVE STAR IS A VARIABLE STAR -- MINIMUM MAGNITUDE = 8.4.																			

A letter in the "D" column indicates a possible double star.

See LSC 35, 5 (May 1999) for comments on recording observations using the new format predictions.

Grazing Occultations, UK and Ireland, January-June 2004, Magnitude <= 7.5

See accompanying graze track map in this LSC

TRACK NO.	DATE (2004)	USNO REF:	SAO/PPM REF:	D	MAG	%SUN-LIT	L	W.U.T. HH	M.M	CUSP ANGLE	T	STAR NAME	MAG1	MAG2 (Where double)
1	JAN 14	ZC 1821	138917	O	2.8	61-	N	2	36.3	10.2	B A	29 Gamma Vir	3.5	3.5 (Porrima)
2	JAN 16	ZC 2069	158573		7.3	38-	S	5	50.5	14.1	D B			
3	JAN 16	ZC 2074	158603		7.1	38-	S	7	34.3	13.3	D B			
4	JAN 25	ZC 3506	146919	K	6.1	18+	S	18	49.3	14.3	D A	376 B. Aqr	7.1	7.1
5	JAN 26	ZC 76	128843		5.9	26+	S	19	4.7	11.8	D A	14 Cet		
6	JAN 31	ZC 660	76608	V	4.3	73+	S	18	6.4	13.1	D A	69 Epsilon Tau	4.6	6.5
7	FEB 1	X 6032	76717		7.2	75+	N	3	23.9	0.3	T C			

8	FEB	1	ZC	714	76727	6.2	75+ N	4	0.8	0.9	T C	95	Tau		
9	FEB	27	ZC	621	76505	V 6.1	47+ S	21	14.9	2.2	D A	192	B. Tau	7.0	7.0
10	FEB	27	ZC	625	76515	7.0	47+ S	22	9.0	0.9	T B	194	B. Tau		
11	FEB	28	ZC	753	76929	7.4	56+ S	21	10.8	2.1	D B				
12	MAR	30	ZC	1251	80113	5.9	68+ S	21	59.8	4.8	B C	19	Lambda Cnc		
13	MAR	31	ZC	1373	80702	6.5	77+ N	21	34.9	5.5	D A	90	H1. Cnc		
14	APR	21	ZC	520	93507	7.5	4+ S	19	46.8	2.8	B C				
15	APR	26	ZC	1206	79861	5.9	41+ N	21	1.0	6.9	D A	2	Omicron Cnc		
16	APR	27	X	12313	79980	7.3	43+ N	1	14.9	4.5	D C				
17	APR	29	ZC	1544	99172	5.4	71+ N	19	48.5	8.5	D A	46	Leo		
18	MAY	4	X	20693	158858	9.8	0E N	21	0.6	TOT.ECL.					
19	MAY	4	X	20694	158857	9.2	0E N	21	3.1	TOT.ECL.					
20	MAY	26	ZC	1484	98955	C 3.5	44+ N	14	40.8	2.9	D B	30	Eta Leo	4.1	4.6

Letter in column after "CUSP ANGLE": - Column 'T' = Telescope size required: -
 'B' = Bright Limb 'A' = 4"
 'D' = Dark Limb 'B' = 6"
 'T' = Near Terminator 'C' = >6"

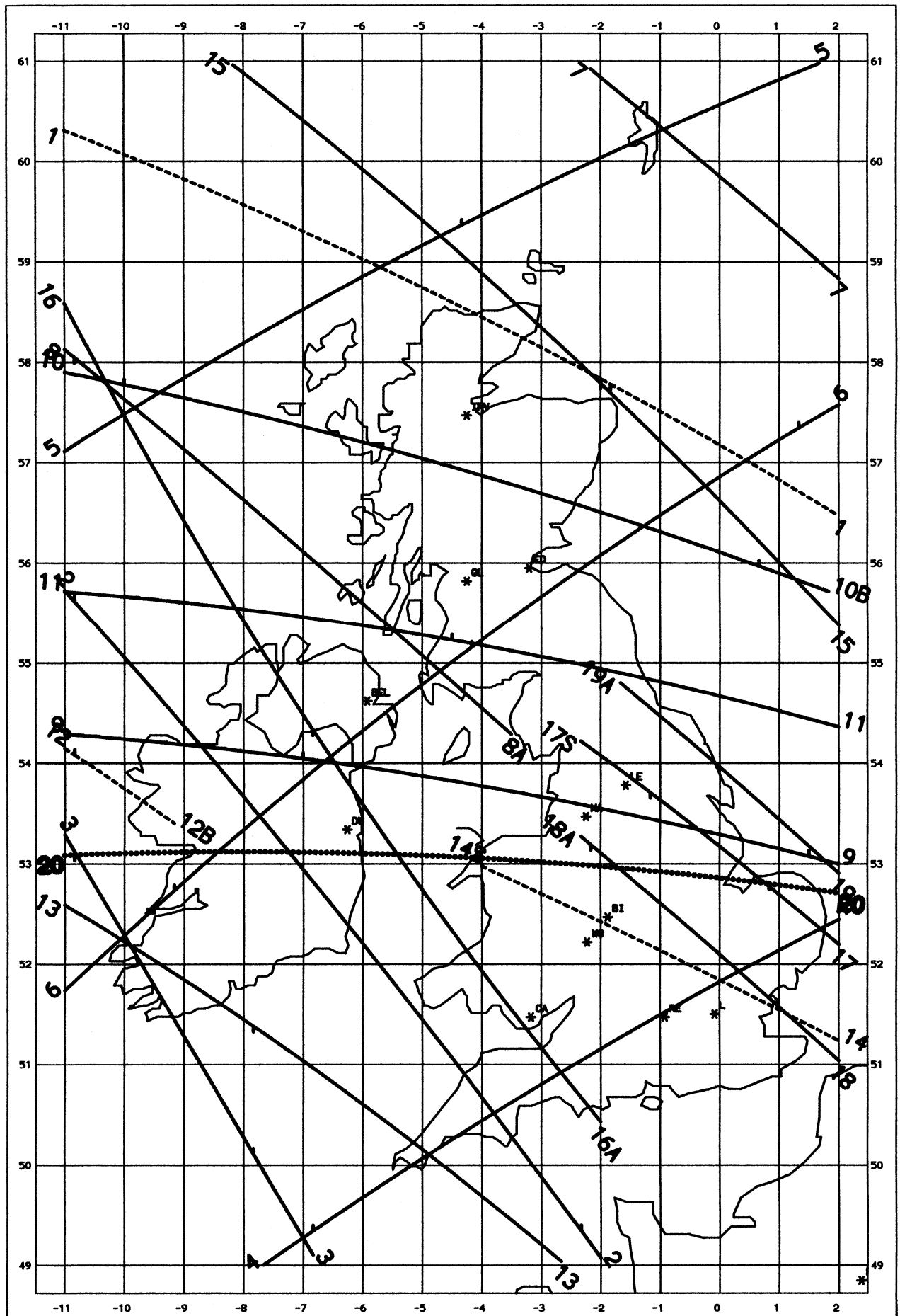
'D' column after PPM indicates double star 'W.U.T.' = Start UT of west end of track

Predictions courtesy of the International Occultation Timing Association – European Section (IOTA/ES) – “OCCMOON” and “GRAZEREG” programs.

[Eclipse photographs taken by Tony Cook](#)



GRAZING OCCULTATIONS UK/IRELAND JANUARY-JUNE 2004
SEE ACCOMPANYING LIST IN THIS LSC (JAN 2004) FOR DETAILS

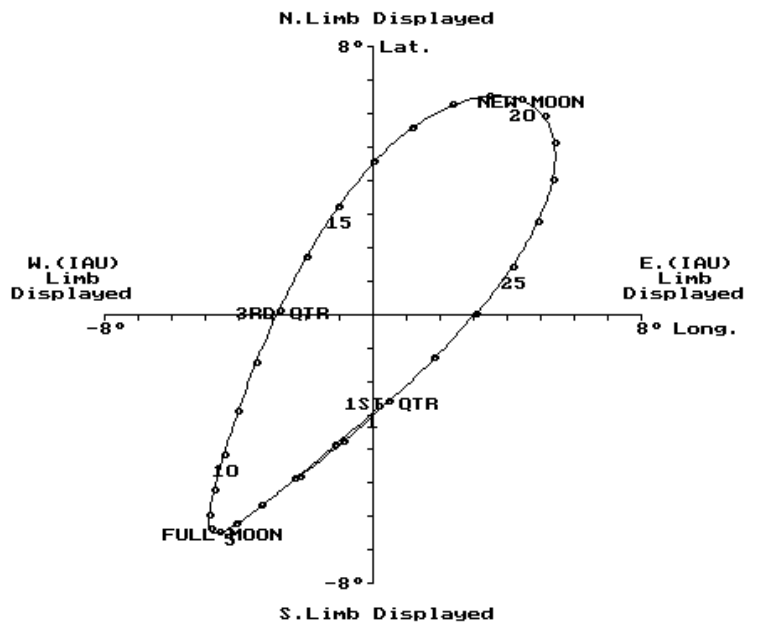


LIBRATION Feb. 2004

Date	Libration amount \varnothing	PA \varnothing	Feature presented
1.0	2.3	170	Klaproth
2.0	3.8	155	Segner*
3.0	5.2	149	Pingre*
4.0	6.4	146	Pingre*
5.0	7.2	145	Wargentín
6.0	7.6	144	Inghirami
7.0	7.5	143	Inghirami
8.0	7.1	141	Inghirami
9.0	6.4	139	Catalan
10.0	5.3	134	Baade
11.0	4.1	126	Bouvard
12.0	2.9	108	Rocca
13.0	2.2	71	Einstein
14.0	2.6	30	Cleostratus
15.0	3.8	7	Mouchez
16.0	5.1	354	de Sitter*
17.0	6.3	346	Petermann*
18.0	7.2	339	Thales*
19.0	7.8	334	Endymion*
20.0	8.1	328	Endymion*
21.0	8.0	324	Mercurius*
22.0	7.5	319	Zeno*
23.0	6.6	314	Boss
24.0	5.4	308	Rynin
25.0	4.0	300	Rayleigh
26.0	2.5	284	Ibn Yunus
27.0	1.4	236	Abel
28.0	2.1	174	Newton*
29.0	3.6	155	Segner*

LUNAR LIBRATIONS - February 2004

Geocentric: —●— The markers show 0:00H UT



From the Ed...

The start of a New Year! New resolutions, new goals. A resolve to get out of that warm armchair and brave the frost to make that all-important observation. Yes. I'm as guilty of that as the next man, but I'll still make that resolution. Doesn't it make you feel good and contented when you do? To the few who will keep their new year resolutions I offer my congratulations, but I suspect that I will not be required to make very many because Baby, its cold outside !!

In the course of 2003 the following observing reports have been received by the Geological Subsection:

- Colin Ebdon - domes in the region of Sinas
- Phil Morgan - domes near Gambart C, domes near Tobias Mayer
- Clive Brook - suspected dome in Mare Humorum
- Nigel Longshaw - domes in the region of crater Fontenelle, domes in the region of Sinas (a very fine and detailed work, for publication on TNM)
- Brendan Shaw - suspected dome NW of Gambart C, Linné Alpha dome

I thank all the above observers for their useful contributions to the section's program.

Well, now what to do with this material? I'm thinking to collect all observations, to complement them with the relevant dome(s) data and measures and to produce a publication like TNM or to publish the observing reports on TNM itself. In addition, when one or more reports give sufficient details on a dome formation or dome area, a research article could be written for the BAA or the ALPO Journals. But if you prefer to read the reports on the monthly LSC (or also on the monthly LSC) please let me know and I will consider which of the above options is the more viable.

Due to an unexpected crash of my office PC, this month I am unable to give you the dome predictions for January 2004. Sorry.

Raffaello Braga_a

2004 FEB.	Age d	Phase	Earth's Selenographic		Sun's Selenographic		R.A.		Dec. °	Rises		Sets		Transit		Alt °
			Long°	Lat°	Colong°	Lat°	h	m		h	m	h	m	h	m	
1.0	10.1	0.748	0.2	-2.8	29.6	-1.56	04	37	24.2	11	50	04	27	20	35	64
2.0	11.1	0.825	-1.2	-3.9	41.7	-1.56	05	29	26.2	12	27	05	32	21	26	65
3.0	12.1	0.891	-2.4	-4.9	53.9	-1.57	06	22	27.1	13	18	06	29	22	19	64
4.0	13.1	0.943	-3.4	-5.7	66.0	-1.57	07	17	26.7	14	21	07	14	23	11	63
5.0	14.1	0.979	-4.1	-6.3	78.1	-1.57	08	11	24.9	15	34	07	48	..	..	..
6.0	15.1	0.997	-4.6	-6.5	90.3	-1.57	09	05	21.9	16	52	08	14	00	02	59
7.0	16.1	0.994	-4.9	-6.5	102.4	-1.56	09	56	17.8	18	12	08	33	00	50	55
8.0	17.1	0.970	-4.9	-6.0	114.5	-1.55	10	46	12.8	19	31	08	49	01	39	50
9.0	18.1	0.924	-4.8	-5.3	126.7	-1.54	11	35	7.1	20	51	09	02	02	25	44
10.0	19.1	0.858	-4.5	-4.3	138.8	-1.53	12	23	1.0	22	12	09	15	03	11	38
11.0	20.1	0.773	-4.1	-2.9	151.0	-1.52	13	12	-5.2	..	..	09	28	03	57	31
12.0	21.1	0.674	-3.5	-1.5	163.1	-1.51	14	02	-11.2	..	..	09	43	04	45	25
13.0	22.1	0.566	-2.8	0.1	175.3	-1.50	14	55	-16.8	01	01	10	02	05	37	20
14.0	23.1	0.452	-2.0	1.7	187.4	-1.49	15	51	-21.5	02	28	10	27	06	32	15
15.0	24.1	0.341	-1.1	3.2	199.6	-1.48	16	51	-25.0	03	54	11	04	07	31	12
16.0	25.1	0.236	0.0	4.5	211.8	-1.47	17	54	-26.9	05	11	11	56	08	34	10
17.0	26.1	0.146	1.2	5.6	224.0	-1.46	18	58	-27.1	06	11	13	07	09	37	11
18.0	27.1	0.075	2.4	6.2	236.2	-1.46	20	02	-25.4	06	54	14	30	10	37	13
19.0	28.1	0.027	3.5	6.5	248.4	-1.45	21	02	-22.1	07	23	15	57	11	34	17
20.0	29.1	0.004	4.4	6.4	260.6	-1.45	21	59	-17.6	07	44	17	23	12	27	23
21.0	0.6	0.006	5.1	5.9	272.8	-1.44	22	51	-12.2	08	00	18	45	13	15	28
22.0	1.6	0.032	5.4	5.1	285.0	-1.44	23	40	-6.4	08	13	20	03	14	00	35
23.0	2.6	0.079	5.4	4.0	297.2	-1.44	00	27	-0.4	08	25	21	19	14	43	41
24.0	3.6	0.142	4.9	2.8	309.4	-1.44	01	13	5.4	08	37	22	33	15	26	46
25.0	4.6	0.218	4.1	1.4	321.5	-1.43	01	58	10.9	08	50	..	..	16	09	52
26.0	5.6	0.303	3.1	0.0	333.7	-1.43	02	44	15.9	09	04	..	..	16	53	56
27.0	6.6	0.394	1.8	-1.3	345.9	-1.43	03	31	20.1	09	23	01	00	17	39	60
28.0	7.6	0.488	0.4	-2.7	358.1	-1.42	04	20	23.5	09	47	02	12	18	27	63
29.0	8.6	0.582	-0.9	-3.8	10.3	-1.42	05	11	25.9	10	21	03	20	19	17	65
1 (Mar)	9.6	0.673	-2.2	-4.9	22.4	-1.41	06	04	27.2	11	06	04	21	20	09	65
2.0	10.6	0.759	-3.4	-5.7	34.6	-1.40	06	58	27.2	12	04	05	10	21	01	64
3.0	11.6	0.837	-4.3	-6.3	46.7	-1.39	07	52	25.8	13	13	05	48	21	53	61
4.0	12.6	0.903	-4.9	-6.6	58.9	-1.38	08	46	23.2	14	30	06	16	22	43	57
5.0	13.6	0.954	-5.2	-6.6	71.0	-1.36	09	39	19.4	15	50	06	38	23	32	52
6.0	14.6	0.987	-5.2	-6.2	83.2	-1.35	10	30	14.6	17	12	06	55	..	..	..
7.0	15.6	0.999	-4.9	-5.5	95.3	-1.32	11	19	8.9	18	33	07	09	00	19	46
8.0	16.6	0.986	-4.4	-4.5	107.5	-1.30	12	09	2.8	19	56	07	22	01	04	40
9.0	17.6	0.949	-3.6	-3.1	119.6	-1.28	12	58	-3.6	21	20	07	35	01	53	33
10.0	18.6	0.889	-2.8	-1.6	131.8	-1.25	13	49	-9.9	22	47	07	49	02	41	27
11.0	19.6	0.808	-1.9	0.0	143.9	-1.22	14	42	-15.8	08	06	03	33	21
12.0	20.6	0.710	-1.0	1.6	156.1	-1.20	15	38	-20.8	08	29	04	27	16

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Items for the February 2004 circular should reach the Editor by the 10th January 2003