

THE BRITISH ASTRONOMICAL ASSOCIATION



LUNAR SECTION CIRCULAR

Director Alan Wells
Assistant Director/Editor John Pedler

Volume 43 No.2

Data on pages 7-8 are for Mar.2006

Lunation 1028

Feb. 2006

TOPOGRAPHICAL SUB-SECTION

COLIN EBDON

More on crater chains this month, and I am indebted to Ed Crandall for following up Phil Morgan's article on the Abulfeda chain, and other observations, with some fine images courtesy of his ToUcam system. It is always encouraging when others take up the challenge to have a closer look at some of these difficult features, and it is not often that I receive CCD, video or photographic images covering other than the more obvious and well known lunar targets.

Ed's image of the Abulfeda chain certainly gives an indication of its true extent as previously noted by Phil Morgan, and even on this image it continues well beyond the terminator. Details as follows: 2005 December 21 Time: 11.10UT. Colongitude: 156. 110mm f6.5 APO refractor + x2 Barlow + ToUcam. North at top, East to right..

Ed has also been busy imaging the Davy Crater chain - a much more difficult feature to capture in detail either visually or photographically due to its small size, especially when the seeing is less than perfect. Ed has marked out with thin lines some possible craters which may or may not be part of the chain. Image: 2005 December 23. 12.01UT seeing 4-5/10 Average. ToUcam +x3 Barlow +2" extension tube. North at top, East to right.

The Davy chain runs through the walled enclosure designated **Davy Y**, and the Easternmost craterlet pointed up by Ed on the rim of this enclosure, is indeed part of the chain as revealed in the 'Times' Atlas, which shows it continuing beyond this by way of three tiny pits, petering out just before meeting a ridge adjoining the crater **Davy G**.

In the Times Atlas the crater chain is seen to commence in the middle of the enclosure Davy Y, with a craterlet designated **Davy C**, although this designation may have been dropped because it is not marked as such in the Clementine Atlas, in which all IAU nomenclature has been brought up to date.

To the west of this crater (i.e further towards Davy itself) there is another craterlet which Ed has picked out. This is shown on the Times map and also on Lunar Orbiter frame IV-113-H2. Whether or not this was formed by the same event that created the chain is an open question.

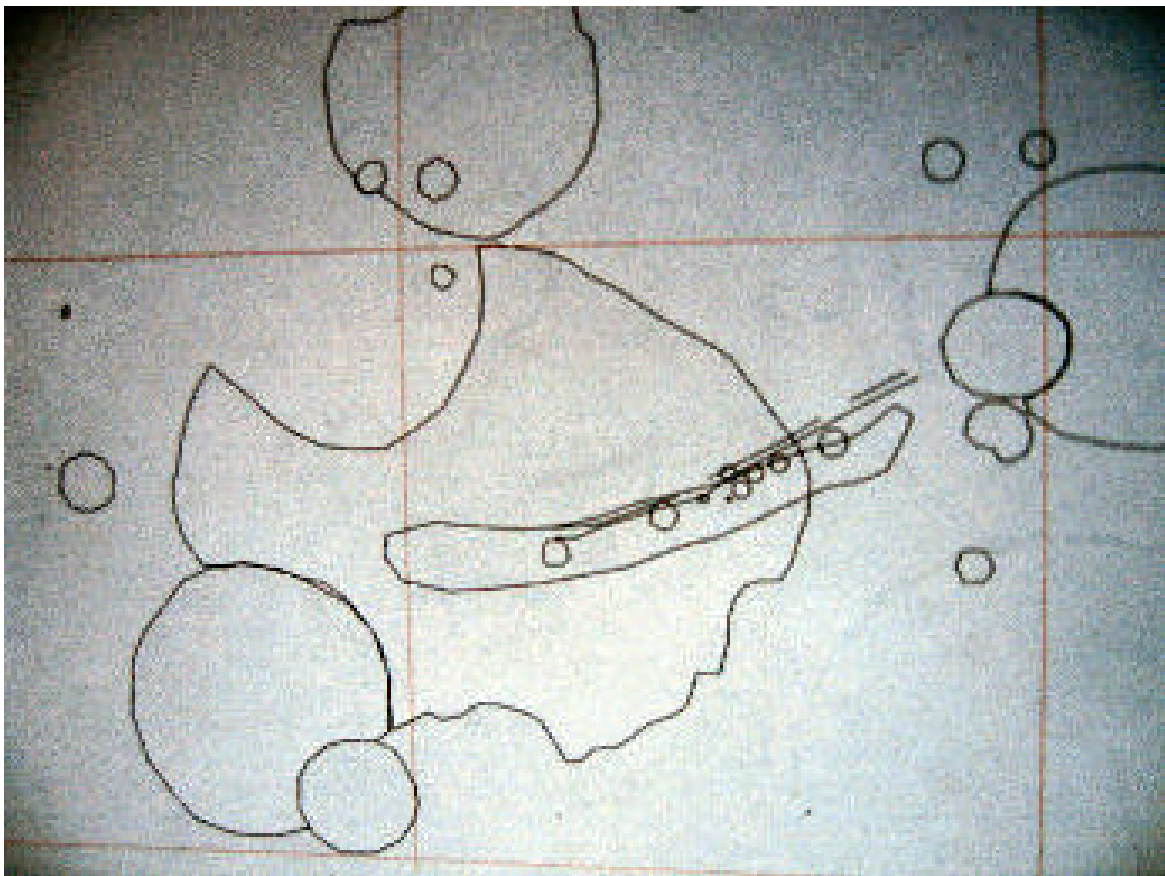
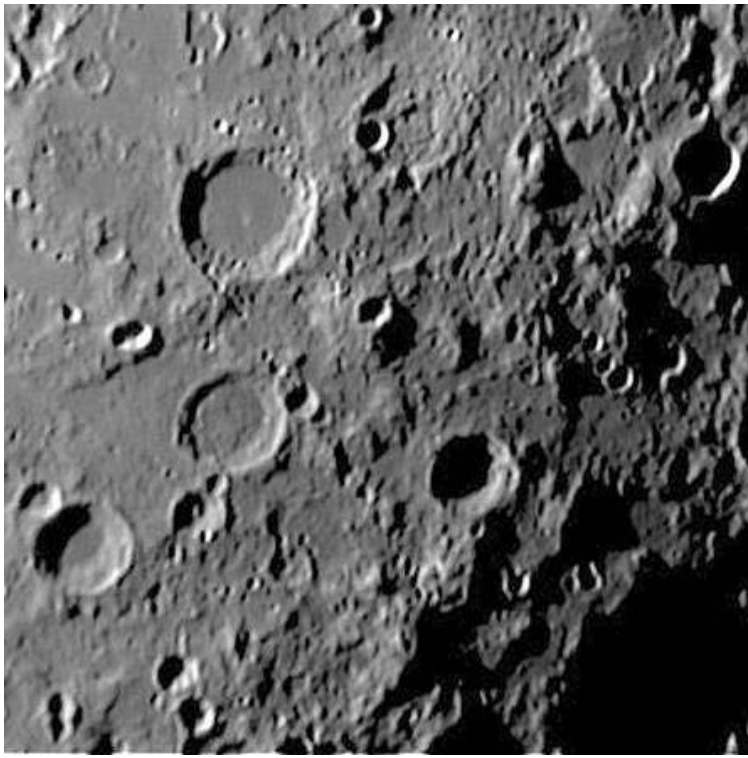
Ed has done well also to pick out two tiny craterlets on the Northern rim of Davy where it abuts Davy Y, although it is doubtful if these are connected with the chain itself.

Lunar Orbiter frame IV-113-H2 terminates at the eastern rim of Davy Y, and thus reveals nothing about the continuation of the chain beyond that point, although amateur observers would require excellent conditions to be able to follow that up

Also included here is a diagram of the crater chain which Ed has supplied from LMPv3 software, which seems to indicate the close proximity of a 'rille' of some sort nearby. Ed says that he 'got a hint of something of the sort' when observing the area with his 10" Newtonian. I can find no evidence of such a feature in either the Orbiter frame or on available maps, but again this is worth following up. The Orbiter frame shows plenty of other tiny craterlets in the vicinity which could be possibly conjoined by the eye at its observing limits.

I am sorry if the photographs do not reproduce well enough here to show fine detail, but hopefully the above descriptions will help, and I look forward to receiving further observations of this feature and others from members at any time.

On a separate note, I am pleased to say that the November and December lunations were fairly favourable from this site and that, along with others, I managed to secure some drawings of the Eastern limb under very favourable libration conditions. But more of that later when I have found time to finish them off!



No grazing occultations are predicted for the UK in February. Predictions of total occultations are listed in last month's Circular.

Observations

Many thanks to Ken Hall, Great Sankey, Warrington who has submitted six observations for the second half of 2005.

Predictions for 52°27'41.4"N 1°44'44.0"W (Birmingham) – March 2005

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				
1/18	03	38	/D	PPM 143346	95	6.4	G5	4+	24	-3	17	250	46N	22	44	-.3	.7	1805.4	14316
1/18	49	20	/DX	PPM 143384	96	7.9	G5	5+	24	-10	10	259	51S	106	128	-.3	-1.8	2014.9	13653
2/19	25	19	/D	PPM 144378	65	8.4	G5	11+	39		18	261	80N	56	77	-.3	-.4	11400.1	90022
3/18	48	31	/D	PPM 117928	55	8.7	A0	19+	52	-10	36	246	29N	7	26	-.7	2.5	20518.9	151931
3/20	12	36	/DF	PPM 117967	55	8.3	A0	19+	52		24	265	23N	1	20	-.8	3.3	20753.7	153709
4/18	22	55	/D	PPM 92118	35	8.8	M0	28+	64	-5	50	230	24N	6	21	-.8	3.9	25908.5	203713
4/21	23	49	/D	SAO 75727	16	7.8	A2	30+	66		25	272	83N	65	80	-.4	-.7	30550.7	205539
5/14	35	39	/DU	FK5 142	16	3.8	B8	38+	76	25	50	121	59N	45	57	-.5	1.8	34931.2	240427
ABOVE STAR IS A VARIABLE STAR																			
5/15	42	33	/RU	FK5 142	15	3.8	B8	38+	76	17	58	144	-79N	267	279	-.9	.5	34931.2	240427
5/18	38	47	/D	PPM 93083	15	8.7		39+	77	-8	57	219	64S	104	115	-.9	-.9	35648.9	242652
5/19	13	52	/D	SAO 76350	18	6.4	K0	39+	77		54	232	56S	111	122	-.8	-1.3	35748.1	242854
5/20	31	35	/D	PPM 93145	15	8.6	G0	40+	78		44	253	80S	87	98	-.7	-.9	40016.6	244255
5/22	23	08	/D	PPM 93194	15	8.5	F8	41+	79		28	276	75N	63	74	-.4	-.7	40359.1	245755
6/19	36	31	/D	PPM 93894	16	7.5	K0	50+	90		60	223	82S	92	98	-.9	-.5	45557.5	271253
6/21	54	55	/DA	PPM 93952	17	6.8	B9	51+	91		42	262	85N	80	85	-.6	-.9	50016.7	272014
7/18	50	52	/D	PPM 94981	15	8.0	A0	60+	101	-9	66	176	44S	136	137	-.9	-1.4	55156.6	280547
7/18	57	36	/DA	PPM 94987	15	8.5	A2	60+	101	-10	66	180	48N	48	49	-1.1	1.4	55211.9	282715
7/19	40	20	/D	PPM 95030	15	8.2	K2	60+	101		65	202	89S	92	93	-1.0	-.3	55342.7	281646
7/20	41	29	/D	PPM 95069	15	8.5	B9	61+	102		60	228	62N	63	64	-1.0	.2	55521.5	282332
7/22	07	46	/D	PPM 95146	15	8.4	A0	61+	102		48	253	74N	75	76	-.8	-.6	55804.8	281740
7/23	19	33	/D	PPM 95207	17	7.0	K5	61+	103		38	268	83S	99	99	-.4	-1.3	60028.7	280744
8/23	35	04	/D	PPM 96757	36	7.0	B9	71+	114		43	260	28S	160	155	.3	-3.0	65620.0	271649
9/01	43	07	/DK	SAO 78968	16	7.2	K2	71+	115		24	284	73S	116	110	.1	-1.6	70121.9	270902
9/19	51	32	/D	PPM 97900	49	5.4	K5	78+	124		62	155	47S	146	137	-.8	-1.4	74430.5	254616
ABOVE STAR IS A VARIABLE STAR																			
9/20	28	18	/DA	PPM 97930	35	8.1	K0	78+	124		63	172	64N	78	68	-1.1	.4	74555.8	255831
13/02	21	42	/DV	PPM 127289	95	7.1	G0	97+	159		34	244	56S	153	133	-.2	-1.8	101842.3	123521
17/02	36	56	/R	PPM 196221	96	6.4	K0	96-	157		27	196	49N	337	316	-.5	-1.0	130934.7	-93425
20/02	43	41	/RD	PPM 264385	85	7.0	A3	77-	122		12	165	55S	252	239	-1.2	.6	153332.2	-243047
31/20	31	05	/DV	PPM 118435	76	7.8	F5	8+	33		12	285	83S	74	91	.0	-1.3	24052.6	183736
31/20	54	20	/DP	PPM 118452	76	7.5	B9	8+	33		9	290	62N	39	56	-.2	-.2	24126.3	184937

N.B. Don't forget to add 1 hour to the above times during British Summer Time (starts Sunday March 26).

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

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

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

Observations for December were received from: Michael Amato (USA), Clive Brook (Plymouth, UK), Marie Cook (Mundesley, UK), Robin Gray (Winnemucca, USA), Gerald North (UK), Brendan Shaw (UK), and myself. The total number of hours observations received at present exceeds 6 hours.

For the next 5 months my teaching workload at University will be 50% greater than in 2005. David Darling is unable to help out as much as he did last year, so there may be some months when we cannot get the usual TLP article out, or where it is shorter than normal. Please do not worry about this, we are still taking your observations in, and hopefully a normal service will be restored after May! Thank you for your anticipated patience over the subsequent months.

So for the next few months I will just highlight representative samples of some of the observations received. For example for December 2005 we received the following reports:

Routine Report : 2005 Dec 08 UT 21:34 Brendan Shaw obtained an image of the floor of Alphonsus that showed the central peak emerging through shadow; as it does every month! This observation was made to show that a TLP report from Hopp in 1972 Sep 15, where a diffuse white to blue area was seen within the crater, could partly be explained as a normal appearance. Hopp was using a small 75 mm refractor back in 1972, and so could have easily mistaken the central peak's emergence for this diffuse area, though it does not explain fully the white to blue colour, however the observer at the time sounded slightly uncertain about what they had seen.

Routine Report : 2005 Dec 10 UT 03:26-04:18 Robin Gray examined the floor of Proclus and found it to be featureless except for two bright, notch like projections from the SE and SW inner walls. Under the same illumination conditions back in 1976 Jul 06, Bartlett claimed surprise to see nothing on the floor. In fact we know now, based upon Robin's observation, that this is quite normal at this colongitude and perhaps the original interpretation by Bartlett was mistaken.

Routine Report : 2005 Dec 10 UT 16:55 Brendan Shaw imaged the floor of Plato and found no strong sign of interior craters. This is in agreement with Fitton's claimed 1970 Dec 8 TLP report when he was surprised that the floor looked blank, so in fact this is entirely a normal appearance and Fitton's report has been removed from my TLP list.

Possible TLP or impact flash? : 2005 Dec 10 UT 20:46 Clive Brook (4" refractor) noted a flash on the floor of Plato of duration 1-2 sec and white in colour. Observing conditions were excellent with the Moon at a high altitude. Brendan Shaw, who was observing independently just missed this area by 5 min prior to this – his image shows nothing out of the ordinary. The flash seen by Clive is unusual for an impact flash as all those that have been confirmed before, last just a fraction of a second, however these have so far only been observed on the dark side. There have been other cases of dayside flashes though of varying duration e.g. the Stuart flash near Pallas in 1953, the Thornton flash in Plato back in 1945, and a recent flash seen on 2005 Oct 17 in Madler by Robin Gray. Mechanisms for these remain uncertain and may not be impact related. Sun glint from satellites have been suggested as a cause of some past flashes e.g. the Kolovos flash in 1985. Although Cosmos 767 was passing close to the Moon at the time Clive Brook was observing from Plymouth (this is being checked), the angular velocity of the satellite may be too fast to produce the flash observed.

The following repeat illumination and libration events for UK observers occur for February:

Event: Plato (Bartlett, 1964 May 20) can be seen on/from (UT): 2006 Feb 06 (17:29-21:44) - [*Can you see any orange/red on the west wall?*]

Event: Piton (Moore, 1958 Sep 23) can be seen on/from (UT): 2006 Feb 08 (02:22-04:29) - [*Any sign of an obscuration?*]

Event: Proclus (Bartlett, 1958 Sep 24) can be seen on/from (UT): 2006 Feb 09 (05:13-05:23) - [*Obtain detailed images and sketches of the crater interior and can you see a ray or ridge connecting the centre of the crater?*]

Event: Gassendi (Robinson, 1976 Oct 04) can be seen on/from (UT): 2006 Feb 09 (17:03-17:59) - [*Can you see a strong red colour on the rim or sign of one of the central peaks becoming hazy?*]

Event: Torricelli B (Serio, 2005 Jan 22) can be seen on/from (UT): 2006 Feb 09/10 (23:18-01:25) - [*How visible and bright/dark is this crater?*]

Event: Herodotus (Bartlett, 1957 Sep 06) can be seen on/from (UT): 2006 Feb 10 (02:21-06:05) - [*Can you see a pseudo peak within the floor shadow?*]

Event: Manilius (Haas, 1939 Jul 30) can be seen on/from (UT): 2006 Feb 12 (00:27-01:35) - [*Measure the brightness of the dark area in the south part of this crater?*]

Event: Proclus (Farrant, 1972 Nov 20) can be seen on/from (UT): 2006 Feb 13 (01:09-05:03) - [*Can you see a dark patch inside this crater and do you consider the bright rim of Proclus thick or thin?*]

Event: Aristarchus (Thomas, 1970 Jan 23) can be seen on/from (UT): 2006 Feb 13 (21:41-01:37) - [*Check for changes to the natural blueness of the crater*]

Event: W.Humboldt (Goodacre, 1897 Dec 09) can be seen on/from (UT): 2006 Feb 14 (00:13-03:10) - [*Any sign of a "Chocolate penumbral shade" edging black shadow on E. wall?*]

Event: Proclus (Bartlett, 1955 Nov 01) can be seen on/from (UT): 2006 Feb 14 (07:22-07:29) - [*Make a note of brightness of spots through red, blue and visible filters*]

Event: Proclus (Savill, 1973 Nov 11) can be seen on/from (UT): 2006 Feb 14 (19:27-23:30) - [*Check to see how many bright spots you can see inside the crater and monitor their sharpness and relative separation over time*]

Event: Aristarchus (Thomas, 1970 Jan 24) can be seen on/from (UT): 2006 Feb 14/15 (21:41-01:37) - [*Check for changes to the natural blueness of the crater*]

Event: Aristarchus (Thomas, 1970 Jan 25) can be seen on/from (UT): 2006 Feb 15/16 (21:40-01:36) - [*Check for changes to the natural blueness of the crater*]

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

CLOUDWATCH

Andrew Bytnar

Tabulated data for December 2005

<u>Observer and location</u>	<u>Excellent</u> <i>days</i>	<u>Cloudy</u> <i>days</i>	<u>Overcast</u> <i>days</i>	<u>Hazy</u> <i>days</i>	<u>No watch</u> <i>days</i>
P.Burt (Chatham)	4 (13%)	2 (6%)	25 (81%)	0 (0%)	-----
A.Bytnar (Mansfield)	7 (23%)	9 (29%)	14 (45%)	1 (3%)	-----
M.Cook (Cromer)	8 (26%)	2½ (8%)	12 (39%)	0 (0%)	7½ (24%)
K.Hall (Warrington)	1½ (5%)	4½ (15%)	11½ (37%)	0 (0%)	13½ (44%)
A.Heath (Nottingham)	9 (29%)	6 (19%)	16 (52%)	0 (0%)	-----
S.Williams (Walsall)	2 (6%)	6 (19%)	23 (74%)	0 (0%)	-----
J.Wrigley (Reading)	6 (19%)	9½ (31%)	15½ (50%)	0 (0%)	-----

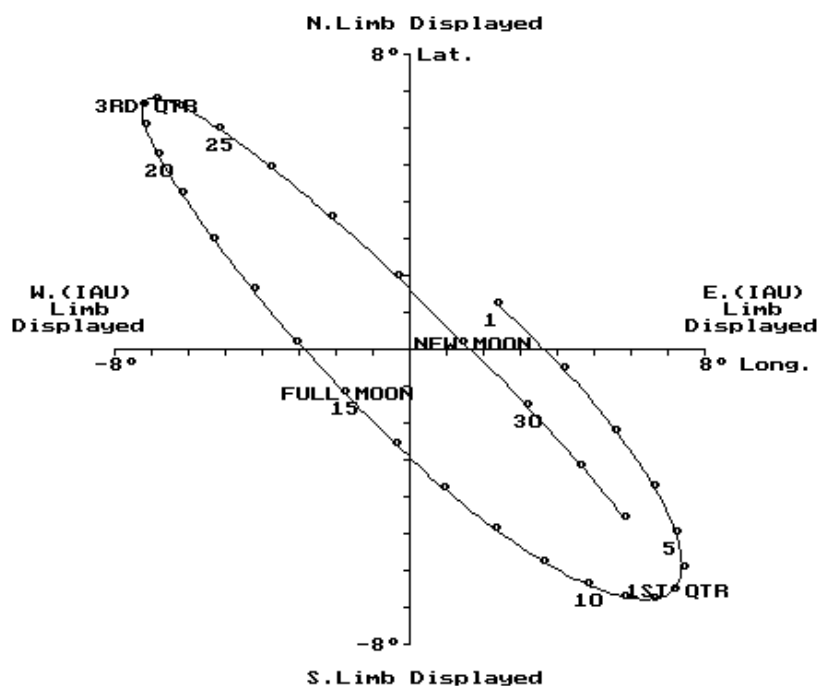
This month we extend a warm welcome to new observer Stuart Williams of Bloxwich, near Walsall.

LIBRATION March 2006

Date	Libration amount	PA	Feature presented
1.0	2.7	314	Boss
2.0	3.6	272	Peek
3.0	5.1	252	Gibbs
4.0	6.7	242	W. Humboldt
5.0	7.8	236	Abel
6.0	8.6	231	Gum
7.0	8.8	228	Marinus
8.0	8.7	224	Oken
9.0	8.2	221	Peirescius
10.0	7.4	217	Lyot
11.0	6.2	213	Hanno
12.0	4.9	207	Pontecoulant
13.0	3.4	197	Neumayer
14.0	2.0	172	Casatus
15.0	1.6	111	Eichstadt
16.0	2.8	73	Dalton
17.0	4.4	59	Rontgen
18.0	6.0	53	Lavoisier
19.0	7.4	49	Lavoisier
20.0	8.6	46	Bunsen
21.0	9.4	44	Gerard
22.0	9.8	42	Gerard
23.0	9.8	40	Galvani
24.0	9.3	38	Galvani
25.0	8.2	36	Volta
26.0	6.7	32	Xenophanes
27.0	4.8	26	Babbage*
28.0	2.8	10	Anaximenes*
29.0	1.5	310	Riemann*
30.0	2.9	254	Ritz
31.0	4.8	240	Barnard

LUNAR LIBRATIONS - March 2006

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



Program by Bob Roberts.

Observer at: Lat. 51.00N, Long. 1.00W

* indicates that the feature is not illuminated.

Section Director Alan E. Wells, 135 Elmdon Lane Marston Green, Birmingham. B37 7DN 0121 7795082

E-mail awells@citycol.co.uk

Assistant Director/Editor John F. Pedler, 25 Beverley Hills Park, Porton Road, Amesbury, Wilts. SP4 7LH 01980 622314

E-mail jhnpedler@aol.com

TLP Co-coordinator Dr. Tony Cook, School of Computer Science & IT, Nottingham University, Jubilee Campus, Wollaton Road, Nottingham, NG6 1BB. U.K. Phone (alerts only) 0798 505 5681

E-mail acc@cs.nott.ac.uk

Topographical Co-ordinator Colin Ebdon, "Briar Patch", Heath Road, Fordham Heath, Colchester, Essex. CO3 5TW.

E-mail colin@ebdon.wanadoo.co.uk

Occultation Co-ordinator Andrew Elliott, White Lodge, Bank Lane, Warton, Preston, Lancs. PR4 1TB. 01772 632450

E-mail ae@f2s.com

Geological Co-ordinator Raffaello Braga, viaE Curiel 22, Corsico-MI 20094 ITALY.

E-mail Rafbraga@tin.it

Section Historian Bob Garfinkle, F.R.A.S., 32924 Monrovia Street, Union City, CA94587, U.S.A.

E-mail ragarf@earthlink.net

Cloudwatch Andrew Bytnar, Central Club, Mansfield Road, Sutton-in-Ashfield, NG17 4EJ.

E-mail ASByt@aol.com

Computing Co-ordinator Mike Carson-Rowland, Little Lawrenceton, FORRES, IV36 2RL

E mail Mike@BAALunarSection.org.uk

Section Archivist. E mail BrendanShaw@btinternet.com or by post through the Editor.

Photographic Co-ordinator Nick Atkinson,, "Stellar View", 25 Mt. Pleasant Drive, Queens Park, Bournemouth, BH8 9JL. 01202 395466

E-mail nick.atkinson@hmce.qsi.gov.uk

2006 MAR.	Age d	Phase	Earth's Selenographic		Sun's Selenographic		R.A.		Dec. °	Rises		Sets		Transit		Alt °
			Longø	Latø	Colongø	Latø	h	m		h	m	h	m	h	m	
1.0	1.0	0.015	2.4	1.2	281.6	-0.64	23	40	-3.2	07	27	20	00	13	33	38
2.0	2.0	0.058	4.1	-0.5	293.8	-0.61	00	33	4.0	07	39	21	30	14	23	46
3.0	3.0	0.126	5.6	-2.2	306.0	-0.59	01	25	10.9	07	52	22	59	15	14	52
4.0	4.0	0.213	6.6	-3.8	318.2	-0.57	02	19	16.9	08	07	..	..	16	05	58
5.0	5.0	0.310	7.2	-5.0	330.4	-0.54	03	13	22.0	08	27	00	28	16	59	62
6.0	6.0	0.414	7.4	-5.9	342.6	-0.52	04	09	25.7	08	55	01	52	17	54	65
7.0	7.0	0.517	7.2	-6.5	354.7	-0.50	05	06	27.9	09	35	03	06	18	49	66
8.0	8.0	0.617	6.7	-6.8	6.9	-0.48	06	03	28.7	10	28	04	07	19	43	66
9.0	9.0	0.709	5.8	-6.7	19.1	-0.46	06	59	28.0	11	34	04	51	20	35	64
10.0	10.0	0.793	4.8	-6.4	31.3	-0.44	07	52	26.0	12	46	05	21	21	23	61
11.0	11.0	0.864	3.6	-5.8	43.4	-0.42	08	43	22.8	14	01	05	43	22	09	57
12.0	12.0	0.922	2.3	-4.9	55.6	-0.39	09	30	18.7	15	15	05	58	22	51	52
13.0	13.0	0.965	0.9	-3.8	67.7	-0.37	10	16	13.9	16	27	06	10	23	32	46
14.0	14.0	0.991	-0.5	-2.6	79.9	-0.34	10	59	8.6	17	38	06	20	..	..	..
15.0	15.0	1.000	-1.8	-1.2	92.0	-0.31	11	41	3.0	18	49	06	29	00	11	41
16.0	16.0	0.991	-3.1	0.2	104.2	-0.28	12	23	-2.7	20	01	06	37	00	49	35
17.0	17.0	0.963	-4.3	1.6	116.3	-0.25	13	06	-8.4	21	15	06	47	01	30	29
18.0	18.0	0.918	-5.4	3.0	128.5	-0.22	13	50	-13.8	22	31	06	58	02	12	23
19.0	19.0	0.856	-6.2	4.2	140.6	-0.19	14	37	-18.8	23	51	07	12	02	57	18
20.0	20.0	0.779	-6.9	5.3	152.8	-0.16	15	28	-23.1	..	..	07	32	03	45	14
21.0	21.0	0.688	-7.2	6.1	165.0	-0.13	16	22	-26.4	01	11	08	01	04	39	11
22.0	22.0	0.587	-7.3	6.6	177.2	-0.10	17	21	-28.3	02	25	08	45	05	36	9
23.0	23.0	0.479	-7.0	6.8	189.3	-0.06	18	22	-28.6	03	26	09	48	06	36	9
24.0	24.0	0.369	-6.3	6.6	201.5	-0.03	19	24	-27.2	04	11	11	09	07	36	11
25.0	25.0	0.263	-5.2	6.0	213.7	-0.00	20	25	-24.1	04	41	12	41	08	35	15
26.0	26.0	0.166	-3.8	5.0	225.9	0.03	21	24	-19.3	05	03	14	16	09	32	20
27.0	27.0	0.087	-2.2	3.6	238.2	0.06	22	21	-13.4	05	19	15	50	10	25	27
28.0	28.0	0.031	-0.4	2.0	250.4	0.09	23	15	-6.5	05	32	17	22	11	17	34
29.0	29.0	0.003	1.4	0.2	262.6	0.12	00	08	0.7	05	44	18	53	12	07	42
30.0	0.6	0.005	3.2	-1.5	274.8	0.15	01	01	7.8	05	56	20	25	12	59	49
31.0	1.6	0.036	4.6	-3.2	287.0	0.17	01	55	14.4	06	10	21	56	13	51	55

APR 2006

1.0	2.6	0.092	5.8	-4.6	299.3	0.20	02	50	20.1	06	29	23	26	14	46	60
2.0	3.6	0.167	6.6	-5.7	311.5	0.23	03	48	24.4	06	54	00	48	15	42	64
3.0	4.6	0.256	6.9	-6.4	323.7	0.25	04	46	27.3	07	29	00	48	16	39	66
4.0	5.6	0.352	6.8	-6.8	335.9	0.28	05	45	28.6	08	18	01	57	17	35	66
5.0	6.6	0.451	6.4	-6.8	348.1	0.30	06	42	28.4	09	21	02	48	18	29	65
6.0	7.6	0.550	5.6	-6.5	0.3	0.32	07	37	26.7	10	32	03	24	19	19	62
7.0	8.6	0.645	4.5	-5.9	12.5	0.34	08	29	23.8	11	47	03	48	20	06	58
8.0	9.6	0.733	3.3	-5.1	24.6	0.37	09	18	19.9	13	02	04	06	20	49	53
9.0	10.6	0.812	1.9	-4.1	36.8	0.39	10	03	15.3	14	15	04	18	21	30	48
10.0	11.6	0.880	0.5	-2.9	49.0	0.42	10	47	10.1	15	26	04	29	22	10	43
11.0	12.6	0.934	-0.8	-1.6	61.2	0.44	11	29	4.6	16	37	04	38	22	49	37
12.0	13.6	0.973	-2.1	-0.2	73.3	0.47	12	12	-1.1	17	48	04	47	23	29	31

To receive regular copies of this circular, please send stamped addressed envelopes to the Director.

Envelopes at least 110mm by 220mm will ensure no damage in transit.

Members who have Internet access may care to receive their Circulars (colour version) by E mail. Please contact the Director for details.

Contributions related to a specific sub-section should be sent to the appropriate co-ordinator, but send any material of a more general nature to the Editor at:

John Pedler, 25 Beverley Hills Park, Porton Road, Amesbury, Wilts. SP4 7LH.

Tel. No. 01980 622314

Email jhnpedler@aol.com

Items for the March 2006 circular should reach the Editor by the 10th Feb 2006