

BRITISH ASTRONOMICAL ASSOCIATION



LUNAR SECTION CIRCULAR

Director Alan Wells
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Data on pages 7-8 are for Aug. 2004

Lunations 1009-1010

July 2004

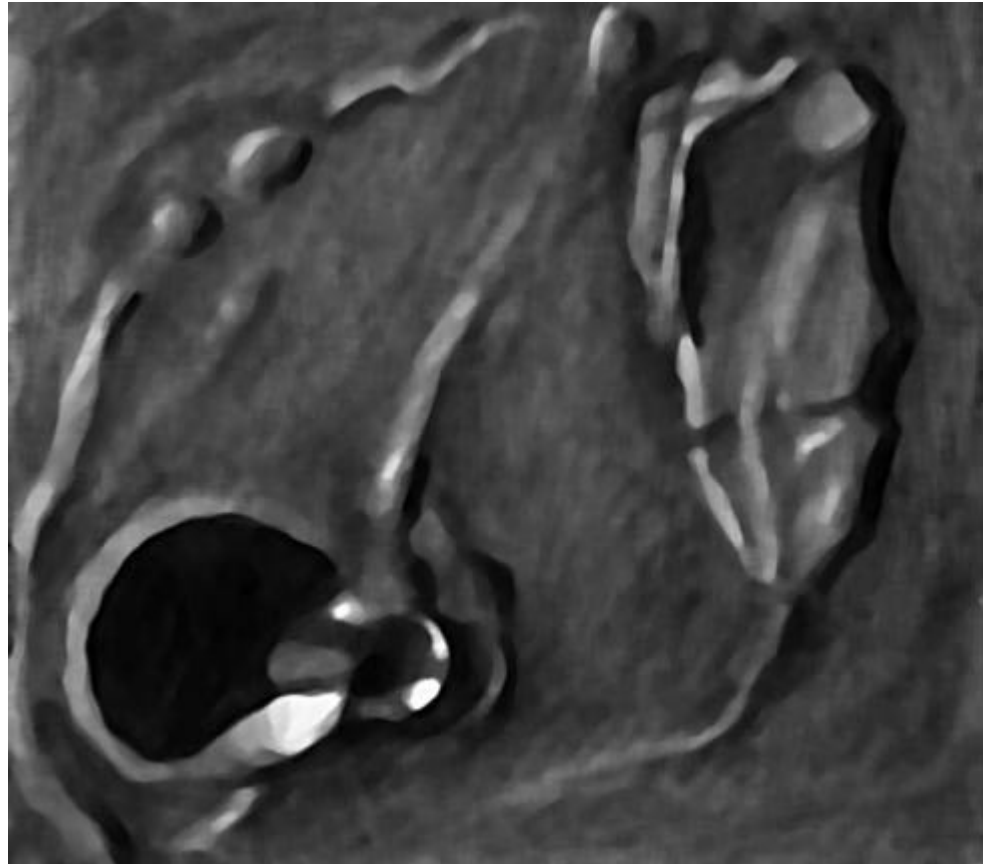
TOPOGRAPHICAL SUB-SECTION

COLIN EBDON

To date, 2004 has not proved to be a particularly memorable year for lunar observers. Despite some periods of very fine weather, the night skies have often been cloudy for the critical parts of each lunation, and as a consequence, the number of observations I have received has dwindled accordingly. I am therefore grateful to Peter Grego for coming to the rescue this month with the accompanying drawing of Torricelli - not a feature that I find easy to observe at the best of times.

Observational details are: 2004 May 24. 22.00 -22.30UT. Seeing: AIII, clear sky, deep twilight. 200mm SCT (LX90) x180. Observer: Peter Grego, Rednal, Birmingham. Longitude: 337.9 to 338.2. deg. Libration Latitude: -06.03. Libration Longitude: -05.59.

Peter writes: ' Torricelli and parts of the larger enclosure Torricelli R were observed, including the southern and southwestern ramparts of the latter. Torricelli itself appeared largely shadow filled, with two dusky bands joining the interior shadow to the crater's western lobe, which itself was largely shadow filled. Low, rounded features could be traced to the immediate west, south and north of Torricelli, a low ridge proceeding from its southern wall across the floor of Torricelli R. Torricelli R's southwestern wall comprised a large, broad, knobby plateau whose eastern ramparts caught the sunlight most. A ridge could be traced to the north, making some of the rest of the wall of Torricelli R. Torricelli R's southern wall comprised a sinuous ridge and several squat dome-like elevations'.



In addition to Peter's observation, I have also included this month a drawing of the region of Brenner and Fabricus, a region which I have often observed under opposite lighting in order to examine what appear to be several straight ridges extending for some length from Brenner. However, the current drawing was made at the instigation of Harold Hill, in order to follow up an observation that he previously made of a rather striking and sharply defined shadow profile in this area. If anyone cares to follow this up (or has previously observed this shadow) I would be pleased to hear from you.

Do not forget that the months of July and August present the perfect opportunity (weather permitting of course) to see the Moon in a less familiar guise as a waning crescent in the pre-dawn sky. If the opportunity presents itself, do try and take the chance to look at some familiar lunar features under unfamiliar lighting conditions - not many observations are made at this time of the year, or of this phase of the Moon.

Fabricus, Metius and Brenner

Observer: C.Ebdon

Date: 2004, May 23.

Time: 21.15-22.30UT

Seeing: II-III, then III deteriorating

Transparency: Moderate -good

7.1" f15 Maksutov-Cassegrain x225

Earth's Sel. Longitude (Deg)

-4.35 to -4.42

Earth's Sel. Latitude

-6.58 to -6.29

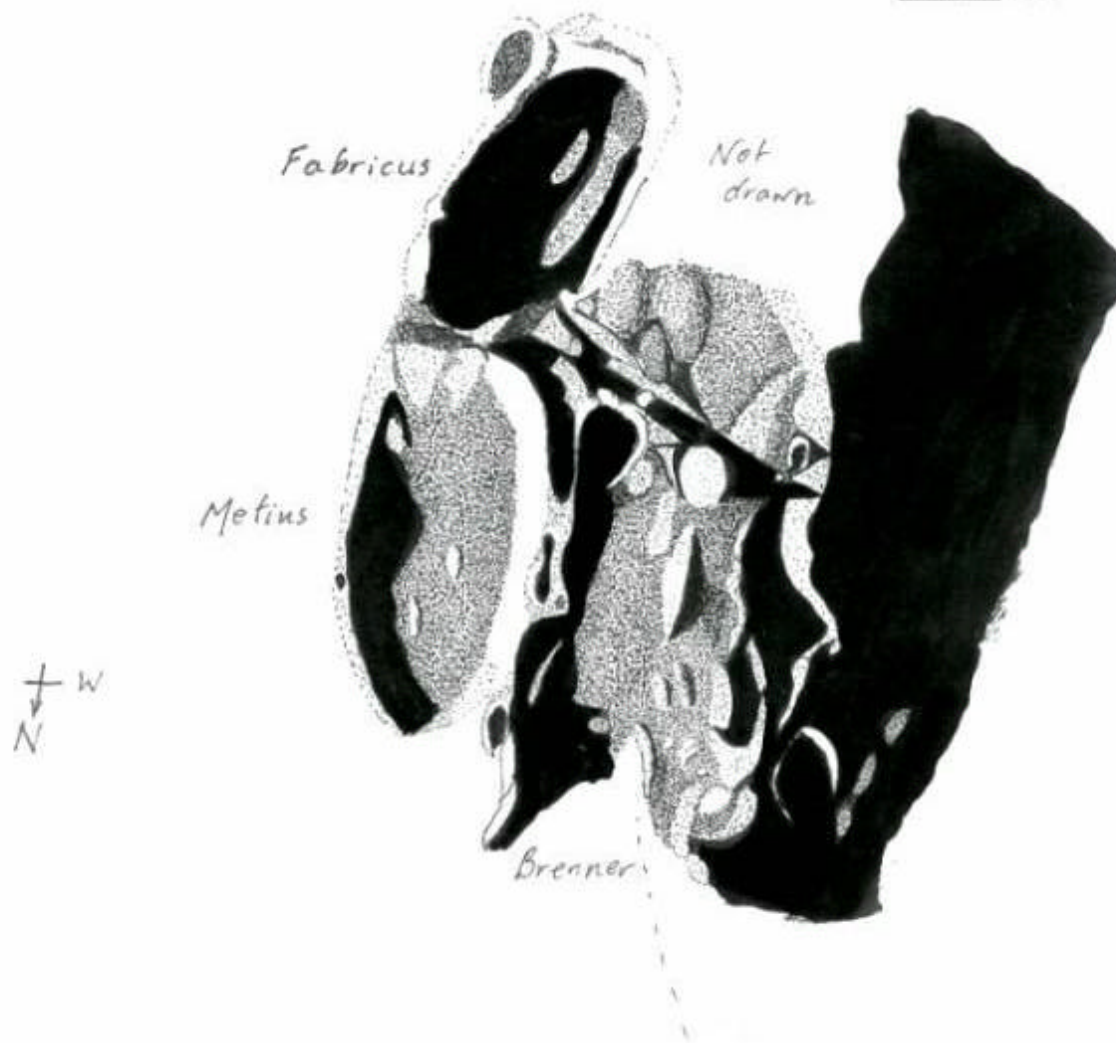
Sun's Sel. Colongitude.

325.4 to 326.04

Sun's Sel. Latitude.

+0.59 (0hrs 24/5)

Lunation: 1006



Notes: This observation was secured in order to follow up a note by Harold Hill in correspondence, concerning a prominent shadow feature in this region, which he observed on 2003 May 5. H.H. writes that '....it took the form of a black straight bar of appreciable width for perhaps 50-60 miles as seen at Colongitude 323.3'. The shadow ran from the outer North-West slope of Fabricus, along the Southern border of Brenner.

At the time of the current observation, although the colongitude had advanced somewhat, the shadow was immediately obvious and quite striking in appearance, having a remarkably straight edge to its Southern border. To the West, it seemed to be formed by (or included within) a sharp triangular shadow which stretched to the terminator. This shadow was created by a prominent mountain block or plateau. This shadow adjoined a small crater which (from the Times Atlas) seems to be Brenner R. There is some indication from this atlas of a sharply defined scarp in this region, but further investigation is needed. It would be interesting, if the lighting could be caught just right, to make sequential observations of this shadow lifting.

Again, with the bright summer evenings here, there is not much to Highlight this month, with no more grazing occultations until September.

Occultation of Venus

Following an email prompt by myself, accompanied by accurate site predictions, eight of us prepared to have a go with the daylight Venus occultation on May 21. These stalwarts were Colin Ebdon, Maurice Gavin, Bill Leslie, Hazel McGee, Martin Mobberley, Bob Rutter, Brendan Shaw, and myself. Unfortunately, those in the south and east were clouded out or rained off, and the rest of us failed to find Venus in the telescope! This confirms the difficulty of finding even the brightest objects in daylight. Having said that, Colin Ebdon and I managed to find it in binoculars, and Bill Leslie and Brendan Shaw found and imaged Venus after the event. Brendan found the web site of Pete Lawrence, Selsey, who spectacularly imaged the disappearance and reappearance, so proving it was actually possible! See http://www.pb133.fast24.co.uk/occultation_001.jpg (and ..._002.jpg).

Fortunately I had more luck with the Venus transit which I managed to video record in its entirety, although some thin cloud partly reduced the quality. The latest exciting news as I write this is that some European observers saw and imaged the “white ring” or “Lomonossov ring” effect....

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

August 2004

Day	Time-UT	P	Object	O	Max	Sp	%	Elg	Sn	Mn	Mn	CA	PA	Watts	a	b	Star's	<u>apparent</u>
	H	M	S	D	V	Mag	Snlt	Alt	Alt	Az			Angle	Min/°			RA	Dec
1/22	58	09	/R	FK5EXT 3761	95	6.4	G5	98-	163		13	144	69N	286	306	-1.4	1.1	220227.8-175252
6/00	11	29	/R	PPM 144568	65	7.7	F5	68-	112		20	106	52S	211	231	-.2	2.3	12439.7 63033
6/03	20	33	/R	PPM 144653	67	6.7	F2	68-	111-10		42	154	57S	216	236	-.8	1.7	12917.3 71907
8/23	38	57	/RV	PPM 92798	66	6.0	B9	40-	78		8	65	83S	251	263	.6	2.2	34443.4 205637
9/01	27	13	/R	PPM 92910	65	8.2	A5	39-	77		23	85	88N	260	271	-.2	2.3	34825.7 212038
9/01	50	31	/R	PPM 92931	65	8.3	F5	39-	77		27	89	77S	245	256	-.2	2.4	34915.3 212125
11/03	17	36	/RP	PPM 94507	96	8.0	A0	21-	55-11		29	83	39N	321	323	-1.7	.0	53505.4 264107
12/01	19	33	/RM	PPM 95891	95	7.8	A0	14-	45		7	53	45N	321	318	-.1	.7	62345.8 270703
12/03	47	17	/RX	PPM 96044	88	6.5	F5	14-	44 -8		26	79	56S	243	240	.1	2.8	62912.0 265759
13/03	09	47	/R	PPM 97404	96	8.0	A0	8-	33		14	64	59N	317	308	-.4	.7	72130.9 262917
13/03	19	36	/R	PPM 97409	96	7.9	G0	8-	33-12		15	66	35S	231	223	.9	3.3	72148.0 260911
29/01	04	02	/DU	PPM 239248	95	6.2	A3	98+	165		15	205	74S	69	88	-1.0	-.4	214330.1-193600

N.B. Don't forget to add 1 hour to the above times when British Summer Time is in Force!

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 new format predictions.

Sorry ! Only six pages this month. Not enough material for eight. Ed.

Firstly, thanks for David Darling for covering for me during May and June. Observations for May have been received from: Clive Brook (Plymouth, UK), Tony Cook (Nottingham, UK), Marie Cook (Mundesley, UK), Robin Gray (Winnemucca, NV, USA), Gerald North (Narborough, UK), Brendan Shaw (UK). Observations received for April-June are now on the web site.

For new members that David Darling has recruited to participate in simultaneous observation of the Moon from the ground and from ESA's SMART-1 I would just like to say welcome onboard to the TLP observing program! Altogether there are fifty observers who belong to ALPO, the BAA, or who have registered an interest. This newsletter forms part of the British Astronomical Associations Lunar Section Circular, and also the Association of Lunar and Planetary Observer's: "The Lunar Observer". Both publications appear monthly. Our aim is to investigate transient lunar phenomenon (TLP), or as they say in America (LTP). TLP are typically faint transient coloured glows or loss of detail that pertain to a particular area. Theories to explain these reports have included out-gassing on the lunar surface, landslides, meteorite impacts etc. Undoubtedly most TLP are aberrations caused by normal terrestrial atmospheric effects e.g. spurious colour, poor seeing, and perhaps even poorly trained observers in the past. In 1978 Dr Winifred Cameron produced a NASA catalog listing 1463 of these reported events covering the years 557AD-1978. Our task is to try to observe these features again but under the same illumination angles (and if possible libration/viewing angles) in order to record their normal appearance. Hopefully we can then eliminate many of these reports and leave ourselves with a core set of reliable observations that we may then study analytically. Another aspect of the ALPO/BAA work is the tradition started in the Apollo era to observe the Moon at the same time it is being surveyed by spacecraft, so that in the unlikely event that a TLP is observed, it can be studied from both the ground and from spacecraft and then comparisons made with past TLP events. Joint observing programs have taken place with Apollo, Clementine and Prospector space missions and David Darling is in contact with mission scientists over near term future missions e.g. he has recently been in contact with the president of the Trans Orbital Company, involved in a private lunar mission: "Trail Blazer". David states that they were interested in a ground-based observing program with amateur astronomers. Trail Blazer is due for launch in Dec 2004.

Both Dr Julius Benton and David Darling have forwarded me an e-mail from Michael and Lois van Son from Bremerton, Washington State, USA, who on 1st May 2004 at 19:34 PST observed a white flash on the Moon (comparable to Venus) in the upper Mare Serenitatis area. Was anybody else observing the Moon at this time? Although they could have witnessed an impact flash, one has to consider other possibilities such as sun glint from a satellite - this is still being checked out.

Raffello Lena (GLR) reports that he received an observation from May 1st from an Italian observer that suggested blue on the walls of Aristarchus at 22:20UTC. This coincided with the predicted repeat illumination conditions for a 1963 Dec 28 TLP observation by Olivarez where they reported *"in poorer moments of seeing, red on Arts, rim & Sch. Valley. Spurious seeing effect"*. The NASA catalog of TLP gives this 1963 observation a very low weight. Alas at present I do not have any further information about the GLR observation, so it is difficult to say if the most likely cause is spurious seeing effects this time? Although the UK was under quite a bit of cloud cover during the May 4th total lunar eclipse, BAA observers: Tony Cook, Marie Cook, Maurice Gavin, David Graham, Mark Kidger, Martin Mobberley, Gerald North, Damien Peach, and John Rogers have communicated what they saw. So far there are no reports of any impact flashes being seen. I took some video from the end of totality onwards, so can easily verify any reports of flashes. Francois Kritzinger (South Africa) reported seeing two bright spots during totality - probably these will turn out to be ray craters, but the image is still being checked out Aadil Desai (Mumbai, India) reports that although most of the eclipse was invisible due to rain, he made it a pretty dark eclipse and noted the colour as grayish red at mid totality. Marie Cook (Norfolk, UK) estimated the eclipse to be Danjon 4 and bright orange at 20.-43UTC. Mark Kidger made it Danjon 2. I guess the uncertainty can be explained by the low altitude of the Moon and local weather conditions.

The following repeat illumination and libration events occur for July; so please have a go if you can? Note that I have decided just to list visibility from the UK to save editorial time and newsletter space. The BAA/ALPO TLP newsletter is published in the UK as part of the BAA Lunar Section circular and sent to amateurs who do not necessarily have access to the internet. Therefore the suggested features for UK observers for July are listed below:

Event: Mare Crisium (Moore. 1948 Jul 2.1) can be seen on/from (UTC): 2004 Jul 03 UK (01:16-02:59) [*what features can you see on the floor of the mare region?*]

Event: Plato (Kelsev. 1966 Aug 02) can be seen on/from (UTC): 2004 Jul 03 UK (02:36-02:59) [*how sharp is the East wall compared to the West wall?*]

Event: Alphonsus (Bartlett. 1966 Aug 30) can be seen on/from (UTC): 2004 Jul 3.1 UK (00:56-02:24) [*can you see any sign of a brown colour on the south floor?*]/For all other observers elsewhere in the world, further predictions, including the more numerous illumination only events, can be found on the following web site:

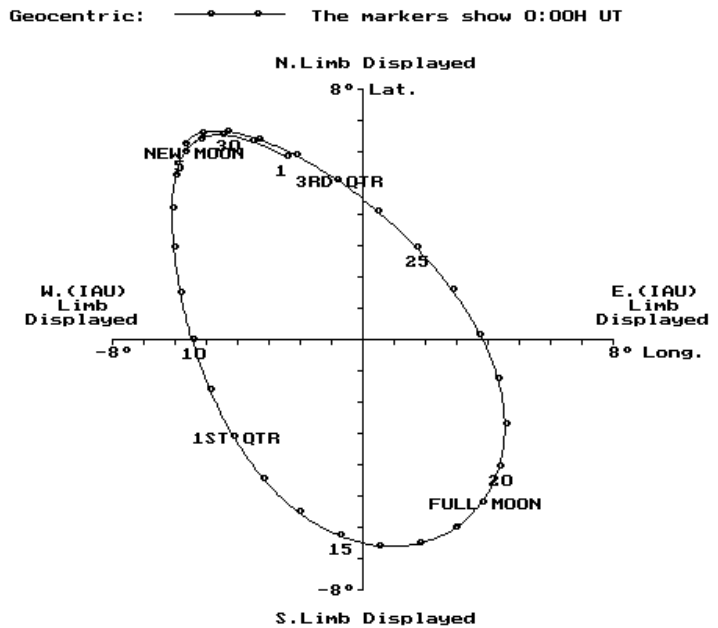
<http://www.lpl.arizona.edu/~rhill/alpoAunarstuff71tp.html>.

If in the unlikely event you see a TLP, please call on Tony Cook's cell phone: +44 (0)798 505 5681 and he 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

Date	Libration amount \varnothing	PA \varnothing	Feature presented
1.0	8.1	336	De la Rue
2.0	8.6	325	Mercurius
3.0	8.8	315	Boss*
4.0	8.8	306	Rynin*
5.0	8.4	297	Liapunov*
6.0	7.7	288	Al-Biruni*
7.0	6.8	278	Jansky*
8.0	5.8	265	Hirayama*
9.0	5.0	249	Curie*
10.0	4.5	228	Marinus*
11.0	4.5	207	Gill*
12.0	4.9	188	Boguslawsky*
13.0	5.5	174	Casatus*
14.0	6.0	163	Kircher*
15.0	6.4	155	Segner*
16.0	6.5	147	Pingre*
17.0	6.5	139	Catalan*
18.0	6.2	130	Drude*
19.0	5.9	119	Pettit*
20.0	5.6	106	Maunder*
21.0	5.3	90	Riccioli*
22.0	5.4	74	Vasco da Gama*
23.0	5.6	57	Rontgen*
24.0	6.0	41	Galvani*
25.0	6.4	27	Cleostratus*
26.0	6.9	14	Carpenter*
27.0	7.3	2	Anaxagoras
28.0	7.5	350	Peters
29.0	7.7	338	Strabo
30.0	7.7	326	Chevallier
31.0	7.6	315	Boss*

LUNAR LIBRATIONS - August 4



Program by Bob Roberts.

Observer at: Lat. 52.0 \varnothing N, Long. 0.0 \varnothing W

* 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-ordinator 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 Eddon, "Briar Patch", Heath Road, Fordham Heath, Colchester, Essex. CO3 5TW.

E-mail Colin@ebdon2102.fsnet.co.uk

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

E-mail andrew@elliott0.demon.co.uk

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, Barnstead, 141 Ecclesfield Road, Chapelton, Sheffield, S35 1TD.

E mail Mike@BAA.LunarSection.org.uk

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

Photographic Co-ordinator Vacant.

2004 AUG.	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			
1.0	14.5	0.997	3.5	6.5	89.9	1.52	21	06	-21.8	20	50	04	38	00	26	16
2.0	15.5	0.976	5.1	6.1	102.1	1.52	22	04	-16.8	21	08	06	10	01	23	21
3.0	16.5	0.930	6.3	5.3	114.3	1.52	22	58	-11.0	21	21	07	38	02	15	27
4.0	17.5	0.863	7.0	4.2	126.5	1.52	23	49	-4.8	21	33	09	00	03	02	33
5.0	18.5	0.780	7.2	3.0	138.7	1.52	00	36	1.4	21	45	10	19	03	47	40
6.0	19.5	0.688	7.0	1.6	150.9	1.52	01	23	7.4	21	57	11	36	04	31	46
7.0	20.5	0.591	6.4	0.1	163.1	1.52	02	09	12.9	22	11	12	51	05	14	52
8.0	21.5	0.493	5.4	-1.3	175.3	1.52	02	56	17.7	22	29	14	06	05	59	56
9.0	22.5	0.398	4.3	-2.6	187.5	1.52	03	44	21.8	22	53	15	19	06	45	60
10.0	23.5	0.307	2.9	-3.8	199.7	1.51	04	34	24.9	23	25	16	29	07	33	63
11.0	24.5	0.224	1.6	-4.8	212.0	1.51	05	26	26.9	..	..	17	30	08	24	65
12.0	25.5	0.150	0.3	-5.6	224.2	1.51	06	19	27.7	00	09	18	19	09	15	65
13.0	26.5	0.089	-1.0	-6.2	236.4	1.51	07	13	27.2	01	05	18	57	10	06	64
14.0	27.5	0.043	-2.1	-6.5	248.7	1.50	08	06	25.4	02	12	19	25	10	56	62
15.0	28.5	0.013	-3.0	-6.6	260.9	1.49	08	57	22.4	03	26	19	45	11	45	58
16.0	29.5	0.002	-3.8	-6.3	273.2	1.48	09	47	18.4	04	42	20	01	12	31	53
17.0	0.9	0.010	-4.4	-5.7	285.4	1.47	10	35	13.6	05	59	20	14	13	16	48
18.0	1.9	0.040	-4.9	-4.8	297.7	1.46	11	22	8.1	07	16	20	26	13	59	42
19.0	2.9	0.090	-5.1	-3.7	309.9	1.45	12	08	2.2	08	33	20	37	14	43	36
20.0	3.9	0.158	-5.2	-2.3	322.1	1.43	12	55	-3.9	09	52	20	49	15	28	30
21.0	4.9	0.244	-5.1	-0.9	334.4	1.42	13	43	-10.0	11	14	21	04	16	15	24
22.0	5.9	0.344	-4.8	0.7	346.6	1.40	14	33	-15.7	12	39	21	22	17	06	18
23.0	6.9	0.453	-4.3	2.3	358.8	1.38	15	27	-20.7	14	06	21	48	18	01	14
24.0	7.9	0.567	-3.5	3.7	11.0	1.37	16	26	-24.6	15	32	22	26	19	01	11
25.0	8.9	0.678	-2.4	4.9	23.2	1.35	17	28	-27.1	16	47	23	22	20	04	10
26.0	9.9	0.782	-1.1	5.9	35.4	1.34	18	33	-27.8	17	45	23	22	21	08	11
27.0	10.9	0.870	0.3	6.4	47.6	1.33	19	38	-26.5	18	25	00	38	22	10	14
28.0	11.9	0.938	1.9	6.6	59.8	1.31	20	42	-23.5	18	52	02	06	23	08	18
29.0	12.9	0.982	3.3	6.3	72.0	1.29	21	41	-19.0	19	11	03	38	..	..	..
30.0	13.9	0.998	4.6	5.6	84.1	1.28	22	36	-13.5	19	26	05	07	00	02	24
31.0	14.9	0.989	5.5	4.6	96.3	1.26	23	28	-7.3	19	39	06	33	00	49	30
1 (Sep)	15.9	0.954	6.1	3.3	108.5	1.25	00	17	-0.9	19	50	07	54	01	37	37
2.0	16.9	0.900	6.3	1.9	120.7	1.23	01	05	5.3	20	02	09	14	02	22	43
3.0	17.9	0.829	6.0	0.4	132.9	1.22	01	52	11.1	20	15	10	31	03	07	49
4.0	18.9	0.746	5.4	-1.1	145.1	1.21	02	39	16.3	20	32	11	48	03	52	55
5.0	19.9	0.656	4.5	-2.4	157.2	1.19	03	28	20.8	20	53	13	04	04	38	59
6.0	20.9	0.562	3.4	-3.7	169.4	1.18	04	18	24.2	21	22	14	16	05	26	62
7.0	21.9	0.466	2.1	-4.8	181.7	1.17	05	10	26.6	22	01	15	21	06	16	65
8.0	22.9	0.373	0.8	-5.6	193.9	1.16	06	03	27.8	22	52	16	16	07	07	65
9.0	23.9	0.284	-0.5	-6.3	206.1	1.14	06	56	27.6	23	56	16	57	07	59	65
10.0	24.9	0.203	-1.7	-6.6	218.3	1.13	07	49	26.2	..	..	17	28	08	49	63
11.0	25.9	0.131	-2.7	-6.7	230.5	1.12	08	41	23.6	01	08	17	51	09	38	60
12.0	26.9	0.072	-3.5	-6.5	242.8	1.10	09	32	19.9	02	24	18	08	10	26	55

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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 August 2004 circular should reach the Editor by the 10th July 2004