

LUNAR PHOTOGRAPHY

by Geoffrey Johnstone
(Coventry and Warwickshire AS)

Lunar and planetary photography is an area of astrophotography in which I have had little success. I have taken the occasional photograph which I would be happy to show others, but this is rare. My main interest is deep sky work, which is less prone to seeing conditions, and where exposures are not critical. Not everything has been disastrous as two years ago I took a couple of photographs which received polite commendation when submitted to the BAA Lunar Section's photographic competition, and I also took a useful series of prints of the total eclipse of the moon at Christmas 1981, but otherwise I have largely abandoned it through poor results.

The problem of lunar photography is, in my opinion, one of finding suitably steady seeing conditions, which seems particularly rare in my area, and exposure. Using a through the lens exposure meter in theory enables the correct shutter speed to be easily found; however the camera's shutter with exposures of from 1/250 sec and longer causes my telescope to vibrate producing an out of focus image. I am reliably informed that it is the instant return mirror that causes the biggest problem. Shorter speeds can be used at the prime focus with fast films, but this prevents much in the way of enlargements from 35mm due to the problems of emulsion grain. I am not satisfied with anything less than high resolution photographs by eyepiece projection of selected areas that can be enlarged to a suitable size.

The improvement came in October of 1984 when deep sky photography was prevented by the presence of the moon. It was between full and third quarter and dominated the night sky from darkness to dawn. On October 13th I went out to observe in the early hours to find the moon very high in the South and about as far from the unsteady horizon air as it could possibly be. The sky was transparent but steadied by early

morning mist. On examining the moon with a power of x100 I was surprised to find near perfect seeing. At x200 there was a slight undulation, but not the usual shimmering effect that I am used to. Getting up early was the first thing I did differently, the second was to carefully adjust the speed of the telescope to lunar rather than sidereal rate, and in doing so was surprised to see the difference. I used Kodak Technical Pan 2415 film for its high resolution (320 l/mm) making enlargements of selected portions of 35mm negatives possible. Knowing the film to be fairly slow ISO 50-100, I exposed it by the "old hat" method. This means I covered the end of the telescope tube before opening the camera shutter, and then uncovered it for a second or so before closing it again. The advice that I should have taken but did not is that given by Martin Moberley writing in the BAA Lunar Section Circular. He advises photographers to use a whole 35 exposure length of film to capture moments of good seeing. Of the fifteen or so exposures that I did make, those taken with eyepiece projection using my 12mm eyepiece were the most successful.

Developing Kodak 2415 has to be approached differently to conventional films as, because of its high contrast, a low contrast developer is required, otherwise a "soot and whitewash" effect is produced. The developer recommended is either Technidol or Pota. I develop in Pota for 25 minutes at 20 C. Both these developers are available, together with the film, by mail order.

There is still room for considerable improvement, but with more practice and a lot of luck who knows what might be possible in the future.

(Below Right) MARE SERENITATIS showing the crater POSIDONIUS
1984 Oct 13 04h 45m 254 mm spec.
2415 Dev. Pota. Geoff Johnstone
(South is at the top)

(Below Left) PITISCUS and ASCLEPI
1984 Oct 13 04h 45m 254 mm spec.
2415 Dev. Pota. Geoff Johnstone.
(South is at the top)

SOUTHEAST PLANETARIUM
Central Museum, Victoria Avenue

This planetarium was opened at the end of January 1984 and was built by Harry Ford, formerly Curator of the Mills Observatory, Dundee, and his wife, in consultation with the District Council. It is a 22-seat unit under a 12.5 foot dome, and complex programmes can be staged. Its location in the Southend Museum is similar to that of the Science Museum planetarium in London, a free standing dome inside a larger room.

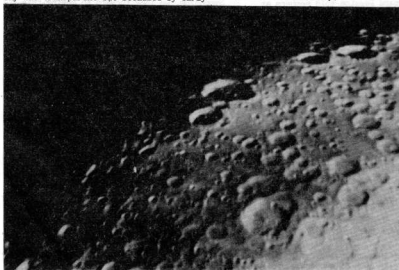
The projector built by Mr Ford has pinhole projection of the stars, projected co-ordination, Sun, Moon and planets. Extra projectors around the central pedestal show constellation figures, a spinning galaxy, Aurora and a floating astronaut. To demonstrate concepts of spherical astronomy, the Sun moves eastwards across the ecliptic in its annual movement. The audience sits on circular padded bench seats.

Outside the dome model displays are being set up showing projects like the space shuttle, Viking and Giotto.

Programmes are geared to basic astronomical teaching and there is no reason to think that such an approach is more stuffy than Laser or "Dr Who" type shows. Every aspect of the images shown are carefully arranged to appear as natural as possible by a working astronomer. The "sky" contains naked eye nebulae and clusters, and Sirius has its own projector. A programme topic might deal with "Fireworks in the Sky" during which the audience will see meteors, fireballs, a supernova, and the aurora. A live commentary is given in all shows which are suitable for beginners or advanced students.

Parties from schools or astro societies are by arrangement and special rates apply for such bookings (tel: 0702 330214).

HARRY FORD Westcliff-on-Sea Essex



LOOK !!! ASTRO-CALENDARS NOW AVAILABLE!

Send 50p + 10p post to Rosemary Naylor, 256 Bacup Road, Todmorden, Lancs, or to Ken Marous, 5 Cedars Gardens, Brighton.

Society News Round-Up

STUART LONSDALE

It would seem that some society magazines and newsletters are not being sent to me directly but to the Secretary or the Editor. Please ensure all items for the Round-Up are sent to me at 16 Joan Lane, Hooton Levitt, Near Rotherham, South Yorkshire, S66 8PH.

Philip Heppinstall the YGAS Representative on the Council has produced a Directory of Astronomical Societies in the YGAS area. Only a few of the societies contacted bothered to reply so it is not complete. WAKE UP THOSE SOCIETIES! Copies can be obtained from Philip, price 95p, from his home address, 21 Henry Frederick Avenue, Netherton, Huddersfield, West Yorkshire.

AYLESBURY AS: An enjoyable evening was had at a recent Astro-Quiz organised by Luton AS - even though Aylesbury did not win. Milton Keynes AS won 86 to 45.

The observatory saga continues with news that the tarpaulin covers over the slit were badly damaged during a storm. They were unusable and so now only the telescope mounting is covered.

A quantity of back copies of New Scientist have been incorporated into the Library courtesy of member Gerard Rawlings.

The November meeting saw a jumble sale that raised £10 for funds followed by an astronomical version of Call My Bluff.

CLEVELAND AS: During October the society hosted the BAA Inner Planets '84 Conference.

December 20th was the 5th birthday of Cleveland AS and in their magazine 'Polaris' member Richard Blackburn recalls those first five years.

An observing site has been secured at Station House for the 10-inch Cassegrain reflector which Cleveland has on permanent loan from Teeside Polytechnic. Though there is some troublesome glow from Teeside industry on the eastern horizon, the sky is apparently far darker than the Harrow Road site and the transparency a vast improvement. They plan to have the 10-inch and the 3-inch Waddington set up before the end of 1984.

It is hoped to convert the Cassegrain focus of the 10-inch to a Newtonian focus to make for more comfortable viewing positions and to complete the outfit, a new set of eyepieces.

COVENTRY & WARWICKSHIRE AS: A pleasing feature in recent months has been that of new members joining the society. Don Wallis gave a very graphic illustration of the scale of the Solar System by using a roll of toilet paper. (He must have used that one that the puppy-dog advertises!)

A quantity of Mylar has been obtained for solar use. The refractor being stopped down to 3-inch. They now only need a couple of thousand pounds for a Hydrogen Alpha filter!

There has been a changeover in the position of Honorary President. After filling the post for over twenty years, the former College Principal, Mr Arculus, has now become an Honorary Vice-President. The new President is John Temple, the present College Principal.

Rob Mosely is now the Secretary and his address is 70 Stanley Road, Earlsdon, Coventry.

EASTBOURNE AS: The exterior of the observatory has been redecorated and is now in a shiny green and black livery.

Short introductory talks on basic astronomy

have been started prior to the main meeting of the evening.

The subscription to Sky & Telescope was reviewed due to the "astronomical" fall in the value of the pound against the dollar which puts the price up. It was thought members who subscribed could pay a supplement and the society pay 50% from funds. This was agreed at the AGM and the subscription was renewed. (I wonder if Eastbourne take "Astronomy"? At least one can buy it off the shelf. Why not then Sky & Telescope on the shelves of the bookshops?)

The January meeting will be a Members Night of short talks.

Member Steve Marriott is looking for support for a project on photo-electric photometry after a recent conference he attended on the subject at the RGO. He says that to make the project feasible, a drive system for the telescope, a home constructed photometer and computer for programming to do all the control and analysis will be required. He says that this solar telescope to do all the sounds and he is looking for someone who thinks they may have something to offer - if only time and enthusiasm. Good luck!

NEWCHAPEL OBSERVATORIES & PLANETARIUM: A very long focus solar telescope under construction at the Newchapel site. The mirrors have already been ground and figured for the instrument, which will have a focal length of 83-feet, and they are now being aluminized by a Yorkshire firm. The telescope, which is a two mirror system, is designed to track the Sun in such a way that a solar image will be constantly projected on to a large screen in the Planetarium building. As many as 40-50 people will then be able to view at one time.

Further plans include a building with a 6-foot diameter dome which is hoped will house a driven camera and small telescope mount. This could be used by visiting members of the public.

The observatory complex at Newchapel is worth a visit - contact Mike Pace at the observatory on 07816 5205 or at his home on Alsager 6514.

NORTH EAST LONDON AS: To celebrate the Greenwich Centenary earlier in the year, some members met in Chingford near Pole Hill, on the top of which are two pillars marking the meridian, one being the old one, the other 19-feet to the east, the modern one. They followed the meridian as close as possible along the roads looking for more slabs, which they did find, the last one being in Leytonstone. They eventually met up with a party coming from the south.

Chairman Bernard Beeston told members at the AGM about the decline in members attending meetings. He was in doubt about the society surviving the year. It was decided to keep subs at the same level and try to attract new members. It was thought a levy might have to be introduced in the New Year to keep them going until July 1985.

If there is anyone in the NOLAS area reading this newsletter and is interested in Astronomy, then please contact Bernard Beeston, 38 Abbey Road, Bush Hill Park, Middlesex, EN1 2QN, tel: 01 550 5696. I'm sure he will be pleased to hear from you.

ORWELL AS: I have little if any news of society activities except the AGM was on Saturday 12th January and it was hoped to arrange field trips to observe two grazing occultations visible from East Anglia.

Visits to the observatory were made by the Ipswich Cubs and the Secford Foundation, Woodbridge.

The winter lecture programme has been suspended due to lack of support.

SCOTTISH ASTRONOMICAL GROUP (SAG): Dr Fiona Vincent of the Mills Observatory, Dundee, says about National Astronomy Week, "Let's face it - if we can't get Joe (or

Jane) Public interested in astronomy during the Halliday's Comet is returning, can we? (We all echo that, Dr Vincent!)

Neil Bone says weather conditions have been rather poor but he reports a successful and well observed Orionid meteor shower in the SAG region. An added bonus for some observers during the early stages of the shower, came in the form of auroral activity displays having been seen from as far south as Yorkshire.

Neil says that he will be heading over the running of SAG to Robert Law and Graham Young in the New Year. He felt that SAG would benefit from a few new ideas and he was sure that Robert and Graham would certainly provide these!

SAGAS: South Downs AS - The jumble sale during October raised £74.11 for funds (£60 after expenses). At very short notice the society was informed that it would no longer be able to use the premises of the Chichester School of English. Luckily another venue was located at the Ferris Centre, Chichester. British Telecom have submitted a planning application for a proposed development on the society's observatory site at Trundle Hill. A public enquiry is expected to last three months and the SDAS Committee will be expressing the society's point of view. Efforts have been redoubled in an attempt to find an alternative site. We all wish you every success in your efforts.

At a SAGAS meeting recently, Konrad Malin Smith (Croydon AS), proposed that the 1985 Astro Camp be held in La Palma in August.

Brighton AS - on the lighter side, Ken M reported that the reason they had stopped playing skittles at the Barley Mow, was because someone else had been booked in their place! Secretary Philip Taylor has a new address, 5 Southdown Place, Lewes, East Sussex, BN7 2BJ.

SALFORD AS: The annual outing was to London University where one of their members is studying. Although most of the research is done abroad, the Department of Astronomy still does some work on asteroids and double stars here in England. During the Salford Show the society took advantage of the fine weather and the pub were able to see some sun-spots with the telescopes on display. Interest was high and they had large crowds at the stands.

Slide and video shows of society activities to be held on open nights and weather permitting, observing through the 18-inch (I must thank Ken Irvine for offering a video of Sheffield's 50th Anniversary Symposium, we look forward to seeing this record of our special day.)

Salford AS meetings are held at the Chas Field Centre, Salford, every Wednesday, 7.30pm start. Visitors most welcome.

SHEFFIELD AS: The Annual Astronomical Auction at the Christmas meeting once again proved to be a winner. In just one hour over £65 was raised for funds. Items ranged from the usual books and magazines to the unusual and rare - Isaac Newton's hat and a garden gnomel! We were told by interest was drawn to small and small bodies of the solar system. (Good grief!)

Publicity wise, new posters are being designed for the New Year to attract more members.

Slight problems with the telescope drive seem to have been overcome. During the summer months the observatory and telescope will need to be repainted. All ready for National Astronomy Week and we hope a flood of visitors.

On the morning of the 14th November I saw magnitude-10 fireball while I was at work. It was 05.45am, duration was 10 seconds, fireball and train were a brilliant white

estimated the train to be over 110° in length. Path was from between Procyon and Pollux, through Le Minior and ending near Arcturus. The BLS and BAA were informed.

SOUTH WEST HERTS AS: Members were sent a questionnaire. Observation wise, planets were the most popular followed by general observing and astro photography. Interest at meetings put the solar system in front with deep space/cosmology and astronomical photography joint second. Most members did or wanted to use the telescope but less than half questioned wanted to join the Committee.

At the observatory, it was hoped to arrange a working party to do some painting and hedge trimming.

WEST OF LONDON AS: The observing site at Northwood Golf Course has had to be abandoned. It would seem that a once derelict house nearby is now to be occupied again and streetlights in the area have increased considerably. South West Herts have kindly allowed them to use their site at High Top, Flaunden, but not the telescope.

The annual society dinner was to be held on January 28th.

The meeting on February 11th will include a short film of a visit to the AAC made earlier in 1984.

During November, Robin Scagell made a return visit to La Palma. He was interested to see how things had grown since he was there two years ago. He said that there were rumours about that the Isaac Newton Telescope was almost unusable because of vibration problems.

WEST MIDLAND AA: Firstly thank you for your Christmas card, the only society to send me one.

Their usual magazine Nova, has been substituted again (for Christmas) by "An Astronomical Portrait 1985". A magazine full of information on planetary and lunar data, meteor diary and of course Comet Halley. The information contained in the magazine is intended to last the whole year.

The meteor diary is especially comprehensive and contains no less than fifty showers!

It does not contain, however, any society news. No doubt this will return to normal with the next edition of Nova.

WEST YORKSHIRE AS: A welcome return to the Society News. Where have you been?

Derek Hurton comments that it has been a very busy year, in particular the constant stream of visitors to the observatory. He sees no respite, in fact an increase is more probable.

In the observatory, the main activity has been in the darkroom. A black and white enlarger has been purchased and has been used to produce photographs in the magazine Photos. A new finder on the telescope is performing well. Serious thoughts are being given to producing an off-axis guider which will mean a variable frequency drive to take advantage of its facilities.

Society outings seem to be stretching further afield. Plans are in hand to visit Birr Castle, Parsonstown in Ireland. They would hope to see Lord Rosse himself while they were there. (The Patron of the Society is The Rt Hon The Countess of Rosse.)

Even more distant is a major excursion in 1986 to view Comet Halley from the Canary Islands. Plans at the moment will see them arrive during the last week in March and stay a fortnight. During the stay, permission has been given to visit the Isaac Newton Telescope and as Derek says,

Well, I wish West Yorkshire and ALL societies throughout the country they very best for 1985 and success in your future plans.

David Hinds Limited

LAST FEW

12 inch PARABOLOIDS

WITH FLATS

£230

DELIVERED

tel: (0442) 53229

DIDYMIUM FILTERS again available until February 9: 75X75mm @ £37-50 post paid. SPEEDIBREWS, 54 Lovelace Drive, Pyrford Woking, Surrey, GU22 8QY; 09323 46942.

ASTRO-CALENDAR 1985

This ever popular publication can be obtained from Rosemary Naylor, 256 Recup Road, Todorden, Lancs, OL14 7JL. The astro-calendar is produced by Bob Owens of the Cardiff AS and contains monthly charts of stars and planets, with descriptive notes on observing them. It is very good value at the inclusive price of 60p each, £6.00 for 10, post paid. Please order in bulk and make cheques payable to the Federation of Astronomical Societies.

PRO-AM CRICKET MATCH

Ian Ridpath's report appeared in newsletter no 3, but due to pressure of space the details of the teams had to be held over until this issue.

Teams: SAGAS - Gregory Smye-Rumby; Alan Drummond; Ian Ridpath; Brian van de Peer; Ian Griffin; Andy Stelling; Mathew Dowdell; Gary Holland; Barry Moppet; John Howe; Roy Easton; Simon Gidden.

ROO - Sarah Griffin; Alan Bridger; Clive Tadnunter; Dave Pike; Dave Culton; Neil Reid; Dave Stickland; Joss Bland; Max White; Rodney Smith; Bob Argyle.

Man of the Match: Clive Tadnunter, ROO (23 and 2 for 6).

ROSEMARY NAYLOR stocks large colour posters. Choose from 26 great subjects: Earth in space, Armstrong on Moon, Earthrise over Moon, First launch Space Shuttle Columbia, Challenger over Earth, Jupiter with montage of 4 moons, Saturn with montage of 6 moons, Saturn from beyond, Orion Nebula, Horsehead Nebula, Milky Way in Sagittarius, Eagle Neb in Serpens, Lagoon Neb in Sag, Helix Neb in Aquarius, Vela supernova remnant, Rho Ophiuchi and Antares, Centaurus A galaxy, Spiral galaxy in Antlia, Spiral galaxy in Sculptor, Crab Nebula, North America Nebula, Veil Nebula, Dumb-bell Neb, Trifid Neb in Sag, Rosette Neb in Monoceros, Pleiades Star Cluster. Select any 6 and quote one alternative which may be substituted. Six posters mailed per tube for £19.50 inclusive, from Earth and Sky, 21a West End, Hebden Bridge, West Yorks. Cheques to Earth and Sky. Allow 2 weeks for delivery. s.a.e. for book list, slide list. Tel: 0422 845443 day/070681 7767 ev.

This year's convention will be on Saturday 1st May at the Herbert Lecture Theatre, Coventry. The price remains the same as last year, £2.50 per person, and please remember that societies sending six or more delegates will get a year's free subscription.

Full details will be given in the next newsletter but speakers will include Dr Ann Cohen from Jodrell Bank and Mike Pace from Newchapel Observatory. All the usual competitions will be run and anyone wanting display space should contact the organiser, Mike Pace, on (09363) 6514.

Applications for tickets should be sent to Ken Marcus, 5 Cedars Gardens, Brighton, BN1 6YD.

MERIDIAN CENTENARY WALK, AUGUST 1984

by Philip Taylor (Brighton AS)

The Meridian Walk went ahead as planned, starting from Peasehaven on the South Coast on the morning of Friday August 17 and finishing at the Old Observatory at Greenwch on the following Monday afternoon. We were received on the Meridian line in front of the City Transit Circle by Stuart Malin, the Director of the Old Observatory, along with Heather Couper and Nigel Henbest. Drinks and a buffet meal were served in the dome of the 20-inch telescope and the walkers were joined by many friends, including three who had cycled south from the North East London Astronomical Society.

Four walkers had completed the full distance of the walk (estimated at about 75 miles): Alan Drummond (Crawley AS), Peter Fisher (Brighton AS), Nigel Houghton (Doncaster AS) and Philip Taylor (Brighton AS). In all, 25 different walkers participated in the four days of the walk representing six different astronomical societies. Almost all the walkers stayed under canvas each night at the SAGAS Astro-Camp in the Ashdown Forest.

There was quite a lot of interest from the media in the event: there were reports in the Brighton Evening Argus, Sussex Express and East Grinstead Courier newspapers as well as Thames TV.

The original idea for a walk up the Greenwich Meridian came from Chris Green of Brighton AS nearly two years ago and was greatly encouraged by the Meridian Centenary celebrations at Greenwich organised by Carole Stott and others from the Old Royal Observatory. A lot of preparatory work went into the walk in terms of route planning both on maps and on the ground. Thanks here, particularly, to Adrian Hills and Chris Green of Brighton, Gregory Smye-Rumby of Orpington and Bill Goody of Croydon.

Thanks are also due to Alan Drummond, Peter Fisher and Ken Marcus for help in transporting the walkers: the arrangements became quite complex at times and would have been almost impossible without the minibus from Brighton College of Technology!

The Sun shone on us every day throughout the walk, at times too hot for comfort. But for all who participated in it, the Meridian Centenary Walk of 1984 was an enjoyable and unforgettable experience.

Small ad

Two free ZX81 astronomy programs (16K) Sun and Moon finder and Planet finder. Both give positions in RA and Dec.

Send either a blank cassette plus return postage or a £1.00 postal order and your address to:

D Swindells Esq
73 Badger Road
Woodhouse
Sheffield S13 7TQ

Letters

... a few paragraphs about "SpaceLine".

Dear Mr Bolland

Dear Mr Bolland

Sidmouth
6 December 1984

... about the Norman Lockyer Observatory. Matters still rumble on. The latest is a possibility of purchase by the East Devon County Council and others, provided that Exeter University's price can be met. The University, are, of course, the managers of the NLO Corporation Trust and must do the best they can for the Corporation. I think we have all been waiting to hear whether the Department of the Environment have agreed to list the domes and "the long building" as historic buildings. This, I understand, they have now done. The price of the land on which the domes stand may well be affected by this fact.

We now await the re-opening of negotiations.

Best wishes,
Yours sincerely

Ross Meadows
(Secretary - Sidmouth & District AS)

(Editor's note: It is good to get some up-to-date news of the NLO. If any readers find themselves in the West Country, don't miss a visit to this delightful little observatory. For details of access, etc, please see the latest FAS Handbook.)

Dear George 4th December 1984

I have been a member of the Wolverhampton Astronomical Society for about 1 1/2 months now ... I have just received issue number 3 of your newsletter and you ask asking for a name for it. How about "OPEN AIR".

"Open Air" could mean: the open air of the night sky or, it is the place to air your views on astronomy topics. What do you think?

Yours sincerely Neill R Tomkins

Dear George 5th December 1984

With regard to the questions posed by Clive Purchase in the last newsletter, the answer is fairly straightforward. I mount the negatives in slide mounts and then use a slide copier. They can be made by contact printing in which case it is worth making a simple device to hold the film and negative in register while the light is flashed on and off.

The film to use is Kodak Technical Pan 2415 because of its high resolution and ability to increase the contrast of the original, thereby revealing detail not previously apparent. The film should be developed in D19 developer 4-5 minutes at 20°C. Both film and developer are available from Speedibrews.

One snag I have found with a slide copier is that a very bright day is necessary as the film is fairly slow and the f/ratio of the slide copier is necessarily large. To overcome this I have discovered that if a flash is mounted on the top of the camera in the usual way, and the slide copier is pointed at a white projection screen, the results are excellent. The exposure can be varied by varying the distance from the screen.

Best wishes

Geoffrey Johnstone
(Coventry & Warwick AS)

HELP!

I have almost run out of copies of newsletter Nos 1 and 2. If any society has some spare copies of either issue, I would be most pleased to receive them - EDITOR.

SpaceLine is the latest in British Telecom's series of Guidelines and is a good success with up to 18,000 callers a week dialing in. In fact, there is only one other guideline that pulls in more callers (Cricket with up to a million on a good test match day). SpaceLine started during space shuttle mission 41-B in February 1984 and gives a few minutes on a "spacey" topic that is changed every week, and every other day during shuttle flights.

I try to be wide-ranging in the topics. What's visible in the night sky, important astronomical events and discoveries, shuttle, Ariane and Russian space missions and almost anything that would inform, entertain and sometimes amuse. In fact, callers from all over the world ring SpaceLine.

SpaceLine will be expanding in the future with more local numbers and may include a live link-up to NASA at Houston during shuttle missions. Also we will be starting satellite predictions for those who want to pick up weather maps from Meteorat and NOAA themselves. We also hope to publicise meetings and events.

Although of interest to amateur astronomers SpaceLine is intended mainly for the public at large, particularly the young, in a hope to get more people interested in space and astronomy.

Alongside SpaceLine (which is available 24 hours a day) I also produce "3rd-Facts in Orbit" on Oracle (page 558 on Friday, Saturday and Sunday) which reflects similar things in a different format.

If you need any more info on SpaceLine or Oracle or want to publicise any of your events then do write/ring me.

Yours

Dave Whitehouse

PS: SpaceLine - 01-246-8055.

(Editor's note: Dr David Whitehouse works at the Mullard Space Science Laboratory, Dorking in Surrey.)

Dear George January 4th 1985

RE: 2nd EAST ANGLIAN AST. SOCS. CONVENTION

Due to problems beyond our control the convention will now be held on 23rd February at Silver End Village Hall, near Braintree, and NOT on 2nd February at Halstead.

For further information I can be contacted on Halstead (0787) 476844.

Yours sincerely

Andrew Gatward
(Chairman, Braintree, Halstead & District AS)

Dear Mr Bolland December 11 1984

Thank you for the copy of your newsletter. I'd appreciate receiving more copies of it as it comes out. Our opportunities for keeping up with the doings of UK amateurs are very scant.

Once again, thank you.

Sincerely

Robert Burnham
Senior Editor, ASTRONOMY Magazine
Milwaukee, USA.

NEXT ISSUE

The next newsletter will be published late March. The deadline for copy is 6th March 1985. - Ed.

Clive Purchase asks how to make a projection slide from a monochrome negative. Most people load a camera with a slow film like Pan F, attach it to a slide copier and bash on regardless. This works OK for many but it does mean buying the copier and locks up a camera for the duration.

The better way is to use a copy film. These have better contrast, needed for astrophotos, but also work under paper safelights and with the same developer Kodak's 5302 is the normal film but 11th can be used. Both can be used for contact printing. The advantage here is that you can see what you are about (by safelight) and a piece of glass will do instead of a full contact frame.

The important thing to remember is that, unlike papers, the background MUST be black - otherwise the film will fog. Is this Clive's problem? Any black paper will do: try backing paper from a roll film, or even carbon paper.

Copy film can be treated like paper with this black backing to make super selective enlargements. There is also a direct positive film which will make nice higher-contrast NEGATIVES for professional-looking results or a second generation originals. This film is LPD4 and treated just like paper. Giant enlargements can be made from sheet versions of these 3 films.

MICHAEL MAUNDER : SAE for more info.

54 Lovelace Drive
Pyrford
Woking
Surrey

Beacon Hill Telescopes

BRITAIN'S NEWEST SUPPLIERS OF
COMPLETE ASTRONOMICAL TELESCOPES
AND ACCESSORIES

- * REFLECTORS FROM 6" TO 14"
- * REFRACTORS
- * EQUATORIAL MOUNTINGS
- * EYEPieces
- * V.F.O.s
- * BINOCULARS
- * BOOKS
- * MYLAR SHEET
- * MIRROR KITS
- * ALUMINIZING SERVICE
- * GAS HYPERSENSITIZING SVC

SEND 50p FOR ILLUSTRATED CATALOGUE TO:-

BEACON HILL TELESCOPES,
112 MILL ROAD, CLEETHORPES,
SOUTH HUMBERSIDE, DN35 8JD.
TELEPHONE 0472692959.

R. A. MARRIOTT, F.R.A.S.

24 Thirlstone Road, Far Cotton
Northampton, NN4 9HD
Telephone Northampton (0604) 65190

RARE AND ANTIQUARIAN BOOKS
ON
ASTRONOMY
15th to 20th Century

From its emergence as a true science to the
considerable advances of recent years

Catalogues issued
Postal business only