



# NEWSLETTER

Sept. - Nov. 2017 Issue 180



*Solar Observing in the Brecon Beacons National Park*

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Welcome to the first newsletter of the 2017/18 CAS talks programme. I'd like to take this opportunity to welcome back existing members to the Society, as well as any new members joining the Society for the first time. The Committee hopes you enjoy the programme we have created. An early highlight is an EXTRA event to be held at The Prince Phillip lecture theatre, on **FRIDAY** 15<sup>th</sup> September, when we are privileged to receive Professor Jim Al-Khalili, from the University of Surrey as our guest speaker. Professor Al-Khalili is a theoretical physicist, author and broadcaster, having appeared on many BBC and Discovery science programmes. You are reminded that the Jim Al-Khalili's event is for **MEMBERS ONLY**, so make sure your membership is up to date (see below). The venue, The Prince Phillip lecture theatre, located on the 4<sup>th</sup> floor of the main building, while larger than our normal lecture room, is only able to hold around 200 people, so you are advised to arrive early to secure seats. Later in September we have Dr Allan Chapman, a regular visitor to the Society, providing another of his excellent talks.

At this time of year, most member subscriptions are due for renewal. Our Membership Secretary, Katherine, kindly asks you to renew your membership as soon as possible, to ensure entrance to the Jim Al-Khalili's talk. Failure to provide membership details will mean you could be denied access. Also Katherine will **NOT** be taking any subscription payments on the evening of the 15<sup>th</sup> September.

I hope you managed to squeeze in some observing during the Summer months. Whether it be lunar or solar observing, night time meteor spotting or perhaps a spot of eclipse chasing, the heavens continue to provide a wealth of visual splendours to savour. With the lengthening evenings, the opportunities for observing are enhanced, though the weather at this time of year can be something of a detriment. Let's hope the clouds stay away. Assuming they do, why not attend a forthcoming outreach event, or join us at an observing session or star party at Dyffryn Gardens. A friendly welcome is always assured and spending time with like minded people can enhance your enjoyment of our fascinating hobby. Details of forthcoming events are contained in the Almanac section of this newsletter, or are available on the Society web site.

This edition of the newsletter contains articles of our soggy, but successful, solar observing outreach event in July in the Brecon Beacons National Park, an article from Theresa about trip to observe the recent solar eclipse in America, as well as the usual Almanac data. As always, I hope you enjoy.

**Happy Observing**

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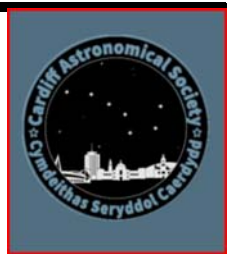
Visit CAS on the web at

<http://www.cardiff-astronomical-society.co.uk>

General enquiries can be sent to:

[info@cardiff-astronomical-society.co.uk](mailto:info@cardiff-astronomical-society.co.uk)

As a CAS member you can use the **Members Area** of the web site to view Society handbooks, committee minutes, newsletters, CIO documents and other Society material of note.



**twitter**

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CAS is now on twitter, to follow us, follow **CardiffAS**

**facebook**

CAS is also on facebook at

<http://www.facebook.com/CardiffAS>

# Solar Viewing - Brecon Beacons Mountain Visitor Centre July 30<sup>th</sup>

**Theresa Cooper**

Are you old enough, like me, to remember the weather clocks with the man and woman out, in, out, in.... depending on the rain? Well the CAS team felt very much as if we were one of those today as frequent showers interspersed some hot sunny viewing conditions.



*Weather clocks of 'old'.....*

But never mind, being made of stern stuff, we persisted, didn't give up and joined in the 60<sup>th</sup> anniversary celebrations for the Brecon Beacons National Park.

We had a good number of very pleased customers from several countries, enjoyed free, warm freshly made Welsh Cakes and



*All we need now is the Sun!!!!*

had a visit and thanks from the Chairwoman of the National Park.

As always, we are looking for more members to join in and help. Sometimes the small team could do with a break (to eat even more



*Our new Society Secretary, Mike Foley, showing his photos during one of the sunnier portions of the day*



*Our, and the telescopes, protection during the frequent showery 'interludes'*

Welsh Cakes!) so if you are interested in a grand day out or star gazing at a dark site, please come and see me, or any other member of the Committee. You will be very welcome!



# Up-coming CAS Public Events

| Date                  | Time              | Event                  | Venue   |
|-----------------------|-------------------|------------------------|---|
| 14 <sup>th</sup> Oct. | 6:30pm - 9:30pm   | Stargazing Evening     | Brecon Beacons Mountain visitor Centre, Libanus |
| 28 <sup>th</sup> Oct. | Details to Follow | CAS Stargazing Evening | Dyffryn Gardens                                 |
| 18 <sup>th</sup> Nov. | Details to Follow | Stargazing Evening     | St Fagans Museum                                |

Further details of these , and other upcoming events can be found on the CAS web site

## CAS Lectures September - November

| Date                                    | Title  | Lecturer  |
|---|--|---|
| 7 <sup>th</sup> Sept.                   | Gravitational Waves: An Update.                              | Dr. Patrick Sutton, LIGOS   |
| 15 <sup>th</sup> Sept.<br><b>FRIDAY</b> | The Search for Extraterrestrial Life.                        | Professor Jim Al-Khalili, University of Surrey. <b>CAS MEMBERS ONLY</b> |
| 21 <sup>st</sup> Sept.                  | Mary Fairfax Somerville.                                     | Dr Allan Chapman, University of Oxford                                  |
| 5 <sup>th</sup> Oct.                    | Dude! Where's My Spacecraft: The Hunt for Apollo 10's Snoopy | Nick Howes, Aerolite  |
| 19 <sup>th</sup> Oct.                   | The Day They Launched a Woodpecker Part 1                    | Jerry Stone, Spaceflight UK   |
| 2 <sup>nd</sup> Nov.                    | Northern Lights  | Will Gater, Astronomy Writer, Author and Journalist                     |
| 16 <sup>th</sup> Nov.                   | The Large Scale Structure of the Universe                    | Dr Mattia Negrello, Cardiff University                                  |
| 30 <sup>th</sup> Nov.                   | The Travelling Astronomer: Observing from Spain              | Andy Burns, Wiltshire Astronomical Society.                             |

Note: - The lecture on 15<sup>th</sup> September is a **CAS MEMBERS ONLY** event, and is being held in a larger lecture theatre - The Prince Phillip N/4.07 on the 4th floor.

**Proof of membership will need to be provided prior to admittance.**

## Observing Sessions

| Date                                       | Day        | Time          | Venue           |
|--|------------|---------------|-----------------|
| 15 <sup>th</sup> or 16 <sup>th</sup> Sept. | Fri or Sat | 21:30 - 00:00 | Dyffryn Gardens |
| 22 <sup>nd</sup> or 23 <sup>rd</sup> Sept. | Fri or Sat | 21:30 - 00:00 | Dyffryn Gardens |
| 20 <sup>th</sup> or 21 <sup>st</sup> Oct.  | Fri or Sat | 20:00 - 00:00 | Dyffryn Gardens |
| 17 <sup>th</sup> Nov.                      | Fri        | 20:00 - 00:00 | Dyffryn Gardens |
| 24 <sup>th</sup> or 25 <sup>th</sup> Nov.  | Fri or Sat | 20:00 - 00:00 | Dyffryn Gardens |

**NOTE:-** Where two dates are given we will attempt to hold the session on the first date, weather permitting, otherwise we will try again on the subsequent date. All dates are subject to weather conditions. For confirmation of any session please check on the CAS Web site or the CAS Observing line 07535 718 669 for more information.

# Almanac

Compiled by John Richards

## Sun Rise/Set & Twilight

| Date                       | Astronomical Twilight Begins | Sun Rise | Sun Set | Astronomical Twilight Ends |
|----------------------------|------------------------------|----------|---------|----------------------------|
| 1 <sup>st</sup> September  | 03:19                        | 05:25    | 19:00   | 21:05                      |
| 8 <sup>th</sup> September  | 03:35                        | 05:36    | 18:44   | 20:44                      |
| 15 <sup>th</sup> September | 03:50                        | 05:47    | 18:28   | 20:25                      |
| 22 <sup>nd</sup> September | 04:04                        | 05:58    | 18:12   | 20:06                      |
| 29 <sup>th</sup> September | 04:17                        | 06:09    | 17:56   | 19:48                      |
| 1 <sup>st</sup> October    | 04:21                        | 06:13    | 17:51   | 19:43                      |
| 8 <sup>th</sup> October    | 04:33                        | 06:24    | 17:35   | 19:27                      |
| 15 <sup>th</sup> October   | 04:45                        | 06:36    | 17:20   | 19:11                      |
| 22 <sup>nd</sup> October   | 04:56                        | 06:48    | 17:06   | 18:57                      |
| 29 <sup>th</sup> October   | 05:07                        | 07:00    | 16:52   | 18:44                      |
| 1 <sup>st</sup> November   | 05:12                        | 07:05    | 16:46   | 18:39                      |
| 8 <sup>th</sup> November   | 05:23                        | 07:18    | 16:34   | 18:29                      |
| 15 <sup>th</sup> November  | 05:33                        | 07:30    | 16:24   | 18:20                      |
| 22 <sup>nd</sup> November  | 05:43                        | 07:41    | 16:15   | 18:14                      |
| 29 <sup>th</sup> November  | 05:51                        | 07:52    | 16:08   | 18:09                      |

## Meteor Showers

| Date                   | Meteor Shower | RA     | DEC             | ZHR |
|------------------------|---------------|--------|-----------------|-----|
| 9 <sup>th</sup> Sept.  | Piscids       | 0h36m  | 7 <sup>o</sup>  | 10  |
| 21 <sup>st</sup> Sept. | Piscids       | 0h24m  | 0 <sup>o</sup>  | 5   |
| 22 <sup>nd</sup> Oct.  | Orionids      | 6h24m  | 15 <sup>o</sup> | 25  |
| 3 <sup>rd</sup> Nov.   | Taurids       | 3h44m  | 14 <sup>o</sup> | 8   |
| 18 <sup>th</sup> Nov   | Leonids       | 10h08m | 22 <sup>o</sup> | 10  |

## Star Party and Observers Club Meetings

| Date                   | Day    | Time          | Venue           |
|------------------------|--------|---------------|-----------------|
| 22 <sup>nd</sup> Sept. | Friday | 19:30 - 21:30 | Dyffryn Gardens |
| 24 <sup>th</sup> Nov.  | Friday | 19:30 - 21:30 | Dyffryn Gardens |

## Publication Dates

The CAS newsletter is published at the first Society meeting of September, December, March & June. The deadline for submissions is 4 weeks before the publication date, and is 6<sup>th</sup> November for issue 181.

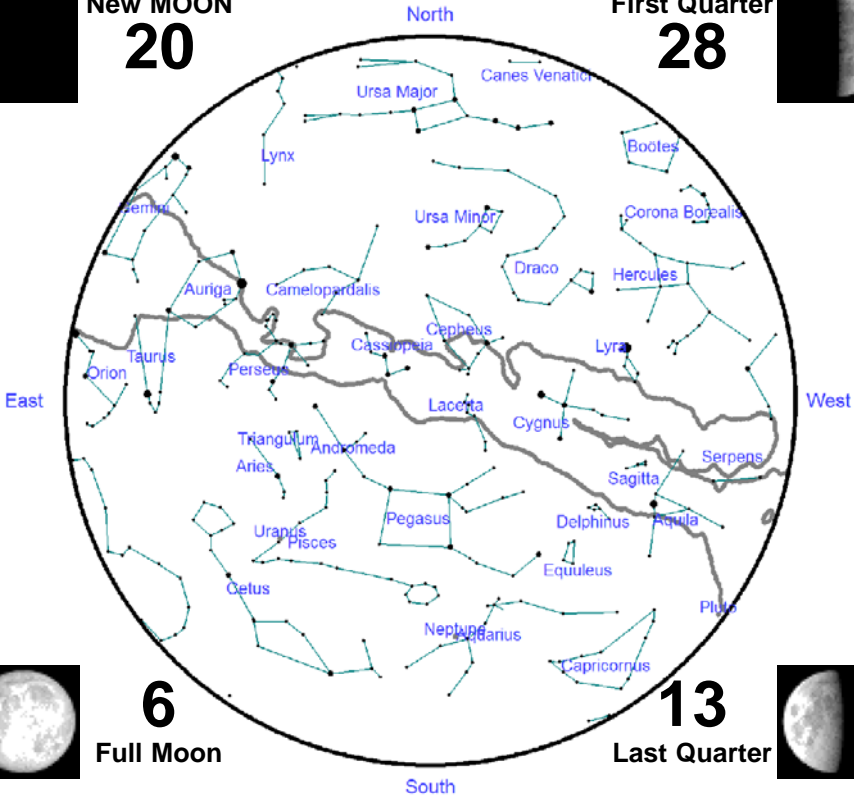
**Why not attach your article, to an email and send it to me, the Editor at [Publications.Officer@cardiff-astronomical-society.co.uk](mailto:Publications.Officer@cardiff-astronomical-society.co.uk).**

# Almanac September



New MOON  
**20**

First Quarter  
**28**

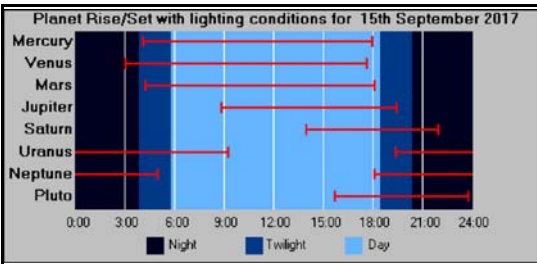


**6**  
Full Moon

**13**  
Last Quarter



|               | Constellation | R.A       | Dec        | Rises | Sets  | Mag.  |
|---------------|---------------|-----------|------------|-------|-------|-------|
| Mercury       | Leo           | 10h28m01s | +10°36'33" | 04:04 | 17:58 | -0.6  |
| Venus         | Leo           | 09h45m39s | +14°15'35" | 03:02 | 17:36 | -3.9  |
| Mars          | Leo           | 10h33m14s | +10°21'51" | 04:11 | 18:02 | +1.8  |
| Jupiter       | Virgo         | 13h33m04s | -08°34'18" | 08:47 | 19:25 | -1.7  |
| Saturn        | Ophiuchus     | 17h23m21s | -22°03'01" | 13:54 | 21:57 | +0.4  |
| Uranus        | Pisces        | 01h44m14s | +10°08'22" | 19:20 | 09:13 | +5.7  |
| Neptune       | Aquarius      | 23h03m08s | -07°03'40" | 18:07 | 05:05 | +8.0  |
| Pluto (Dwarf) | Sagittarius   | 19h28m12s | -21°31'01" | 15:55 | 00:05 | +14.3 |



## Planet Events

5th Neptune at Opposition  
15th Mercury at Perihelion (0.31 A.U.).

The data presented here is for the 15<sup>th</sup> September positional data is at 00:00 GMT/UT

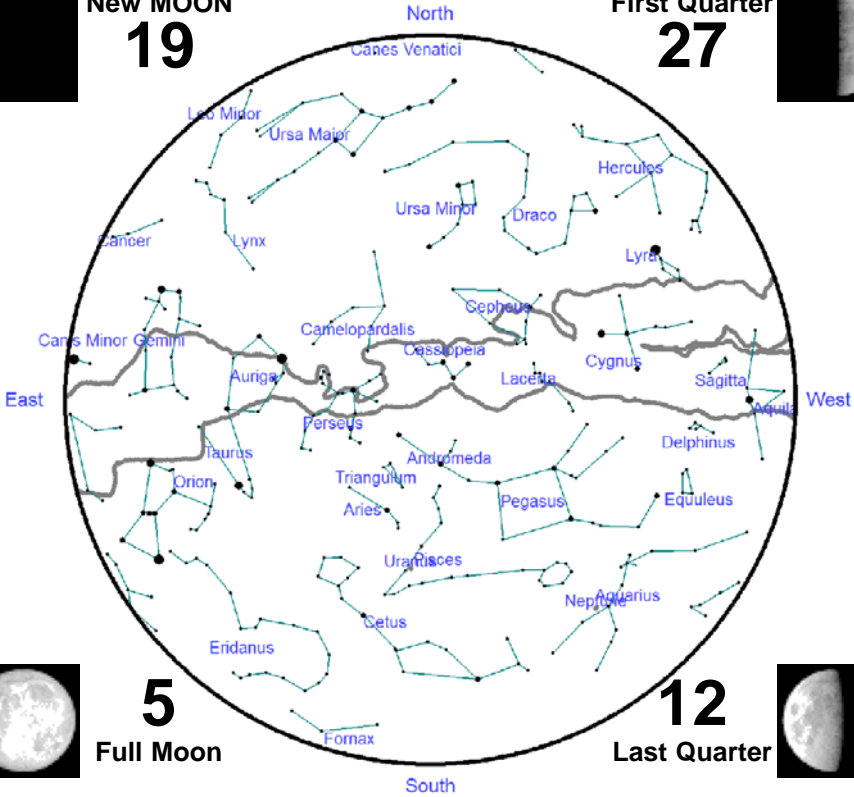
# Almanac October

New MOON

19

First Quarter

27



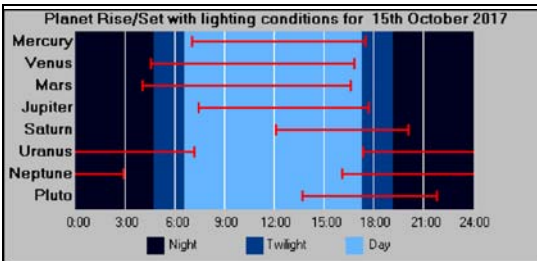
5

Full Moon

12

Last Quarter

|               | Constellation | R.A        | Dec        | Rises | Sets  | Mag.  |
|---------------|---------------|------------|------------|-------|-------|-------|
| Mercury       | Virgo         | 13h37m43s  | -09°39'48" | 06:59 | 17:26 | -1.1  |
| Venus         | Virgo         | 12h05m01s  | +01°06'04" | 04:32 | 16:48 | -3.9  |
| Mars          | Virgo         | 11h43m49s  | +03°01'05" | 04:01 | 16:37 | +1.8  |
| Jupiter       | Virgo         | 13h56m048s | -10°50'58" | 07:24 | 17:39 | -1.7  |
| Saturn        | Ophiuchus     | 17h30m26s  | -22°13'43" | 12:04 | 20:05 | +0.5  |
| Uranus        | Pisces        | 01h40m02s  | +09°44'24" | 17:20 | 07:09 | +5.7  |
| Neptune       | Aquarius      | 23h03m16s  | -07°02'49" | 16:09 | 03:07 | +8.0  |
| Pluto (Dwarf) | Sagittarius   | 19h28m17s  | -21°30'55" | 13:57 | 22:07 | +14.3 |



## Planet Events

- 3rd Venus at Perihelion (0.72 A.U.).
- 8th Mercury at Superior Conjunction.
- 19th Uranus at Opposition.
- 26th Jupiter at Conjunction.
- 29th Mercury at Aphelion (0.47 A.U.).

The data presented here is for the 15<sup>th</sup> October, positional data is at 00:00 GMT/UT

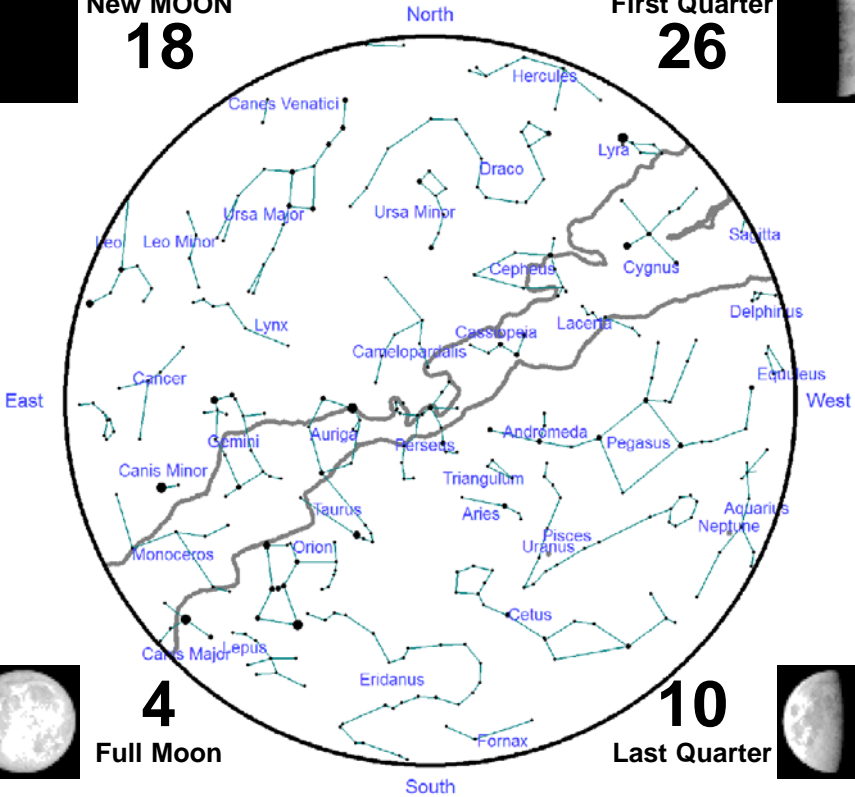


# Almanac November



New MOON  
**18**

First Quarter  
**26**

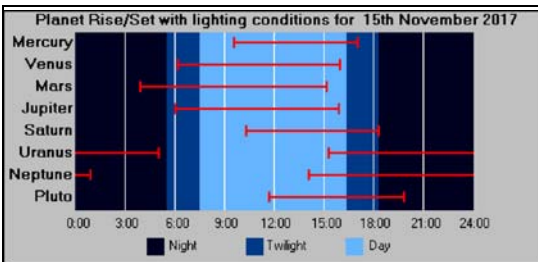


**4**  
Full Moon

**10**  
Last Quarter



|               | Constellation | R.A       | Dec        | Rises | Sets  | Mag.  |
|---------------|---------------|-----------|------------|-------|-------|-------|
| Mercury       | Ophiuchus     | 16h44m28s | -24°47'14" | 09:34 | 16:59 | -0.3  |
| Venus         | Libra         | 14h29m42s | -13°27'28" | 06:09 | 15:55 | -3.9  |
| Mars          | Virgo         | 12h55m42s | -04°45'27" | 03:50 | 15:07 | +1.8  |
| Jupiter       | Libra         | 14h22m44s | -13°07'20" | 06:00 | 15:50 | -1.7  |
| Saturn        | Ophiuchus     | 17h42m40s | -22°24'47" | 10:16 | 18:14 | +0.6  |
| Uranus        | Pisces        | 01h35m26s | +09°18'24" | 15:16 | 05:00 | +5.7  |
| Neptune       | Aquarius      | 23h03ms   | -07°01'57" | 14:08 | 01:06 | +8.0  |
| Pluto (Dwarf) | Sagittarius   | 19h28m22s | -21°30'50" | 11:55 | 20:05 | +14.3 |



## Planet Events

NONE.

The data presented here is for the 15<sup>th</sup> November, positional data is at 00:00 GMT/UT

# The Great American Eclipse 2017

**Theresa Cooper**

Was I going to be so lucky as to see my *third* total eclipse? The first two I saw with 'CAS on tour' as one of our members arranged a week's holiday around an eclipse. I have lovely memories about those trips, many sociable times, and much jollity as we got together in the evenings. Happy Days!

This eclipse would be different. An independent holiday close to that chosen by some big tour companies, but away from the main towns and in hopefully, a quiet location; small town America on the western side of the Grand Tetons National Park. And so Driggs, Idaho was to be our location. A close community and very welcoming to the influx of astronomers. We arrived early and stayed put, the media predictions of food and fuel shortages never materialised.

The hotel was like an international convention of astronomers who soon got chatting about clouds, clouds, and the possibility of more clouds to spoil the show. NASA had established an excellent outreach programme across the country which the local libraries and schools embraced with enthusiasm. Solar telescopes were setup on Main Street for the week before the event and we were welcomed to a series of talks by NASA scientists. There were many 'give-aways' some of which will soon be adorning our display boards.

The day itself dawned with a cloudless blue sky like nearly every other day of our trip but the local forecast did raise some doubts. Partial cloud with some rain. The Welsh translation reads as a couple of fluffy bits with a few spots of rain sometime during the coming week. The only real threat was smoke from wildfires in Montana but this came to nothing.

After breakfast an array of telescopes, cameras and a gazebo were setup in the hotel car park and everyone got ready. The hotel staff joined us as did a UPS driver and the town Mayor, who travelled by pushbike, and thanked us all for visiting!

Leading up to totality we had the change of light to an eerie grey and the image of hundreds of partially eclipsed Suns on the tarmac



*Image courtesy of Jose Magsaysay, San Diego Astronomical Association.*

through the leaves on some trees. Totality is spectacular of course especially as the corona appears; smaller in this case in the quiet period of a solar cycle. A ball of black surrounded by a ring of brilliant white in a navy-blue sky.

Venus was easy to spot but I couldn't see Mercury or Mars which were both close to the Sun. Birds in the trees behind us stopped singing and fluttering around, the diamond ring drew gasps from the crowd and then it was over – but the holiday wasn't.

We visited some National Parks which are rated by the International Dark Sky Association for the darkness of their skies as being Gold Star. We parked in an empty car park at one of the viewing outlooks and my jaw dropped as I got out of the car to see The Milky Way stretching from horizon to horizon looking like bright white clouds. I could follow all the contours, outline and the dust lanes. The double cluster in Perseus and Andromeda were obvious and so many stars made it difficult to pick out the patterns which I have known over many years. But no matter, I gave up on the planisphere and laid on

the ground just looking up, trying to take it all in. Warm enough at 80 degrees to do astronomy in a T shirt to the background sound of crickets. This is the way to do it .... *(editor: I'm not jealous at all!!)*

In contrast to our approach to total solar eclipses, the Native American tradition is to stay indoors with the curtains drawn whilst the Sun is reborn, staying quiet, no talking, eating or drinking. It is all about a time of renewal and perhaps a different outlook on life, one which they hope will bring them more happiness and better health.

So what next? I seem to have become an eclipse chaser. South America next year or Texas in 2024? The latter is a long duration one and tentative plans have been made to join up with the San Diego Astronomical Association. Their expert observer at public events takes the prize for the best car number plate I've seen:

**I B \*GAZIN** Amen to that.

### Contact Details

Have you changed your email address or other contact details recently? If so, you could be missing out on receiving important Society information. Please keep us up to date with any changes. Send your revised details to either our Membership Secretary ([membership.secretary@cardiff-astronomical-society.co.uk](mailto:membership.secretary@cardiff-astronomical-society.co.uk)) or Secretary ([secretary@cardiff-astronomical-society.co.uk](mailto:secretary@cardiff-astronomical-society.co.uk)).

### Caption Competition Results

Plenty of great entries, including **Betty Lane** with these captions:

'The Doctor has gone to collect the Hoover and polishing materials.'

'Excuse me, my dear fellows, I think I've lost my way. Could you by any chance direct me to planet Earth?'

**John Kinsey** provided this very accurate observation

I don't care who you are, you are not getting in to see Jim Al-Khalili unless you are a member!!

and finally, **Edward Cooper** provided these pithy captions:

Dalek: As I said, "The 13<sup>th</sup> DOCTOR needs an Equity Card"!

Dalek: Live long and prosper. Doh! Wrong cult.

Many thanks to all those who contributed.