



Cosmic Passport

SIDEWALK ASTRONOMERS

This Book Belongs To:

Family

To post your events and homemade telescopes, star parties, birthday cakes and solar event photos please go to Sidelwalk Astronomers Face Book page.

For more information on SWA outreach events, solar and night telescope plans; mirror grinding and additional resources go to: Sidelwalkastronomers.us

Thank you for participating in our events this year!

Solar Eclipses 2016



March 9th Total Eclipse — where moon blocks all the light from the sun. This one is not visible in US. But in South East Asia, Indonesia, Australia, and East Pacific Ocean.

September 1st Annular Eclipse — where the moon does NOT block all light of the sun but leaves a ring around the edge of the sun. This one is not visible in US. Will be seen in Central Africa, Atlantic and Indian Ocean.

For information on eclipses go to:
Eclipse.gsfc.nasa.gov

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September 16th will be seen in Europe, Africa,
Asia, Australia and West Pacific
March 23rd will be seen in Asia, Australia, Pacific,
Western America, West Pacific



Is where the moon moves
through a faint outer part of the
Earth's shadow and looks like a

Penumbral Lunar Eclipse

Earth Shine — Earth glow on lunar surface

Waxing Crescent Moon
1—3 day moon
@ sunset



Jan 10th to 12th
Feb 9th to 11th
Mar 9th to 11th
Apr 8th to 10th
May 7th to 10th
Jun 5th to 7th
Jul 5th to 7th
Aug 3rd to 5th
Sep 2nd to 4th
Oct 1st to 4th
Nov 10/31 to 11/3
Dec 11/30 to 12/3
Dec 30th to 1/1 2017

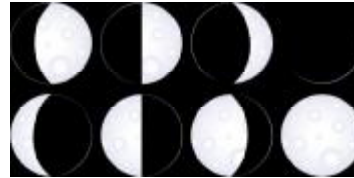
Waning Crescent
28 day old moon @ sunrise



Jan 4th to 7th
Feb 4th to 7th
Mar 4th to 7th
Apr 3rd to 6th
May 2nd to 5th
Jun 5/31st to 6/3rd
Jul 1st to 3rd
Aug 7/30th to 8/1st
Aug 28th to 31st
Sep 26th to 29th
Oct 27th to 29th
Nov 26th to 28th
Dec 26th to 28th
Dec 30th to 1/1 2017



What else can you find on the full moon?



Moon Phases write the date
of the phase you saw!

You cannot see the New Moon

Waxing Crescent on: _____

First Quarter on: _____

Waxing Gibbous on: _____

Full Moon on: _____

Waning Gibbous on: _____

Third Quarter on: _____

Waning Crescent on: _____

_____ :no tps uns

_____ :Flare on:

_____ :Filament on:

_____ :Prominence on:

What I saw on our sun:

Solar Sun Day
September 11th



tally mark the meteors you see!

Camp out, BBQ, spend the day or weekend at a national, state or local park with your family. Observe the sun during the day and lay on a blanket to count meteors at night!

It's A Family Affair Aug 12th-14th
100th Birthday of National Park Service Aug 25th



Build Your Own Telescope/
Amateur Telescope Making
Day—January 15th
start the year by making
your own telescope!

I looked through a home made telescope on:

Date: _____

Date: _____

Telescope plans:

<http://www.sidewalkastronomers.us/id5.html>

Saturn Spotting Weekend
June 3rd to 5th
Opposition June 3rd
Will be up summer to fall



I saw Saturn on:

Date: _____

Date: _____

Date: _____

Date: _____

With moon Jun 3rd; Sep 29th; With Jupiter Apr 20th; With Pleiades Jun 13th

May 9th Transits the Sun

Sunset W. horizon: Apr 18th; Jun 16th; Aug 16th; Nov 11th;

Sunrise E. horizon: Feb 7th; Jun 5th; Oct 28th;

Mercury Madness
Will be up a lot this year!
I saw the planet Mercury on:



Mars Attacks Weekend May 20th to 22nd Opposition May 22nd

I saw the planet Mars on:

Date: _____

Date: _____

Mars closest to Earth on Oct 29th to 30th

Mars with Moon: Feb 1st; Nov 6th; Dec 5th;

Date: _____

Date: _____

With Jupiter Aug 27th; Sep 18th in Virgo/Spica

With Moon: Feb 6th; Aug 4th; Sep 3rd;

Closest to Earth Perihelion Jul 17th

I'm Your Venus
I saw the planet Venus on:



Jupiter Rising Weekend
Mar 3rd to 6th Opposition
Mar 8th up from spring into summer



I saw the planet Jupiter on:

Juno arrives @ Jupiter
July 4th

With Moon: May 15th; Jun 11th; Oct 28th;
Nov 24th; Dec 22nd

With Mercury Aug 20th; Venus Aug 27th;

Date: _____

Date: _____

UK=the Plough
 Spain=Oxen & Dog
 German=Wagon
 Malaysia=Canoe Stars
 Arabic=Coffin
 US/Canada=Ladle or Dipper
 No. America Native American=Bear
 Dutch=Saucepan
 Romania=Great Wagon
 Greek=Mother Bear
 Chinese =Grain Measure
 Finland=Salmon Net
 East Asia=Right Wall
 Mongolia=Seven Gods
 Africa=Drinking Gourd
 Dipper

Circle the one you learned about the Big Dipper

ISAN

May 14th

International Sidewalk
 Astronomy Night
 being done all over the
 world tonight!



Happy Birthday John!
 September 14th

Make a telescope or astronomy themed cake, cupcakes or cookies

What flavor cake did you make? _____

Take pictures of your B-day goodies and party fun on Sidewalk Astronomers Face Book page

Who was there? _____

What we did was _____

Where was event? _____

Girls Rule Sept 17th
 With Venus & Virgo



Boys Night Out Nov 5th
 Mars & Moon



Where was event? _____

What we did was _____

Who was there? _____
