

Amazing Space!

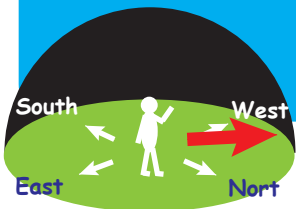
April - June 2013

Getting started in astronomy is as easy as looking up. This newsletter shows you how to find the planets, the Moon, constellations and see a solar eclipse without a telescope.

5.45 pm May 26 2013

Jupiter

Venus Mercury

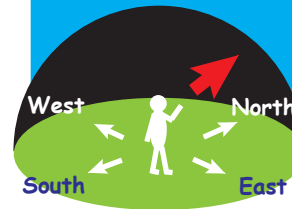


May 24 - 30:
Jupiter, Venus
and Mercury
temporarily
gather low
above the
North Western
horizon in the
evening
twilight.



Moon

Saturn



June 19: Use
the Moon to
find Saturn

Look below and
to the right of
the Moon in
the early
evening sky.
The pale yellow
star is the
planet Saturn.

(c) Paul Floyd March 2013 www.nightskyonline.info Individuals and non-profit organisations are given explicit permission to reproduce and freely distribute this newsletter in its entirety for not for profit purposes.

This newsletter is
brought to you by:



Paul Floyd's
Astronomy
& Space
Website

www.nightskyonline.info



www.extravision.com.au

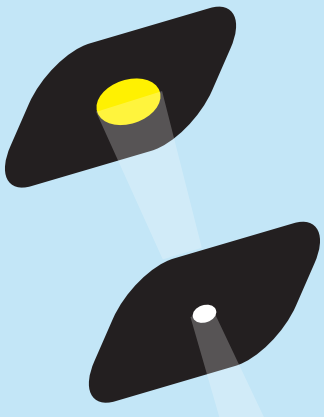


Solar Eclipse Pinhole Viewer

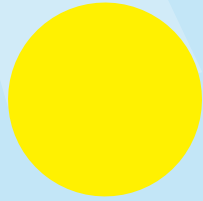
Solar Eclipse 10 May 2013

Instructions

1. Cut the viewer in half (on the dashed line).
2. Make a pinhole at the location marked.
3. Position the pinhole so the Sun's image falls onto the blank side of the second page as shown (at right).
4. Look only at the projected image of the Sun. Do not look at the Sun through the hole.
5. The larger the gap between the two pieces of paper, the bigger the Sun's image will be.



→ Make pinhole here



Paul Floyd's
**Astronomy
& Space
Website**

www.nightsonline.info

Website and outreach activities sponsored by

EXTRAVISION.com.au
'Specialising in products that help you see better'

For all your solar glasses and specialist solar filter needs:
<http://www.extravision.com.au/catalog/index.php?cPath=102>

Safety Warning!

Looking directly at the Sun without using solar filters designed to filter 100% of the Sun's ultraviolet radiation may result in permanent blindness.

©Paul Floyd www.nightsonline.info December 2012. You are free to reproduce and distribute this resource for non-commercial purposes but not to modify it in any way without permission from the author. Full licence conditions at <http://creativecommons.org/licenses/by-nc-nd/3.0/>.

10 May 2013 Annular / Partial Solar Eclipse



Note: Eclipse times listed for local time zones. Event times thanks to Google Maps. UT times here: <http://eclipse.gsfc.nasa.gov/OH/OHTables/OH2013-Tab02.pdf>

Australian Curriculum links for school teachers

Arranging for your students to indirectly observe this eclipse provides the student with a real life example of ... how the relative positions of the Earth, sun and moon affect phenomena on Earth' (Year 7 Achievement Strand Australian Curriculum (Science) Earth and space sciences content strand and space sciences content strand reference ACSSU115).

Brisbane

Eclipse begins: 7:41:13 am
Mid-Eclipse: 8:57:49 am
Eclipse ends: 10:27:57 am
Sun covered by Moon: 40%

Adelaide

Eclipse begins: 7:09:13 am
Mid-Eclipse: 8:14:41 am
Eclipse ends: 9:29:26 am
Sun covered by Moon: 38%

Sydney

Eclipse begins: 7:49:34 am
Mid-Eclipse: 8:57:09 am
Eclipse ends: 10:14:20 am
Sun covered by Moon: 27%

Canberra

Eclipse begins: 7:49:43 am
Mid-Eclipse: 8:55:13 am
Eclipse ends: 10:09:36 am
Sun covered by Moon: 26%

Cairns

Eclipse begins: 7:27:57 am
Mid-Eclipse: 8:48:41 am
Eclipse ends: 10:27:00 am
Sun covered by Moon: 83%

Hobart

Eclipse begins: 8:06:21 am
Mid-Eclipse: 8:59:03 am
Eclipse ends: 9:56:03 am
Sun covered by Moon: 13%

Perth

Eclipse begins: Not visible
Just after sunrise: 6:58:00 am
Eclipse ends: 7:45:01 am
Sun covered by Moon: 52%

Darwin

Eclipse begins: Not visible
Mid-Eclipse: 8:06:43 am
Eclipse ends: 9:28:13 am
Sun covered by Moon: 68%

Melbourne

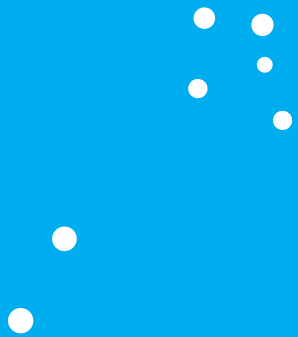
Eclipse begins: 7:50:07 am
Mid-Eclipse: 8:52:15 am
Eclipse ends: 10:02:06 am
Sun covered by Moon: 25%

Townsville

Eclipse begins: 7:28:34 am
Mid-Eclipse: 8:49:21 am
Eclipse ends: 10:26:54 am
Sun covered by Moon: 74%

©Paul Floyd www.nightsonline.info December 2012. You are free to reproduce and distribute this resource for non-commercial purposes but not to modify it in any way without permission from the author. Full licence conditions at <http://creativecommons.org/licenses/by-nc-nd/3.0/>.

Crux 'The Southern Cross' and 'The Pointers'



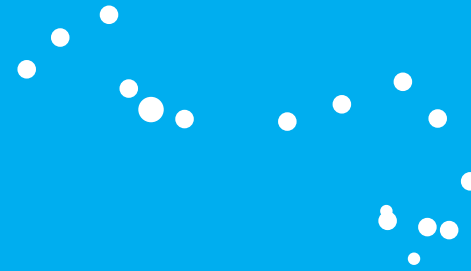
Look above the Southern horizon at the end of evening twilight (April-June).

Constellations



Constellations are imaginary pictures in the sky. Can you imagine a giant Scorpion or a Cross in the night sky?

Scorpius 'The Scorpion'



Look low above the South Eastern horizon at 7.30 pm in early May and 6.30 pm in early June.



(c) Paul Floyd March 2013 www.nightsonline.info Individuals and non-profit organisations are given explicit permission to reproduce and freely distribute this newsletter in its entirety for not for profit purposes.

Find the Moon

April - June 2013



Crescent Moon

April 16
May 15
June 14



First Quarter Moon

April 18
May 18
June 17



Gibbous Moon

April 21
May 20
June 19



Full Moon

April 26
May 25
June 23

West

North

East