RSS of Astronomy News Blog Remove from the mailing-list **February 2011**

Curiosity

Centuries ago, it was considered that the appearance of comets in the sky portended misfortune or calamity. Many violent or tragic events in history are associated with appearance of comets: the death of Agrippa (12 BC), the destruction of Jerusalem (66 BC) and the assassination of Emperor Claudius (54 AD) are a few examples.

Astronomy Calendar

February 1st: Day 32 of the gregorian calendar.
History:. In 1999, 19th flyby of the probe Galileo near Europa.
In 2003, the Space Shuttle Columbia desintegrates during its entrance in the atmopheres killing the seven astronauts aboard: Rick D. Husband, William C. McCool, Michael P. Anderson, Ilan Ramon, Kalpana Chawla, David M. Brown e Laurel Clark.

Observations: Mercury is 4ºS from the Moon.
Since we are almost at New Moon now is the time to make the observations o M1 suggested on the the Advanced Astronomical Observations Section.

February 2nd: Day 33 of the gregorian calendar.
History:. In 1964, the america probe Ranger 4 arrived to the Moon.

EDITORIAL

This month a lot of activity has been developed in our Association.

New webpages and social websites, new projects and many other thing have been done. In this issue we tell you all about the recent activity that has been developed by the webteam and we present you the new EAAE project for schools: the EAAE Sunrise Project.

We hope you enjoy it.

EAAE News

Here comes "Catch a Star"!

The new edition of the astronomical contest "Catch a star!" had its official beginning at 0h00 UTC of February 1st, 2011.

"Catch a Star!" is a contest that has been held as a result of the collaboration between the European Association for Astronomy Education (EAAE) and European Southern Observatory (ESO). This project

"Catch a Star!" includes more than one competition, so there is something for everyone. The idea of the program is to encourage students to work together, to learn about astronomy and discover things for themselves by researching information.

The goal of the European Astronomy Contest "Catch a Star" is to stimulate the creativity and independent work of students, to strengthen and expand their astronomical knowledge and skills, and to help spread the use of information technologies in the educational process.

We invite for participation in the contest all students who have studied in European countries during the current year and have a strong interest in astronomy and information technology.

The contest includes developing and presenting astronomy projects online.

The students will write a report about an astronomical object, phenomenon, observation, scientific problem, or theory, etc. The students may also wish to include practical activities such as their own observations. They will create the project's report as PDF document and upload it online on the website's application form.

The student teams who prepare the best projects will receive exciting prizes.

For the first time we can provide to student teams the opportunity to work as real astronomers.

Observations: At nightfall and early evening, people at mid-northern latitudes see the famous Belt of Orion. In Orion constellation lies one of the most famous stars of the sky, ruddy-hued Betelgeuse. Betelgeuse is a red supergiant, and one of the largest and most luminous stars known. For comparison, if it was at the center of our solar system its surface might extend out to between the orbits of Mars and Jupiter, wholly engulfing Mercury, Venus, the Earth and Mars. Kids like Betelgeuse, because its name sounds so much like "beetle juice." Try to see it from your home's sky.

February 3rd: Day 34 of the gregorian calendar.
History: In 1984, Space Shuttle program: STS-41-B Mission is launched to International Space Station
Observations: New Moon at 02h31 (UTC). Still good to try to observe M1.

February 4th: Day 35 of the gregorian calendar.
History:. In 1906, birth of Clyde Tombaugh, famous for the discovery of Pluto, in 1930. He also discovered many asteroids.

In 1932 the asteroid 1239 Queteleta was discovered by Eugène Joseph Delporte.
In 1934 the asteroid 2824 Francke was discovered by Karl Wilhelm Reinmuth.
Observations: Mars is in conjuncion wih he Sun a 17h (UC).
Two nights ago we suggested Betelgeuse. Orion's two brightest stars – Betelgeuse and Rigel –

The special grand prize is one observational session on the 2-meter Faulkes telescopes.

The Director of the Team of the 2-meter Faulkes telescopes project will provide one observational session on the Faulkes telescopes in Hawaii and Australia. We are very grateful to Sarah Roberts, the astronomer from the team of the 2-meter Faulkes telescope project for her help and collaboration.

The Director of the National Astronomical Observatory "Rozhen" in Bulgaria will provide three prizes, which are free remote 3x60 minutes observational sessions with the 2-meter RCC telescope; the 50/70 cm Schmidt telescope and the Cassegrain telescope "Zeiss-600".

The Director of the Educational office of ESO will provide three very interesting astronomical books and 10 astronomical DVDs.

We are very grateful to these astronomical organizations for their exclusive prizes and we are convinced that the students will work hard to win.

The deadline for participants to fill the form with their work is Monday, 1st July 2011, at 17:00 Central European Time.

We wish students success in their work and an enjoyable experience!

Project's webpage: http://www.eaae-astronomy.org/cas/

EAAE Sunrise Project is back again!

The EAAE is proud to announce the Vernal Equinox 2011 edition of EAAE Sunrise Project - A modern variation of the Eratosthenes Experiment. The project is a follow up of the 2010 edition and the **deadline for registration is February 20th, 2011**. Project coordination is assured by Sakari Ekko, a long time member of the EAAE that has been very active in astronomical photography among other areas.

The idea of the Sunset Project is that the students use simple self-built cardboard pinhole cameras to make very long-exposure (several days) photographs of the sunrise or sunset around vernal equinox 15. – 25.3.2011. The Sun exposes its path on the image, which is sent to Sakari Ekko after the exposure for scanning. The processed images are shared and used to comprehend the latitude-dependent differences of the path of the Sun and to find the latitudes of the different locations. The images are added to the EAAE sunrise image collection for further pedagogical use of all interested teachers.

lodge at an equal distance above and below Orion's Belt. So tonight try to look at Rigel that is 775 light-years away. If Rigel was at the same distance as the Sun it would be 40 000 times brighter.

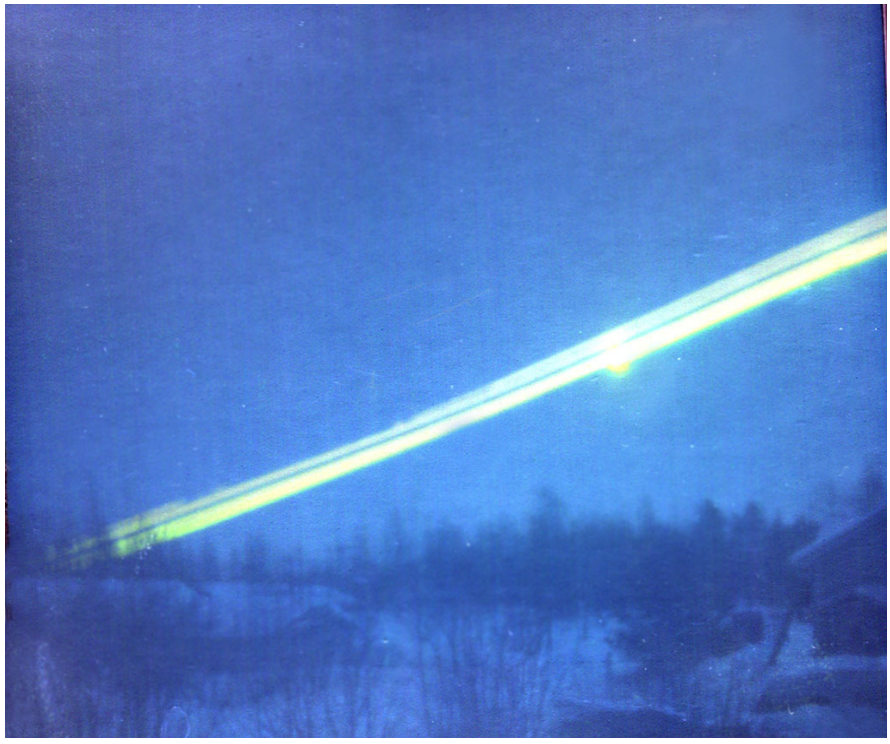
February 5th: Day 36 of the gregorian calendar.
History:. In 1971, Apollo 14 landed on the Moon, in the Fra Mauro formation.

Observations:. The waxing crescen Moon is getting closer to Jupiter in wesen sky at dusk.

February 6th: Day 37 of the gregorian calendar.
History: In 1959, the first ballistic missile Titan was launched from Cape Canaveral.

Observations: Moon is at apogee at 23h(UTC). Moon and Jupiter are very close to each other.

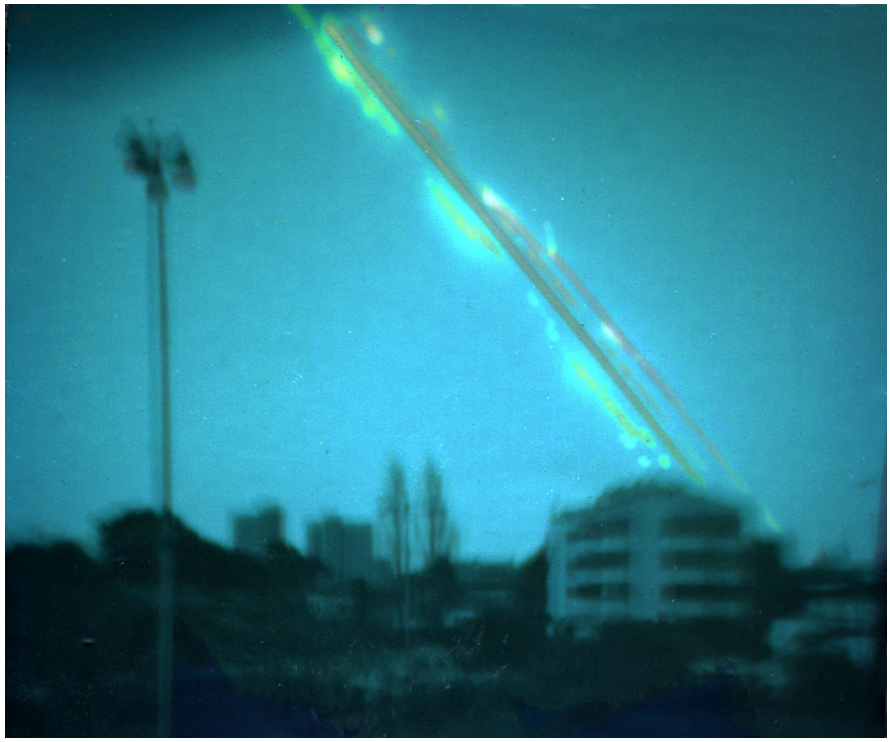
February 7th: Day 38 of the gregorian calendar.
History:. In 1979, Pluto "moved" to an orbital position closer to the Sun than Neptune for the first time after its discovery.
In 1984, the astronauts Bruce McCandless II and Robert L. Stewart make the first space walk using the Manned Manouver Unit during the mission STS-41-B of the Space Shuttle program.
In 1991, Salyut 7 desintegrates in the atmosphere above Argentina.
In 2001, mission STS-98, of the Space Shuttle Atlantis is launched, transporting the "Destiny" module of the International Space Station (ISS). The launch at sunset is considered by many as one of the most beautiful launches that was ever made.



A pinhole camera image done during the 2010 edition of Sunrise project. Sunrise 17.3.-22.3.2010, Rovaniemi, Finland, 66.5ºN 25.7ºE. Very near the Arctic circle. Look at the scanned data sheet series S.

The students will develop their skills, among other things, in basic geometrical optics, the idea of camera, self-building, observing practice, Sun's path in the sky and its effects on climate in different latitudes.

The EAAE Sunrise Project intends to promote the simultaneous development of astronomy, maths and photography skills among students.



Another pinhole camera image done during the 2010 edition of Sunrise project. Sunset, Cascais, Portugal 38º42'N 9º25'W. Photographer: Salvador M.Bruschy. Teacher: Leonor Cabral.

Project's website: http://eaae-astronomy.org/sunrise-project/

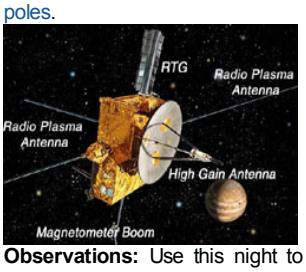
Observations:. Uranus 6ºS from the Moon. Jupiter 7ºS from he Moon.

February 8th: Day 39 of the gregorian calendar.
History:. In 1974, after 84 days in Space, the crew of the first american Space Station, Skylab, returns to Earth.
In 1994, initial flight of the CZ-3A (China).
Observations: Tonight try to find the Double Cluster in Perseus, near Cassiopeia.

February 9th: Day 40 of the gregorian calendar.
History: In 1986, comet Halley returned for its periodic visit after a 76 year absence.

Observations: The moon's disk is nearly 40% illuminated by sunshine and 60% engulfed in its own shadow. Tonight, the moon shines near the three brightest stars of the constellation Aries: Hamal, Sheratan, and Mesarthim.

February 10th: Day 41 of the gregorian calendar.
History: In 1992, the Ulysses probe uses Jupiter's gravity to slingshot to explore the Sun's poles.



Observations: Use this night to find Cassiopeia with the help of Stellarium or a planisphere.At this time of year – and at this time of night – this constellation has the shape of the letter M, and you might imagine the Queen reclining on her starry throne. But, at other times of year or night, Cassiopeia's Chair dips below the celestial pole. And then this constellation appears to us on Earth more in the shape of a W.

It happened last month

Last Month's highlights from EAAE News Blog

EAAE News

- The Sun popped off two simultaneous events A Fizzy Ocean on Enceladus
- Jupiter's 2009 scar probably made by an asteroid
- MRO HiRISE Images (2011.01.26)
- A Fizzy Ocean on Enceladus
- Hubble finds a new contender for galaxy distance record
- First Light for VIRUS-W spectrograph
- Solar Sail Stunner
- Mars Express close flybys of martian moon Phobos
- NASA spacecraft prepares for Valentine's day comet rendez-vous
- Galileo satellite undergoes launch check-up at ESTEC
- Romania accedes to ESA Convention
- AstroMundus - an Erasmus Mundus Masters Course in Astronomy and Astrophysics
- The Orion Nebula continues to surprise
- NASA challenges students to train like an Astronaut
- ESA's Mercury mapper feels the heat
- New Telescope Exploring Solar System "Outback"
- The Best Way to Measure Dark Energy Just Got Better
- NASA invites students to send experiments to the edge of Space
- ATV Johannes Kepler gears up for space journey
- WISE Beholds a Pair of Dancing Galaxies
- WISE Catches the Lagoon Nebula in Center of Action
- Sundiving Comet Storm
- NASA Telescopes Help Find Most Distant Galaxy Cluster
- ESO's Hidden Treasures Brought to Light
- Fermi discovers thunderstorms make Antimatter
- A Hole in the Sun's Corona
- Planck's new view of the cosmic theatre
- Say Hello to Astronomy evening from Bray Ireland and a Partial Solar Eclipse from Greystones Beach by Deirdre Kelleghan
- NASA's Fermi Catches Thunderstorms Hurling Antimatter into Space
- Hubble Zooms in on a Space Oddity
- NASA's KEPLER mission discovers its first rocky planet
- ESA releases first Planck data
- Crab Nebula Supernova reveals its secrets
- NASA research team reveals the Moon has Earth-like core
- Sun, Moon and Earth line up for Proba-2
- New light shed on cosmic dark ages
- January 4th Partial Solar Eclipse
- VISTA Stares Deeply into the Blue Lagoon
- A high C/O ratio and weak thermal inversion in the atmosphere of exoplanet WASP-12b
- Andromeda's once and future stars
- Identity Parade Clears Cosmic Collisions of the Suspicion of Promoting Black Hole Growth
- Quadrantids to begin the New Year

FIRST ASTRONOMICAL OBSERVATIONS

The Solar System Planets in February 2011

During the beginning of the nights Jupiter is the most visible planet , with Saturn taking over as the dominant planet after Jupiter sets. During February we will continue to have long nights in the northern hemisphere and we can take lots of pictures of these objects.

Jupiter should be one of the first points of light to shine through the twilight glow, appearing in the southwest at magnitude -2.2. The planet sets about four hours after the sun at the beginning of the month to about two and a half an hour after the sun by month's end.

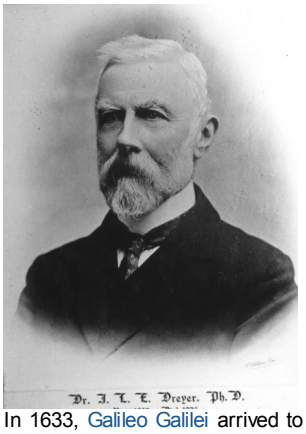
February 11th: Day 42 of the gregorian calendar.
History: In 1997, Space Shuttle Discovery was launched with the mission to repair Hubble Space Telescope .

Observations: The Moon is at First Quarter at 07h18min(UTC).

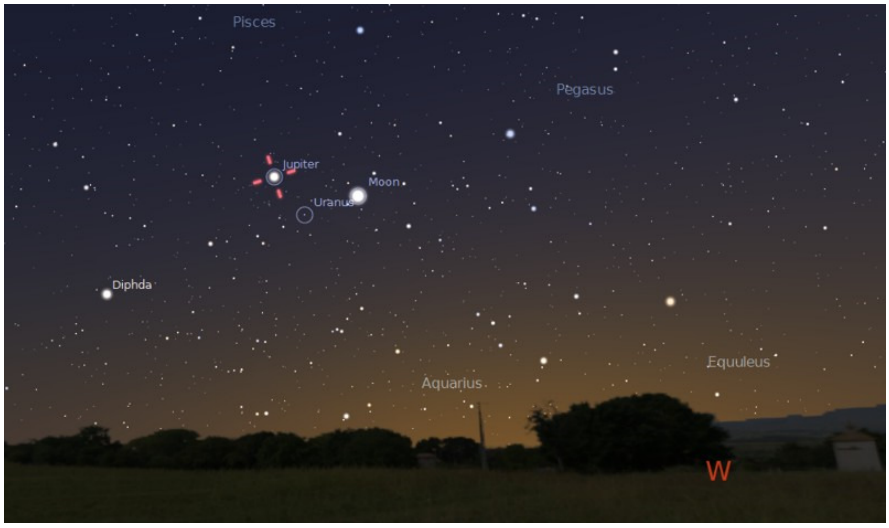
February 12th: Day 43 of the gregorian calendar.
History:. In 2001, the probe NEAR Shoemaker became the first human spacecraft to land on an asteroid, the 433 Eros.

Observations: You have been looking around the Orion constellation. Have you found the star Capella yet?

February 13th: Day 44 of the gregorian calendar.
History:. Johan Ludwig Emil Dreyer, the man that compiled the New General Catalogue of Nebulae and Clusters of Stars (NGC), was born on this date in 1852.



In 1633, Galileo Galilei arrived to Rome to be judged by the Inquisition.



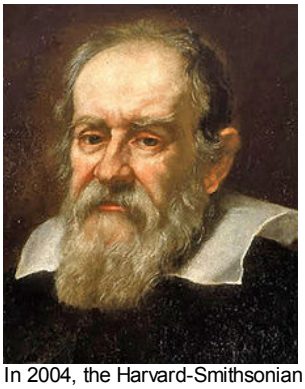
Jupiter, Uranus and the Moon on the evening of February 6th after sunset.
Click on the image to see a bigger and clearer version.

Jupiter pairs with the 14-percent lit crescent moon on February 6. Jupiter is about four degrees to Uranus's upper left in the constellation Pisces in early February, but the two grow farther apart by the end of the month. Jupiter is also close to the left of the circlet of Pisces and then climbs upward later in the month.

It is also is to make pictures of Jupiter's system, with views of the galilean moons (Io, Europa, calisto and Ganimede). You mast take car not to overexpose the images or you will loose all Jupiter's details but you also have to take care because if the exposure is to short you won't be able to see the moons.

An image of Jupiter's system taken by stuadents at Escola Secundária de Loulé. Image details: Stack of 25 images of 1.2s using a TouCam Pro webcam with an LX200R telescope.

If you have a good telescope with a good following system you can even think of doing bettyer images and zoom up Jupiter. Of course very sharp images require optimal conditions (no light pollution, dark sky, no wind on the telescope, besides all telescope requirements).



In 2004, the Harvard-Smithsonian Center for Astrophysics claims the discovery of the biggest diamond of the known Universe, the white dwarf BPM 37093.

Observations: The waxing gibbous moon is in the inside of the Winter Circle – an asterism sometimes called the Winter Hexagon (see bellow)– an incredibly large star configuration made of six brilliant winter stars of many different colours.

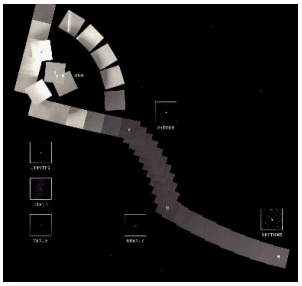
February 14th: Day 45 of the gregorian calendar.

Happy Valentine's Day.

History: In 1747, astronomer James Bradley presented his evidence of Earth's wobble, called nutation.

In 1898, Fritz Zwick, was born. He was the first astronomer to identify supernovas as a different class of objects and to suggest the possibility of neutron stars' existence.

In 1990, Voyager 1's cameras pointed to the Sun and took a series of images of the stars and its planets making the first "portrait" of our Solar System from outside.



In 2000, the probe NEAR becomes the first to orbit an asteroid, the 433 Eros.

Observations: The movie "Face Off" with Nicholas Cage and John Travolta had a great inspiration in Astronomy. In the two bad brothers where Pollux Troy and Castor Troy. Do you have any idea where those names came from? Try to find out tonight where the stars that

An image of Jupiter taken in 2010 by students at Escola Secundária de Loulé. Same wind on spot didn't allow a very sharp image. Image details: Stack of 100 images of 1.0s using a TouCam Pro webcam with an LX200R telescope.

It's time to look at it for last times because Jupiter only has one more month in the evening sky before it becomes a morning object.

When Jupiter is no longer visible it will become time to observe Saturn. We can do this until summer hollidays but if we start marking Saturn's positions now then we might do something interesting latter on in March.

Saturn as it can be seen in the night sky at about 22h at the end of the month.
Click on the image to see a bigger and clearer version.

We will talk more about Saturn next month.

Links:
Wikipedia - Mars
NASA's Mars Exploration Program

ADVANCED ASTRONOMICAL OBSERVATIONS

Messier1(M1) a supernova remnant

This Month's suggestion is a bit challenging. If you have really dark skies, you will have the perfect opportunity to "go after a crab" in Taurus. Although M1 was discovered by John Bevis in 1731, it became the first object on Charles Messier's famous astronomical list.

inspired those names are.

February 15th: Day 46 of the gregorian calendar.
History: In 1564, Galileo Galilei, was born. He was the first to use the telescope to observe space.
In 1828, Jules Verne was born.

During his life he wrote 54 science fiction related books.
In 1999, the IKONOS 2 Athena 2was launched.

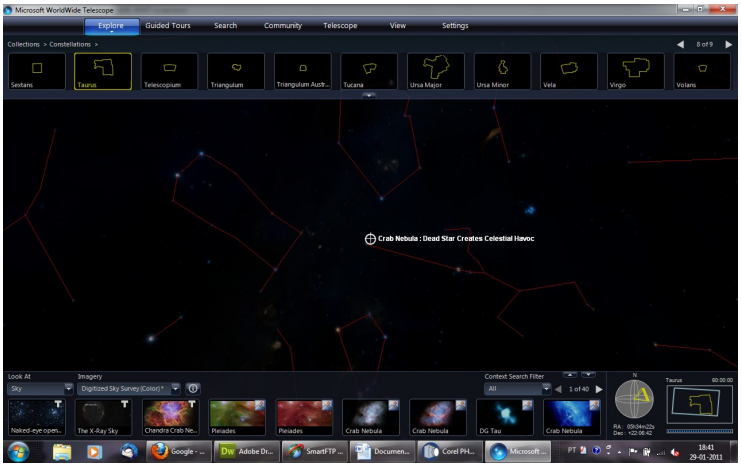
February 16th: Day 47 of the gregorian calendar.
History: Birth, in 1786, of Francois Arago who was an early and enthusiastic supporter of the wave theory of lightand in 1811 invented the polariscope to study polarization.
In 1926, the rocket launched by Robert H. Goddard becomes the first working on liquid fuel.

In 1966 the Gemini 8 was launched.
In 1999, the team of the Lunar Prospector at the NASA Ames Research Center announces discoveries that confirm that the Moon's mass is in its majority provenient of material ejected from Earth during a past impact with an object about the size of Mars.
Observations: In celebration of Arago's birth, why not go out and have a look at Merope in the Pleiades. As you observe Merope keep in mind that its light doesn't begin polarized. As it passes through the Merope Nebula, it becomes filtered. Try using a polarized filter and compare the view without.

February 17th: Day 48 of the gregorian calendar.
History: In 1958 the first probe working on solar energy, the

A screenshot of World Wide Telescope (see article bellow) exploring the Crab Nebula. Click on the image to see a larger version.

He rediscovered M1 while searching for the expected return of Halley's Comet in late August 1758 and these "comet confusions" prompted Messier to start cataloging. It wasn't until Lord Rosse gathered enough light from M1 in the mid-1840's that the faint filamentary structure was noted (although he may not have given the Crab Nebula its name). M1 is an irregularly shaped supernova remnant that has its origin corresponding to a bright supernova recorded by Chinese and Arab astronomers in 1054.



A screenshot of World Wide Telescope (see article bellow) exploring the Crab Nebula. Click on the image to see a larger version.

Finding M1 isn't very difficult: it can be seen with as little as 7X magnification.

Locate Zeta Tauri (about halfway between Orion's ''head'' and the southernmost bright star in Auriga) and aim about 1 degree (nearly a finger-width) northwest (Right Ascension: 05h 34min 32s; Declination: -22º 00' 42").

You won't see the "Crab legs" in small scopes - but if you have a large telescope then you will start to solve them.

Links:
Wikipedia - M41
SEDS - M42
NOAO - M41

ASTRONOMY SOFTWARE TOOLS

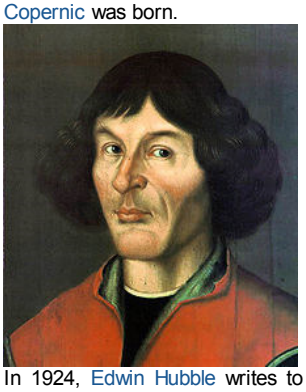
World Wide Telescope

Vanguard 1, was launched.
Observations: Neptune is in Conjunction with the Sun at 10h (UTC).

February 18th: Day 49 of the gregorian calendar.
History: In 1930, while analyzing photographic plates made in January, Clyde Tombaugh discovers Pluto. At the time it was dubbed the ninth planet until 2006, when it was included in the dwarf planet category.
In 1977, the Space Shuttle Enterprise is launched from the back of a Boeing 747.

In 2001, astronomers saw first light of one of the most ancient structures in the Universe: quasar RD J030117+002025 in the Whale constellation; the quasar lies at 13 thousand million light-years from us, which means it is seen at a time when the Universe had only 8% of its present age.
In 2003, comet C/2002 V1 (NEAT) at perihelion, is seen by SOHO.
Observations: Full Moon at 08h36 (UTC).

February 19th: Day 50 of the gregorian calendar.
History: In 1473, the founder of the heliocentric system, Nicolas Copernic was born.



In 1924, Edwin Hubble writes to Harlow Shapley: "You might be interested to know that I have found a cepheid variable in the Andromeda Nebula" (now known as Andromeda Galaxy).
In 1986, the Soviet Union launches Space Station Mir.
In 2002, the Mars Odyssey probe started to map the surface of Mars.
Observations: Moon is at Perigee at 07h00(UTC).

February 20th: Day 51 of the gregorian calendar.
History: In 1962, the astronaut John Glenn, on Friendship 7, orbits Earth 3 times as part of the Mercury Program.

The WorldWide Telescope (WWT) is a free Web 2.0 visualization software environment created by Microsoft that enables your computer to function as a virtual telescope—bringing together imagery from the world's best ground- and space-based telescopes for the exploration of the universe.

WWT blends terabytes of images, information, and stories from multiple sources into a seamless, immersive, rich media experience delivered over the Internet.

Students of all ages will feel empowered to explore and understand the cosmos using WWT's simple and powerful user interface.

A screenshot of World Wide Telescope. Click on the image to see a larger version.

After installing, to start exploring when you first open the Home screen, you'll find a dialogue box that tells you how to navigate in the WorldWide Telescope. Follow the instructions, and then, after you're familiar with the controls and features, click the Guided Tours tab.

Now you can choose from a growing number of guided tours created by astronomers and educators from famous observatories and planetariums.

For example, you can join Harvard astronomer Alyssa Goodman on a journey that shows how dust in the Milky Way Galaxy condenses into stars and planets. Or you can accompany University of Chicago cosmologist Mike Gladders two billion years into the past to view a gravitational lens bending the light from galaxies – a phenomenon that allows you to see billions more years into cosmic history.

WorldWide Telescope Educator's Tour screenshot.

The Educator's Tour by Lisa Dettloff is particularly interesting to help you star using this software in a didactical way. I am sure you will have lots of fun with it.

Amazing software...

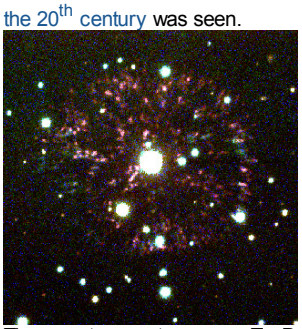
Links:
WorldWide Telescope Homepage

ONLINE ASTRONOMY

The Milky Way Project

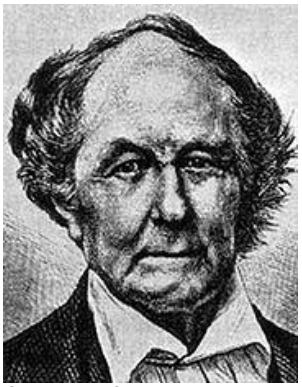
In 1965, Ranger 8 probe crashes on the Moon after making pictures of places for the landing of the Apollo missions.
Observations: After Moonless sunsets in February and March one has the best opportunities of year to see zodiacal light in the evening sky. The light appears when all traces of twilight have left the sky. It looks like a hazy pyramid of light in the west after true darkness falls.

February 21st: Day 52 of the gregorian calendar.
History: In 1901 the first Nova of the 20th century was seen.



The amateur astronomer T. D. Anderson was its first observer of the Nova.
In 1972, the russian probe Luna 20 lands on the Moon.
Observations: Saturn is 8ºN from the Moon at 17h (UTC).

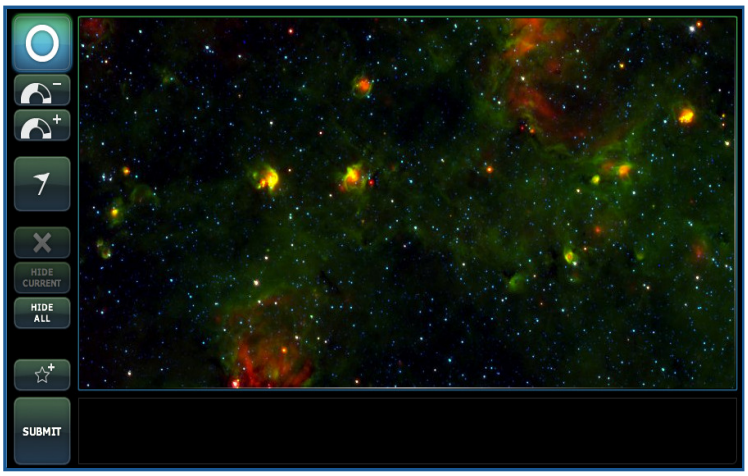
February 22nd: Day 53 of the gregorian calendar.
History: In 1632 Galileo's o "*Dialogo sopra i due massimi sistemi del mondo*" was published .
In 1799, F.W.A. Argelander was born.



Organizer of star catalogues, he studied variable stars and created the first astronomical international organization named the *Astronomische Gesellschaft*.
In 1995, the cosmonaut Valeryiv Polyakov returns to Earth after breaking the record on Mir space station : 438 days.

The Milky Way Project, launched in December 2010, is the ninth Zooniverse Project and aims to sort and measure our galaxy.

In the first stage the Project's team is asking people to help them find and draw bubbles in beautiful infrared data from the Spitzer Space Telescope. Understanding the cold, dusty material that can be seen in these images will help scientists to learn how stars form and how our galaxy changes and evolves with time.



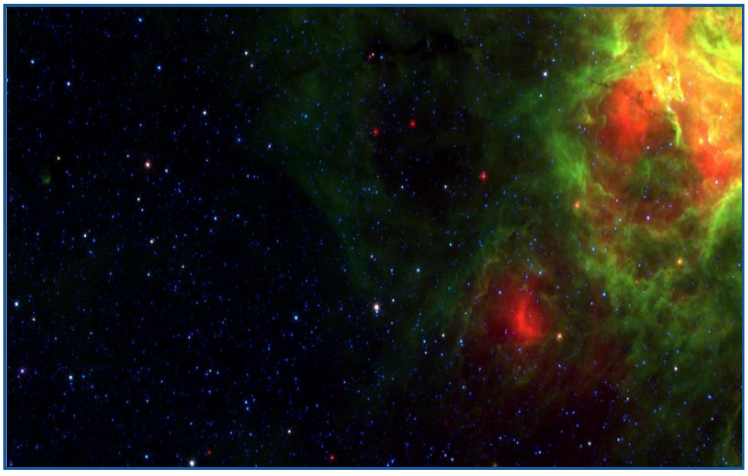
A screenshot from the Milky Way Project's environment.

As well as drawing out bubbles in our galaxy, it's also requested that collaborators mark other objects such as star clusters, galaxies and ghostly red 'fuzzy' objects. People will help to map star formation in our galaxy! Take a look at our tutorial page for the complete run down, with examples.

On the same day Zooniverse launched new collaboration and community tool: Talk. Milky Way Talk resides at http://talk.milkywayproject.org and there you can find, collect and comment on the objects you see in the Milky Way Project.

Every time you classify an image in the Milky Way Project you will be prompted to 'discuss' that image via Talk. Talk lets you collect objects together and shares those collections with everybody else. Talk is a brand new feature, developed in-house at Zooniverse HQ. It continues to evolve and change as you use it.

When you're drawing bubbles, star clusters and everything else all over the Milky Way, you have the option to click a little 'star' button to mark an image as a favourite. These are then visible in the 'My Galaxy' portion of the site. Primarily this is done to let you keep hold of the images that you like the most. A side effect though is that the Zooniverse team can see which images are collectively seen as the best by the Milky Way Project community like the image bellow.

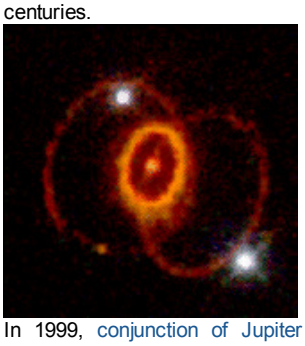


One of the Milky Way Project's favorite images.

Link:
The Milky Way Project
The Milky Way Project Favorites page

In 1995, the asteroid 1995CR passes at 7.2 million kilometers from Earth.
In 1996, the mission STS-76 of the Space Shuttle Atlantis was launched.
Observations: Aldebaran and Betelgeuse seem a bit different from the rest of the stars in their surrounding, though they are not exactly the same color. Why?

February 23rd: Day 54 of the gregorian calendar.
History: In 1950, discovery of the asteroid (29075) 1950 DA.
In 1987, the supernova of the Large Magellanic Cloud becomes visible in naked eye as a result of the explosion of the blue supergiant Sanduleak 69. Known as SN1987A, it was the "closest" supernova in the last three centuries.



In 1999, conjunction of Jupiter with Venus.

February 24th: Day 55 of the gregorian calendar.
History: In 1968 the first pulsar, discovery is announced on *Nature* by Jocelyn Bell Burnell. Hewish and Ryle co-directors of the project received Physics Nobel Prize in 1974, for explaining the observations with a model of a rotating neutron star.

In 1969 the american probe Mariner 6 was launched.
In 1979, launch of the Solwind P78-1 probe.
In 1996 the Polar probe was launched to study Earth's poles.
Observations: The Moon reaches Last Quarter at 23h26 (UTC).

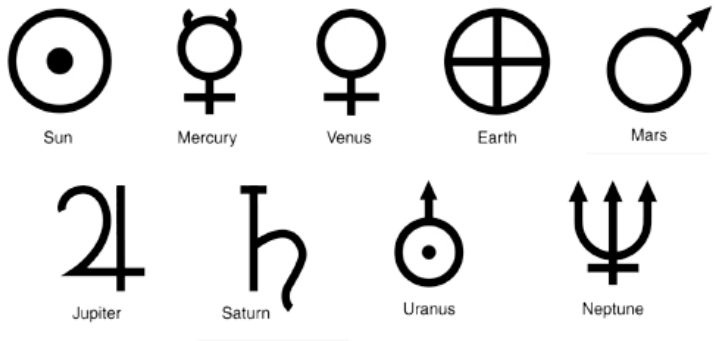
February 25th: Day 56 of the gregorian calendar.
Observations: Mercury in Superior Conjunction at 09h00 (UTC).

STUDENTS CORNER

SOLAR SYSTEM SUDOKU IS INTERACTIVE!!

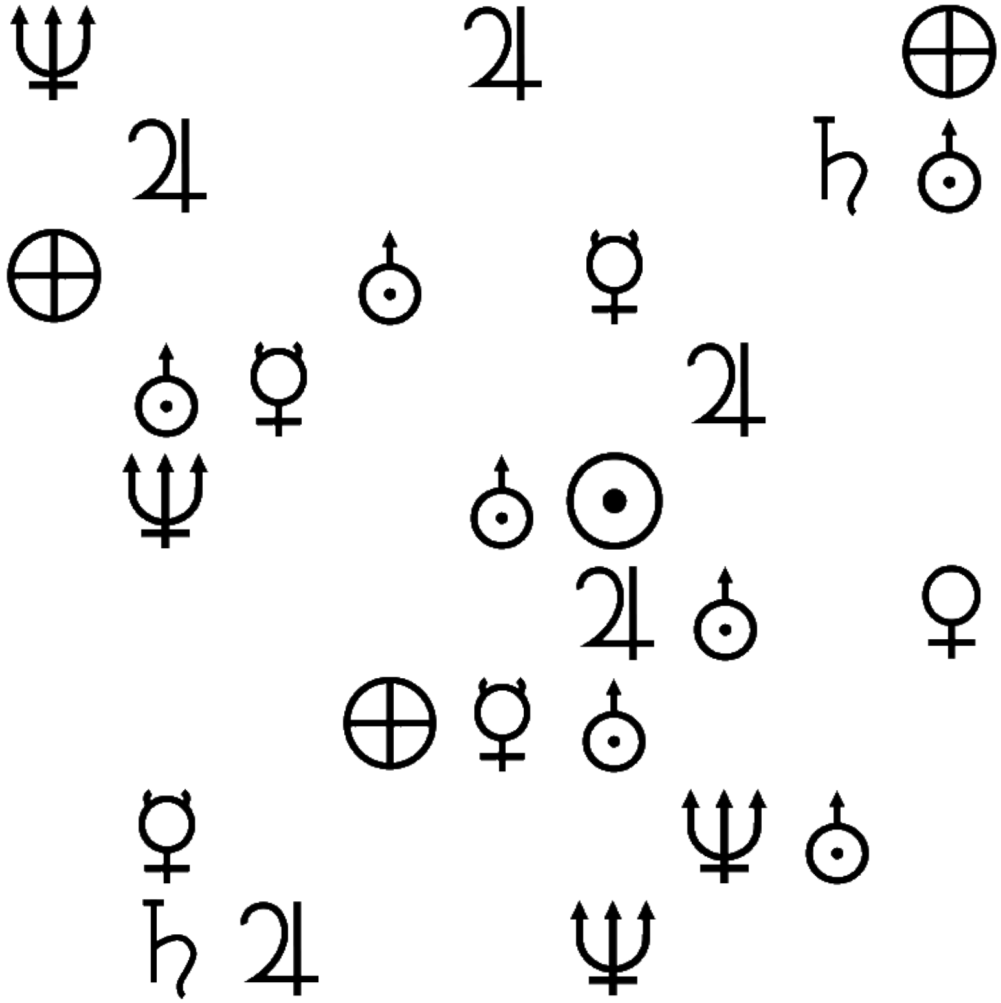
Solar System Sudoku is an EAAE transformation of the famous Japanese Sudoku. You have to put on each the nine symbols on each row, each column and each of the nine small nine spaces squares. This means each one of the nine symbols has to appear nine times on the Sudoku puzzle.

Instead of numbers, we use symbols of the nine major celestial objects of the solar system (Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune).



In this new interactive version just go on clicking on the empty cells until the object you want appears. Now you can play it interactively as many times as you want. When you finish you can start a new game.

Have fun!



Hint | Mistakes | Solution | Start Over | New Game

February 26th: Day 57 of the gregorian calendar.
History: In 1966, the first rocket Saturn IB, the AS-201, of the Apollo program was launched

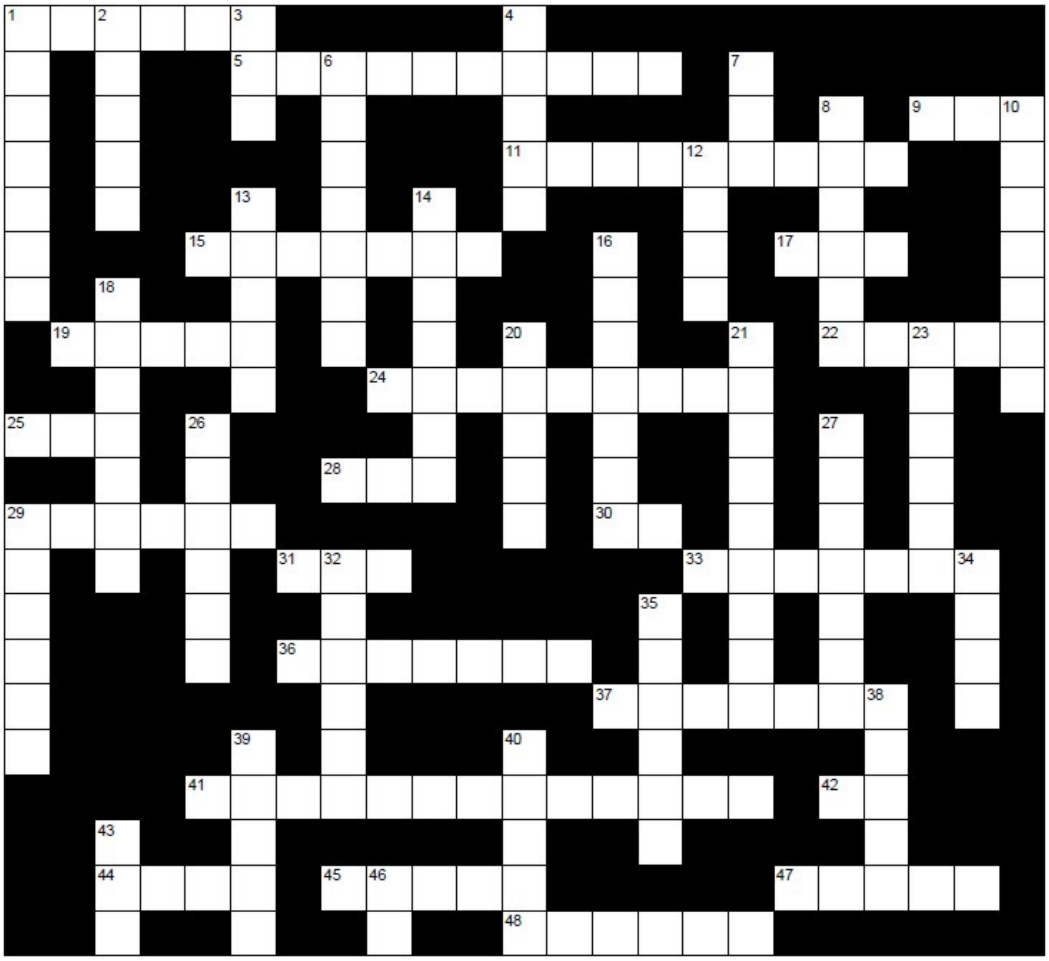
Observations: Occultation of Lutetia not seen from Europe.

February 27th: Day 58 of the gregorian calendar.
History: In 1897, Bernard Lyot, inventor of the coronograph was born.

February 28th: Day 59 of the gregorian calendar.
History: In 2007, the probe New Horizons, passes by Jupiter on its way to Pluto.

Observations: Occultation of Vesta not seen from Europe. Vesta will be about 1ºN from the Moon at 0h (UTC) when seen from Europe.

ASTRONOMY CROSSWORD PUZZLE



Clues:

ACROSS

1 Type of Galaxies.
3 Invented the first reflector telescope.
8 Observation instrument
10 A violent death of a star.
11 The initials of an irregular galaxy of the Local Group.
13 Volcanic galilean moon
14 Small Maggelanic Cloud
15 Biggest moon of the solar system
18 European Associaton for Astronomy Education.
21 Invisible radiation next to visible light in the spectra but with smaller wavelengths
23 Occurs when the Moon crosses a node between the Sun and Earth.
24 Planet with water in three physical states
25 An example of carbon dioxide's greenhouse effect
28 Charge Coupled Device (acronym).
30 Interaction between bodies due to their mass.
31 Pointer for sundials
35 A former planet.
38 Once it was considered the biggest asteroid.
39 Planet that rotates on its belly
42 Blue Marble
44 Moon of a former a planet
45 Largest galaxy of the Local Group
49 Name used for a group of stars or galaxies.
51 Water level variation due to gravitational pull of the Moon.
52 New General Catalog (acronym)
53 Space Telescope that proved the existence of cosmic microwave background radiation.
54 Visible electromagnetic radiation.
55 Ship with ionstruments sent to explore new "worlds"

DOWN

2 Wheeled vehicle used to explore planetary surfaces.
4 Saturn's moon that emits jets of gas and dust and that may harbor liquid water under its south pole region.
5 The hunter (constellation)
6 Jupiter's galilean moon with water
7 Satellite that has a 24h orbital period.
9 Second largest galilean moon
12 Has a Big Blue spot that was seen for first time by the Voyager probes.
15 Discovered that the Sun had rotation.
16 Project for the search of extraterrestrial life
17 Saturn's satellite.
19 Gravitationally connected structure containing millions of stars, as well as clouds of gas and dust.
20 Astronomical Image Processing System (acronym).
22 The biggest individual radiotelescope.
26 Largest and closest moon of Mars
27 Probe thet took a plate about Earth and Man to to salute extrassolar civilizations.
29 Period of Earth's rotation
32 Cloud of Gas and Dust
33 Closest Planet to the Sun.
34 The eighth planet
36 Biggest satellite of Saturn
37 Irregular galaxies that were first called clouds
40 Orbit that passes by the poles.
41 Closest G2 Class Star to Earth.
43 Color-Magnitude Diagram (acronym).
46 The author of the HD Catalog of Stars
47 Earth's satellite.
48 The Sun (ancient civilization)
50 Large Maggelanic Cloud

To confirm and print the solution click here.

PICTURE GALLERY

Polar Ring Galaxy NGC 660- Credit & Copyright:: Stephen Leshin

(click on the image to see a bigger version)

Near the center of this image we can see NGC 660, a Polar Ring Galaxy. NGC 660's ring spans about 40,000 light-years. Over 20 million light-years away,it can be seen in the boundaries of the constellation Pisces. Polar ring galaxies receive their name due to their peculiar appearance. A rare galaxy type, they have a substantial population of stars, gas, and dust orbiting in rings nearly perpendicular to the plane of the galactic disk. The configuration of the galaxy could have been caused by the chance capture of material from a passing galaxy by the disk galaxy, with the captured debris strung out in a rotating ring.

2010 - EAAE - European Association for Astronomy Education. Edited by Alexandre Costa. The contents of the links were active at the date of the publication of this newsletter, but some of them cannot be taken as granted to work in the future. Please don't answer to this e-mail.

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