

Newsletter

WELLINGTON ASTRONOMICAL SOCIETY

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**THIS MONTH'S
MEETING FEATURES**

Peter Read the People's Astronomer

**a presentation by
Gordon Hudson**

Wednesday, 1st of June,
7:30 PM at Carter Observatory

06-2011



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**Wellington
Astronomical
Society**





Presidents Report for June 2011

The month of May was very quiet on the astronomy scene although we have had one or two good nights but that was about all.

Last months talk was a DVD called 'Telescope Hunting the Edge of Space' this was a two part story but it was too long at 137 minutes for our meeting night so we only showed the first half.

Last months observing at Pauatahanui was the most successful we have had with a clear sky and about 10 people turned up and Chris was still there at 11pm.

Chris also runs Tawa College observing every Friday evening and this is well attended by the students.

The Pauatahanui observing was on May 21st which we decided at 5pm to cancel. At the time it was cloudy but it did clear up in Porirua at about 7pm but not in Wellington till later. Seeing conditions were not good. The next observing at Pauatahanui will be on 4th June starting at 7pm.

We are still trying to get our 6" dobsonians returned so that they can be checked. So if you have one we would like it returned at the next meeting. I have already have two returned.

We have other members waiting for these telescopes.

Before our next meeting the RASNZ conference will be over and I don't arrive back in Wellington until the night before our meeting so that means that the newsletter has to be finished before I go to the conference and may be a bit shorter than usual.

We are still requiring members to assist at the Carter Observatory observing on Saturday nights so if you haven't volunteered yet now is your chance to do so. Register your name with our

secretary Ross Powell on 389 9765.

Our treasurer John Talbot is still away overseas and will not be back in time for our next meeting so most of our treasury accounts will have to wait a little longer.

I will be presenting this month's talk, an extended version of the talk I am presenting at the RASNZ conference. "Peter Read the Peoples Astronomer".

We have been offered to anyone who wants to buy a couple of 16" mirror blanks of annealed pyrex 35mm thick should ring 04 236 7688.

Gifford Observatory are seeking trustees so if you think you have what it takes to become a trustee of the observatory: write to: Marilyn Head at 105 Owen Street, Newtown, Wellington or email marilyn@actrix.co.nz

Starlight Conference

We have registered a new domain name for the Third International Starlight conference. This is <http://starlight2012.org>

Which should link automatically to the website hosted at the Dept of Physics and Astronomy.

Please bring the conference to the attention of all your friends and colleagues who might be interested in this meeting.

COUNCIL OF THE WELLINGTON ASTRONOMICAL SOCIETY INC.

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OBSERVING AT PAUATAHANUI

The next observing evening at Pauatahanui is on June 4th starting at 7.00 pm. **If doubtful please ring Chris Monigatti on his mobile 021 890 222 to see if the session is going ahead.**

OBSERVING AT THOMAS KING

All public observing evenings will be held at the Thomas King Observatory run by our Observatory Director Ross Powell. from 7:00 pm. **Ring Ross on 389 9765** to check if there are public observing evenings on most FRIDAYS, starting as soon as it gets dark depending on the weather and Ross's availability.

WAS June's talk resumee

Presenter: : Gordon Hudson

Duration: approx. 50 minutes

Abstract:

“Peter Read, the People's Astronomer”

This presentation will show much about the late Peter Read featuring his two sons who will be shown on screen and much about Peter's past along with many photos and some of his achievements such as: an Artist; an Actor; TV Front Man; an Educator; an Entertainer and an Astronomer. His telescopes will also feature.

Research Astronomy Group

The main areas we have decided to focus on are Variable Stars and Occultations. Many of the group already observe one or both.

Murray Forbes is leading the Variables group and set us home work to map and locate a known eclipsing binary variable star RS Cha (Chameleon) also known as Tycho 9403-1987-1 at RA 8:43:12, Dec -79:04. This should be visible above 0 deg altitude year round so is not season dependant. John Talbot is leading the Occultation group and is publishing predictions for the Wellington area on our web site at <http://was.org.nz/01Occs.html>.

These include both Lunar events that should be visible in a 6 inch telescope and Minor Planet events that may be a bit dimmer but which have high probability of being seen. Even if you do not have recording equipment it can be fun in the evening to observe a star disappearing behind the dark edge of the moon during the first half. Or if you like getting up real early and want a harder challenge try for some bright reappearances during the second half of the cycle.

The Research group meets each month at 6:30pm before the main meeting.

Please feel free to come along and join in if you are interested. This is also a good time to bring along that telescope or observing problem you may have for discussion.

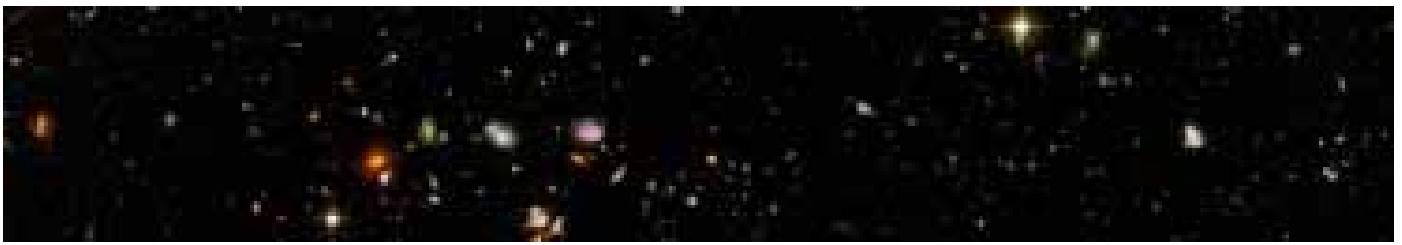
May 2011 Crossword answers

Across

1. PROCYON, brightest star in Canis Minor;
3. POLARIS, The North Star;
6. ION, an arrested atom;
7. LMC, could be mistaken for a cloud;
9. DEWCAP, used to prevent moisture condensing on a telescope;
12. APHELION, one phial (anagram);
16. PANDORA, a shepherd satellite of Saturn's F ring, also the first women in Greek mythology;
19. APOGEE, When the Moon is furthest from the Earth;
20. IO, One of the Galilean satellites;
21. HST, an orbiting telescope;
23. AZIMUTH, horizontal angle around the sky;
24. NORTH, thorn (anagram);
25. DAY, 24 hours;
26. SEYFERT, type of galaxy with unusually bright nucleus;
29. KIWI, New Zealander;
31. ALGOL, Demon star;
32. SCORPIUS, constellation with a sting;
34. EQUINOX, 23rd September;
37. HOUR, unit of time;
38. ZODIAC, also a small inflated rubber boat;
41. LOKI, volcano on Io;
43. BOLIDE, A meteor that appears to explode;
44. DARWIN, proposed theory of evolution;
45. SMC, satellite galaxy to the Milky Way;
46. FUSION, process that powers stars;
48. GAS, solid, liquid or ...;
49. SETI, A serious search for aliens (abbrev);
51. REFLECTOR, type of telescope;
53. ENCELADUS, end clause (anagram);
54. BLUEMOON, Once in a ...;

Down

1. PELE, volcano on Io;
2. NUTATION, Causes small changes in RA and Dec coordinates;
3. PLEIADES, The Seven Sisters;
4. NOON, mid-day;
5. ECLIPTIC, plane of Earth's orbit around the Sun;
8. BIGBANGTHEORY, A cosmological model;
10. PAVO, The Peacock constellation;
11. PHOBOS, A Moon of Mars;
13. SYRTISMAJOR, A dark, triangular plateau near the Martian equator;
14. HELIUM, second most common element;
15. EARTH, Tellus;
17. NOVA, a new star;
18. VEGA, alpha Lyr;
22. SCHMIDT, type of telescope;
27. LUMINOSITY, The intrinsic brightness of a star;
28. HALO, angels and galaxies both have one;
30. ICE, frozen liquid;
32. SPIRAL, type of galaxy;
33. UFO, flying saucer;
35. COSMICRAYS, High energy particles that impact the Earth at near light-speed;
36. GIBBOUS, a phase of the Moon;
39. CLUSTER, An open or globular ...;
40. VENUS, a very cloudy planet;
41. LATITUDE, allow some leeway;
42. MASS, I weight 6 times less on the Moon, but still have the same ???;
47. DENEK, alpha Cygnus;
50. ATOM, smallest indivisible piece of a element;
52. LEO, A lion circling the Earth;



An Autumn Galaxy



Galaxy NGC 2997 - Antila

by John Field

This autumn the weather has not been the best for observing or imaging; even viewing the early morning planetary conjunction has been difficult. Clear nights have been few and far between and most of those have been clear have been around the time of the Full Moon. On the few nights available I have attempted to image some “faint fuzzies”. Previously I have unable to do long enough exposures to capture galaxies but with the new mount and guiding system I have been able to lengthen exposure times to 4 – 8 minutes before sky glow becomes a problem.

This month I have chosen an image of the southern spiral galaxy NGC 2997.

NGC 2997 can be found in the constellation of Antila and shines at magnitude 10. It is a tilted to us on an angle of 45 degrees allowing us wonderful view of the galaxies spiral structure. The blue colour of the spiral arm comes from the young hot stars that have recently formed in these areas. The central core has yellowish hue coming from the much older stars that inhabit galactic cores.

Two faint dark spiral features can be seen on either side of the core.

NGC is estimated to be about 24 million light years away. Total exposure time 4 hours and 18 minutes, images were taken over two nights and then the images were combined in Deep Sky Stacker, along flats and darks, and the final image processed in Photoshop.



**PRESENTER
CARTER OBSERVATORY**

Start date: Immediate
Position terms: Casual positions available – Weekdays / Weekends / Evenings
Location: Botanic Gardens, Wellington



Carter Observatory has been revitalised. This world class visitor attraction and education facility reopened its doors in March 2010 with a multimedia exhibition and digital full dome planetarium dedicated to celebrating the stories of the Southern Skies.

As a Carter Presenter you will be presenting planetarium shows, taking gallery tours and holiday workshops, and operating our historic telescope. You will proactively provide guidance to all our visitors all while ensuring an enjoyable and safe experience.

If you have proven excellence in delivering a quality customer service and have natural charisma and confidence to excite, engage and inspire a variety of audiences, we want to hear from you. A high standard of personal presentation is essential.

A full position description is available on request from jobs@carterobservatory.org.

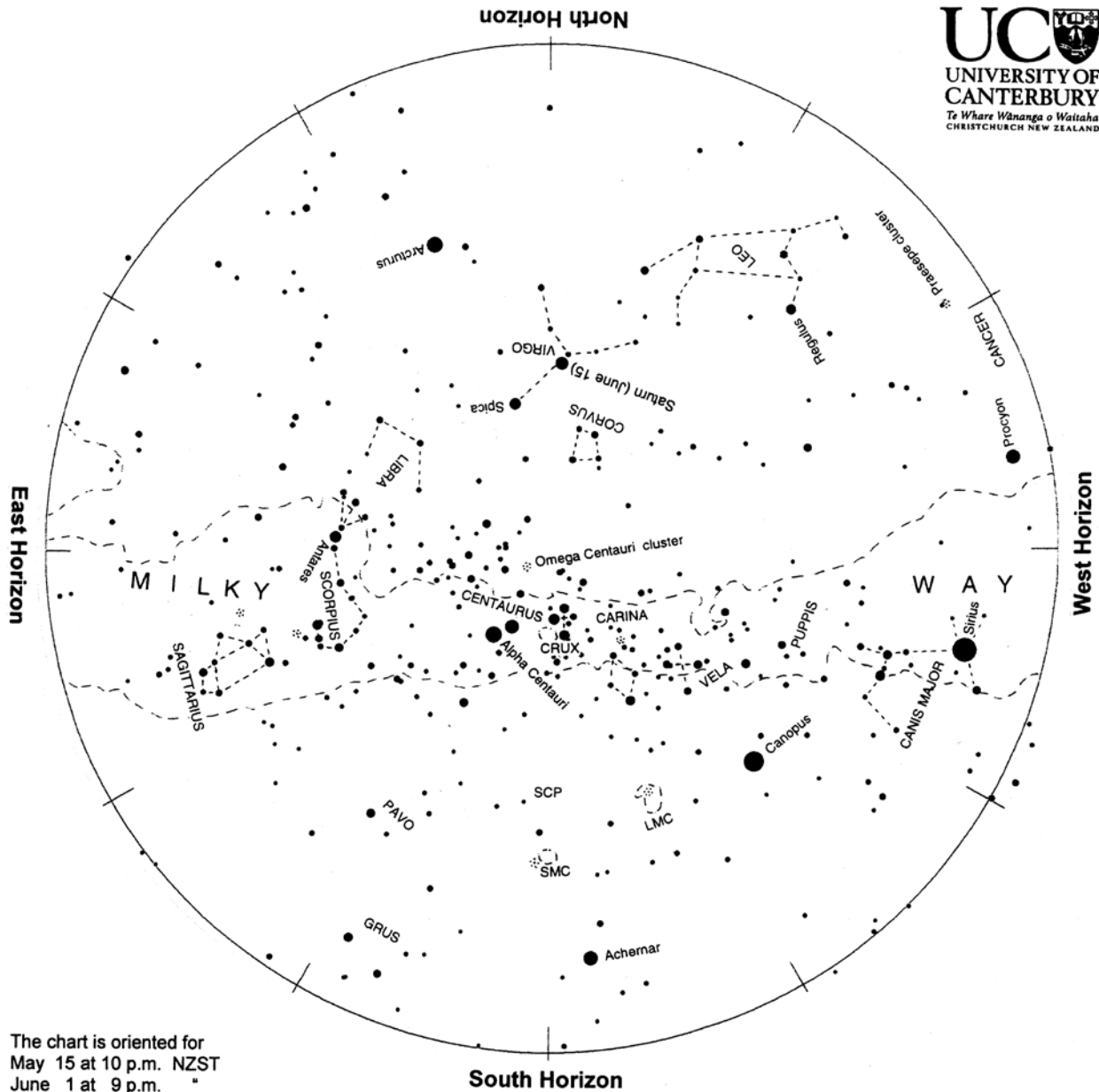
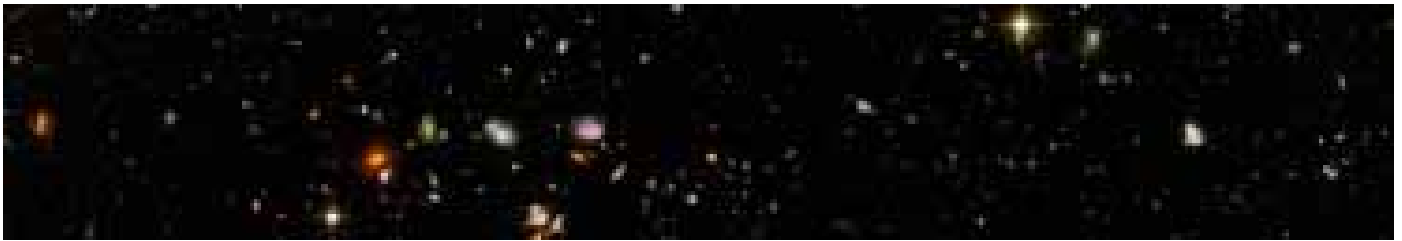
If the role interests you and you feel you can excel within this position, please complete an application form from our website and send this in with a covering letter and your CV to jobs@carterobservatory.org.

Applications close: Wednesday 1st June 2011, 5pm

To find out more about Carter Observatory please visit our website www.carterobservatory.org

Planetary Nebula Lyra - M57 - Photo Haritina Mogosanu Canon 50 D 300 sec - remotely from Kutztown University Tzec Maun Observatory





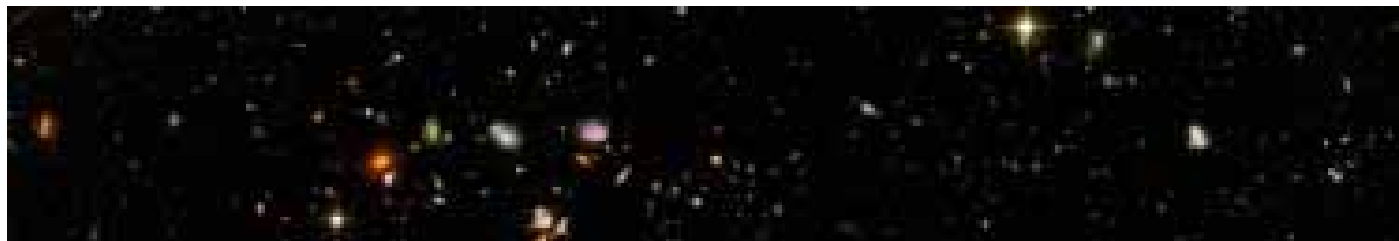
The chart is oriented for
 May 15 at 10 p.m. NZST
 June 1 at 9 p.m. "
 June 15 at 8 p.m. "
 July 1 at 7 p.m. "

Evening sky in June 2011

To use the chart, hold it up to the sky. Turn the chart so the direction you are looking is at the bottom of the chart. If you are looking to the south then have 'South horizon' at the lower edge. As the earth turns the sky appears to rotate clockwise around the south celestial pole, SCP on the chart. Stars rise in the east and set in the west, just like the sun. The sky makes a small extra westward shift each night as we orbit the sun.

Sirius twinkles colourfully in the west before setting. Canopus is in the southwest, swinging down to the south through the night. South of overhead are Alpha and Beta Centauri, with the Southern Cross (Crux) to their right. Further to the right are the Diamond Cross and False Cross, with a bright region of Milky Way above them. Saturn and Spica make a matched pair midway up the north sky; Saturn is the lower one. Below them orange Arcturus often twinkles red and green. The Scorpion is on its back midway up the eastern sky with Sagittarius below it. Jupiter, Venus, Mercury and Mars are in the dawn sky. The moon is totally eclipsed on the morning of June 16.

Chart produced by Guide 8 software; www.projectpluto.com. Labels and words added by Alan Gilmore, University of Canterbury's Mt John Observatory, P.O. Box 56, Lake Tekapo 7945, New Zealand. www.canterbury.ac.nz



The Evening Sky in June 2011



Sirius, the brightest star, appears low in the western sky at dusk before setting in the southwest. It twinkles with all colours like a diamond. Canopus is higher in the southwest sky, circling lower into the south later on. Crux the Southern Cross, with Beta and Alpha Centauri, is south of overhead. Scorpius, upside down, is midway up the eastern sky. Below it is Sagittarius; its brighter stars making 'the teapot'.

Midway down the north sky are Saturn and Spica, similar in brightness. Saturn is the lower of the two and has a creamy colour. Spica is bluish. Below and right of them is orange Arcturus often twinkling red and green. Arcturus is 120 light years* away and 37 times brighter than the sun. It is the fourth brightest star in the sky after Sirius, Canopus and Alpha Centauri.

Crux, the Southern Cross, is south of the zenith. Beside it and brighter are Beta and Alpha Centauri, often called 'The Pointers' because they point at Crux. Alpha Centauri is the closest naked-eye star, 4.3 light years away. A telescope shows it is a binary star: two suns orbiting each other in 80 years. Beta Centauri and many of the stars in Crux are hot, extremely bright blue-giant stars hundreds of light years away. Canopus is also very luminous and distant.

Scorpius is midway up the eastern sky, lying on its back. Its brightest star is orange Antares, marking the scorpion's heart. Antares is a red giant star: 600 light years away and 19 000 times brighter than the sun. Red giants are much bigger than the sun but much cooler, hence the orange-red colour.

They are dying stars, wringing the last of the thermo-nuclear energy from their cores. Antares will end in a spectacular supernova explosion in a few million years.

The Milky Way is brightest and broadest in the southeast toward Scorpius and Sagittarius. It remains bright but narrower through Crux and Carina then fades in the western sky. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one. The thick hub of the galaxy, 30 000 light years away, is in Sagittarius. A scan along the Milky Way with binoculars will find many clusters of stars and some glowing gas clouds. Relatively nearby dark clouds of dust and gas are silhouetted as holes and slots in the Milky Way.

The Clouds of Magellan, LMC and SMC, are in the lower southern sky, easily seen by eye on a dark moonless night. They are two small galaxies about 160 000 and 200 000 light years away. They are only a fraction the mass of our galaxy but still contain billions of stars.

Saturn's rings are "opening" now after being edge-on in recent years. A small telescope will show the rings and Saturn's biggest moon Titan about four ring-diameters from Saturn. Other smaller moons appear as faint stars close to Saturn. Saturn is around 1400 million km away. In June Saturn is close to the star Gamma Virginis, also known as Porrima. It is a double star -- two stars orbiting each other -- but the stars are now close together and difficult to separate in a telescope.

Jupiter (not shown) rises in the east around 4 a.m. It shines brightly with a steady golden light. Brilliant silver **Venus** rises in the northeast after 6 a.m.

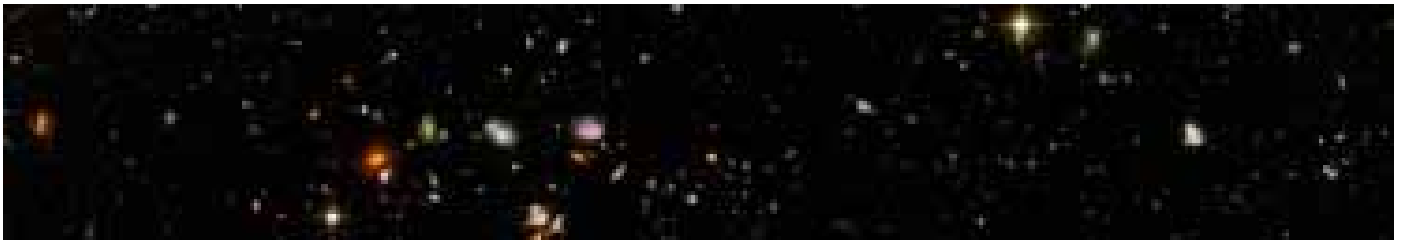
At the beginning of June **Mars** is above Venus, looking like an orange 'star' much fainter than Venus. **Mercury** is below Venus and bright. By mid month Mercury will have disappeared into the twilight and Venus is very low in the dawn. Around the 20th Mars will be right of Matariki, the Pleiades star cluster, which is just appearing in the dawn twilight. Jupiter is 830 million km away. Mercury, Venus and Mars are all on the far side of the sun; their distances 200 million, 250 million and 340 million km respectively at mid month.

On the morning of June 16 we see the start of a **total lunar eclipse**. The full moon begins to move into Earth's outer shadow at 5:23. It touches the dark inner shadow, the umbra, at 6:23. By 7:22 it is fully in the umbra. Being exactly opposite the sun, the totally eclipsed moon sets at sunrise.

**A light year (l.y.) is the distance that light travels in one year: nearly 10 million million km or 10^{13} km. Sunlight takes eight minutes to get here; moonlight about one second. Sunlight reaches Neptune, the outermost major planet, in four hours. It takes four years to reach the nearest star, Alpha Centauri.*

Notes by Alan Gilmore, University of Canterbury's Mt John Observatory, P.O. Box 56, Lake Tekapo 7945, New Zealand.
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Cross Word with Murray Forbes



EclipseCrossword.com
Across

1. The North Star; 5. Antab; 8. thorn (anagram); 10. some spiral galaxies have one; 12. Name of ESA spacecraft that intercepted Halley's comet; 14. end clause (anagram); 16. I weight 6 times less on the Moon, but still have the same ???; 17. Demon star; 19. an open cluster in Taurus; 20. Once in a ...; 21. angels and galaxies both have one; 22. an orbiting telescope; 27. 24 hours; 31. could be mistaken for a cloud; 32. satellite galaxy to the Milky Way; 33. mid-day; 34. volcano on Io; 35. alpha Cygnus; 37. A satellite of Uranus, a character in Othello; 38. elect pose (anagram); 40. constellation with a sting; 44. A type of star whose core hydrogen has been used up; 47. Early German astronomer - formulated 3 laws of planetary motion; 49. an arrested atom; 50. process that powers stars; 51. The SI unit of mass; 52. flying saucer; 53. A NZ astronomy summer getaway;

Down

1. When the Moon is closest to the Earth; 2. frozen liquid; 3. a phase of the Moon; 4. figure of 8 pattern formed by the Sun's position at the same time of day over a year; 6. When the Moon is furthest from the Earth; 7. full name for quasar; 9. alpha Lyr; 11. robin claus (anagram); 12. solid, liquid or ...; 13. plane of Earth's orbit around the Sun; 15. satellite observatory studying the Sun; 18. unit of time; 23. Carter Observatory's public telescope; 24. The Seven Sisters; 25. A Moon of Mars; 26. A meteor that appears to explode; 28. a shepherd satellite of Saturn's F ring, also the first women in Greek mythology; 29. to block light from another object; 30. Constellation with Spica; 31. Latitude and ?; 33. a new star; 36. A lion circling the Earth; 39. The winged horse constellation; 41. A serious search for aliens (abbrev); 42. a double star; 43. a very cloudy planet; 45. One of the Galilean satellites; 46. smallest indivisible piece of an element; 48. The Peacock constellation;