

UNIVERSE

Journal of the Astrological Society of New South Wales, Unco.

1st April, 2005

VOLUME 7 #1

NEW ASNSW CITY BASE SECURED

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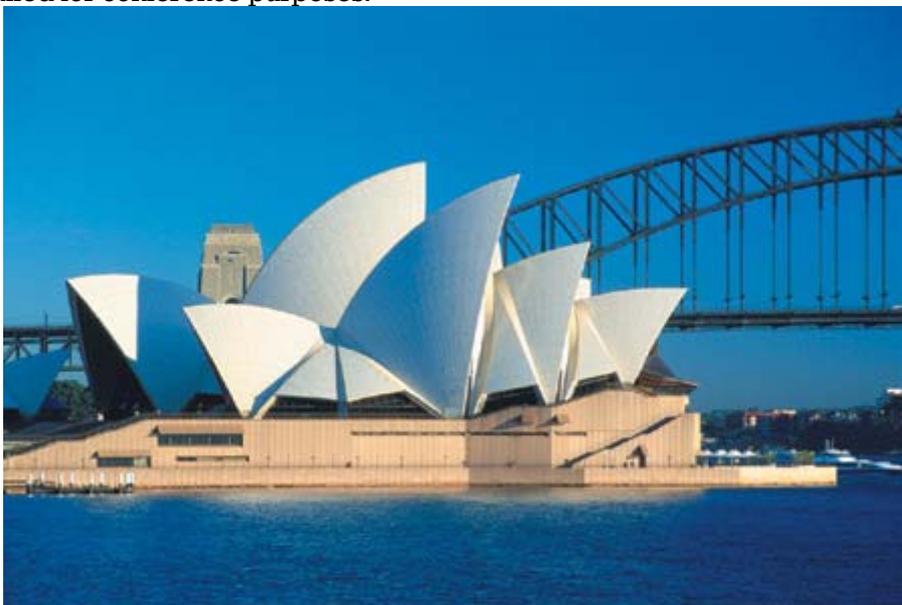
Observatories:

Wiruna 33° 01'S 149° 46'E
Crago 33° 33'S 150° 37'E
Antarctica 89° 56'S 149° 64'E

In a surprise announcement, the State Government said that it was acceding to a request by the Astronomical Society of New South Wales to lease the rarely used small drama theatre at the Sydney Opera House as its City Base of Operations.

The Premier, Mr Shipp said that with the falling off in patronage of live theatre, the drama company had disbanded, with many of its members either going into politics or becoming used car salesmen.

Though the theatre only had a seating capacity of 200, this was perfectly adequate for Society needs, and audio visual equipment was already there, having been installed for conference purposes.



The ASNSW's New City Base of Operations

With the stunning CCD and webcam images currently being produced by talented amateurs, it had been widely accepted that amateur astronomy had a legitimate claim to be accepted within artistic circles, while many of the lectures presented had genuine literary merit.

To strengthen its case, the Society had undertaken to produce monthly Mick & Don shadow puppet shows for audiences of very young children, the mentally challenged, and those people who in the normal course of their miserable lives regularly watch reality TV or bet on World Championship Wrestling.

These shadow puppet shows will be accompanied by songs from the "Three Crooners" on the off chance that the music will be somehow relevant to the action.

Although erecting a dome within the sails of the Opera House was examined, this has been shown to be impractical owing to the significant amount of horizon being obscured.

However, permission has been obtained to permanently park a van-mounted dome on the east side of the building so that the sails will shield it from both lights on the Harbour Bridge as well as from New Year's Eve and similar fireworks displays, and field trials have established that a 60mm Tasco fitted with webcam can achieve respectable results if aimed out over the Botanic Gardens and away from city lights.

MYSTERY ROADKILL NEAR WIRUNA

Early arrivals at Wiruna prior to the February New Moon weekend observing session discovered a mystery roadkill on the side of the Sofala Road, close to the turnoff leading to Lot 7.

Normally, roadkills are common in the district, and do not arise that much interest unless the death takes place inside your vehicle after the miserable beast has entered at a considerable rate of knots through your windscreen.

Members have become adept at identifying, at a glance, the nature of the deceased - i.e., Wombat, Kangaroo, Sheep, Yokel etc, but in this case, five successive carloads of members utterly failed at this task.

Discussion on-site resulted in a committee of the whole returning to the scene just before dark to make a more thorough investigation from the upwind side as the subject had clearly been dead for many days in exceedingly hot weather.

At the end, opinion remained divided.

One member suggested a Wombat / Kangaroo hybrid, several thought it might be the missing stud Alpaca which had strayed from the "Starpaws Observatory and Alpaca Farm" near Mudgee, while two members voted that it was a grey alien who had fallen from a VERY great height.

Alas, the mystery may forever remain unsolved, as club conservationist Col McMickle's sensible suggestion that an autopsy be performed in the eat-in kitchen was voted down and the next day the "thing" had vanished without trace.

However, the new crop circle which had appeared overnight in the field adjacent to the roadkill has resulted in more members opting for the grey alien scenario which continues to gain support.

**RETROGRADE LUNAR MOTION
FORECAST**

Following on last June's historic transit of the planet Venus across the face of the sun, the first since 1881, a strange phenomenon has been detected concerning the Moon.

Confirmation of this strange phenomenon has come from as far south as the radio physics observatory at the South Pole, and Mr Ivor Merino's complex on the frozen summit of Mt. Cook in New Zealand to classic observatories such as Lick and Palomar.

Astronomers had long been familiar with the retrograde motion of Mars as it varies between perihelion and aphelion, with the Earth overtaking on the inside track as it were and making the planet appear to reverse its course against the background stars.

In ancient times and in the middle ages, this phenomenon caused endless headaches for astronomers and philosophers desperately trying to make the Ptolemaic system work, with epicycle upon epicycle added to try to find some "perfect" explanation.

Curiously enough, it seems that this year we are to see the same phenomena occur in connection with Earth's own satellite, the Moon, a rare cyclical event concerned with a cumulative effect of a prime number of transits of Venus.

Though Venus is quite small in diameter compared to the Sun, during transit it causes a minute but measurable diminution in the Solar radiation reaching both the Earth and the Moon.

Light, of course, exerts a force - the Solar Wind and all that, and the end result of a certain number of transits is that in a manner analogous to precession, a coriolis effect is set up between the Earth and the Moon amplifying the echo of Earth's oceanic tides on the Lunar Maria.

This causes a distinct precessional motion on the Moon, which will not only wobble sufficiently that over

a period of only one Lunar month amateurs will be able to observe 78% of the Lunar surface, but as well the braking effect will temporarily throw the Moon into a wider and slower orbit, so that it will appear to reverse it's course amongst the stars.

Though this will be the first such event anticipated and observable with high tech instrumentation, fragments in romantic ballads of the court of Elizabeth Tudor and Duke William the Bastard which were attributed to poetic licence and fantasy may well have a basis in observation by somebody.

Lines such as "*My love doth stay the Moon's majestic course*", and "*Thy brilliant orb returns upon her tracks to mock my ill starred love*", written in the 16th century by balladeer Johan Sebastian Amadeus are dated to just after the last Lunar retrogression, computed to have occurred in 1592.

If the next such event takes place as forecast, the Moon will appear to stop and go into reverse very late in the evening of March 31, 2006.

**SKY AND TELESCOPE TO BE
PUBLISHED IN LATIN**

Following on the success of the German edition of Sky and Telescope, which has reached a wide European audience in recent years, scholars at the University of Bürgerwelt suggested that an old European University tradition should be revived and undertook to produce a Latin edition.

In medieval Europe, Latin was the lingua franca, spoken by educated men and widely utilised for the publication of books and papers so that they could be read by the University educated in all countries.

They pointed to the warm reception given in recent years to the publication of the classic children's book, Whinnie The Pooh in Latin, and said that the monthly task would make a suitable and rewarding exercise for the University Latin department.

The professor of Latin Dr Cavé Canem said that he would have to develop many phrases and words to cover things and concepts unknown to the ancient Romans but which were the regular terminology of modern astronomy.

PILOT LAKE TUTTI FRUTTI STAR PARTY

A glowing account has been received from organiser Bokglob Gröseblurter reporting the success of the first Lake Tutti Frutti Star Party held in July 2004. A good fifty expert amateurs attended, with scopes ranging from 8 inch SCT's to 30 inch Dobsonians.

The week passed in tranquillity owing to the local truce brokered by Mt Coatopakrat Astronomical Society President Monty Sumer who had successfully got the warring factions to realise the mutual benefit of a week to bury their dead, recover their wounded, and resupply food, ammunition and medical equipment.

Good weather was ensured by the ritual sacrifice of an albino Alpaca, four lucky participants getting to hold a leg each while Monty expertly extracted it's still beating heart with an antique obsidian blade after which the entrails and hooves were burnt as offerings to the Weather God and his consort the Rain Goddess.

Ambient temperatures were a comfortable 22 degrees Celsius as the whole peak of the volcano was centrally heated, while the crater lake kept a few degrees below boiling point until the very last day, so dewing was not a problem.

Delicious food was provided by Thai Food Mary's Catering Services and TSP veterans present considered that were she to relocate to Fort Davis she would be among the top ten restaurants there.

Unlimited hot water was piped to the replica Inca pumice stone huts, freshly rebuilt after November's minor eruption.

After 6 nights perfect observing weather, no one complained when departure time on the final day was advanced by two hours on a purely precautionary basis following on the lake reaching boiling point, the usual sign of a likely minor eruption.

In the event, expert driving by bus driver Speedy Gonzales kept the bus a good minute ahead of the modest pyroclastic flow, which served to provide an exciting end to the week's event.

Bokglob Gröseblurter is proud to give notice of the April 2005 Lake Tutti Frutti Star Party to be held alongside the pristine waters in the crater at the summit of Mt Coatopakrat at an altitude of 13,998 feet.

Prospective participants can be assured that the volcano is now safely in it's dormant phase and that there have been no serious eruptions since last February.

Guests will be accommodated in authentic Inca dwellings with quality reed floor mats, thatched roofs and ventilation throughout, and are welcome to participate in the regular evening sacrifice of a pedigree Alpaca to propitiate the Weather God followed by the ritual evisceration and barbecue.

Safe conduct passes have been obtained from most of the warring political factions while at least 10 minutes notice will be given before the outbreak of any shooting.

Though no shots should be aimed at visitors, Kevlar telescope shrouds and sleeping bags will be provided at a small extra cost for anyone of a nervous disposition.

Door prizes include authentic Jivarro shrunken heads - a must for amateurs with pretensions, and all 67 varieties of Peruvian potatoes.

Booking details will be available soon. Interested?

EMMANUEL COMES HOME

After a fun-filled holiday in the USA, Dunedoo's most famous son, Emmanuel Snodgrass returned home in triumph last month courtesy of a free flight in a US Army military transport plane on a training run from Guam to Richmond in Sydney's West.

The minor problem of Dunedoo not having an airport was overcome by parachuting him down into the main street where he made a perfect landing, although Emmanuel wished they had thought to let him out of the crate first as it was a bit cramped in there alongside his ride-on mower, but the modest impact split the crate open anyhow.

His trip to the Texas Party had blossomed out into a 9 month holiday with board and lodging paid for by the Director of Homeland Security at his Club Med replica on tropical Cuba where he had lots of fun.

By night he thoroughly explored the northern sky with his binocular-Telrads, while by day he played endless dress up games with cute but delightfully kinky US army girls who had not seemed to have heard about the ban on gay marriages and who taught him lots of party tricks.

In fact, he discovered that wearing women's underwear on his head was a great way to keep warm while observing, while the girls were intensely interested in learning about the cultural achievements of Dunedoo, though two of them suffered nervous breakdowns just about the time he was relating how Dunedoo had come an honourable seventh in the Tidy Towns Awards of 1967 and was about to move on to the care and breeding of Tiger Snakes.

Being at the latitude of Cuba he was able to do a Messier Marathon with his famous Telrad / averted imagination combination which was convenient as he was nervous in case a further visit to the Texas Star Party extended out to nine or ten months.

However, he had got to see all the tourist attractions of Fort Davis - the Rattlesnake Museum, the old army buildings, the grand new Pop's hamburger joint, and of course the Prude Ranch and had also noted that the volume of traffic in the central business district of Fort Davis was about at the same level as at Dunedoo.

He had missed out on visiting the McDonald Observatory and had dearly wanted to see if the famous number plates that modest optical aid shows under the Marfa lights could be seen in his Telrads but considered that his free mystery flight by army helicopter more than compensated for these small disappointments.

Once he has settled in at home, Emmanuel plans to take a ride-on mower tour of all New South Wales observatories, working his way from the Australia Telescope at Narrabri to the AAT at Coonabarabran, the radio telescope at Parkes and then on to the ruins of Mt Stromlo.

GREAT RED SPOT REVEALED

Exciting news has broken concerning cutting edge research at the University of Burgerweldt into the nature of the Great Red Spot on Jupiter.

Using the newly developed interferometric radar / NGT combination, findings suggest that rather than being, as long believed, an ongoing atmospheric storm, the spot is actually turbulence around an inner moon in a rapidly decaying orbit placing it inside Jupiter's extended atmosphere and rotating at almost the same velocity as the spectacular jet streams.

Estimates of the moon's diameter range between 200 to 300 km and the Doppler shift in the radar echoes are consistent with the moon slowing at a rate which would bring it into contact with Jupiter's core of metallic hydrogen within perhaps a few years, which would make for a more dramatic event than the impact of the various segments of comet Shoemaker-Levy.

However, as the moon is composed of nickel-iron, as demonstrated by the radar echoes, impact will be preceded by a massive and continuous electrical pulse caused by the interaction between the metal and the denser gases creating a gigantic dynamo.

Indeed, the pulse could be sufficient to arc between the planet and the four Galilean moons Io, Europa, Ganymede and Callisto.

This may result in Jupiter's magnitude increasing to match the brightness of the full moon for many months, if not years.

Dedicated Dark Sky Observers among amateur astronomers have expressed alarm at this potential threat to their dark adaption and night vision.

However, NASA is excited by the news as there is likely to be a powerful electromagnetic effect which could be used to slingshot space probes at high velocity, for example, reducing travel time to Saturn, the other gas giants and Pluto to just a few weeks.

Some optimists are rapidly preparing plans for a probe designed to reach Alpha Centauri in less than eight years.

GRAVITATIONAL REFLECTIONS

Gravitational lensing has been widely researched and documented in recent years, demonstrating how massive gravitational fields such as those found in large galaxies can bend the light emanating from more distant objects.

The result can be that duplicate images of distant objects are produced from slightly different points in time.

More recently, the allied phenomena of gravitational reflections has been identified by researchers from the Astronomy Field Station established by the University of Burgerweldt on the summit of Mt Coatopakrat in Peru.

Observing on top of a somewhat active volcano presented certain technical challenges, but promising reports from the inaugural Lake Tutti Frutti Star Party made the faculty decide it was worth the effort.

Elementary precautions such as the construction of reinforced concrete bunkers, with walls fourteen metres thick and proof against both lava bombs and rocket propelled grenades, to house resident astronomers were taken, while the twin turrets with coaxial 40mm canon and 50 calibre machine guns were installed largely for their deterrent effect rather than to be actually used against local rebel armies - Hopefully.

In the dry thin air, the 2 metre telescope and associated instrumentation works to optimum levels.

The most exciting discovery over recent months has been the gravitational mirror effect detected in the Centaurus galaxy cluster which is well placed for observing from southern latitudes.

It seems that 470 of these galaxies are arranged in a saucer like formation extending over a diameter of 870 million light years, and the gravitational strings connecting this network are woven into such a close structure that the density is strongly differentiated from the thin intergalactic medium and forms a coarse gravitational mirror.

This mirror was used as a Herschellian reflecting telescope with an electronic eyepiece operating in the ultrared wavelength and has provided stunning images of galaxies and quasars half way between our planet and the Centaurus cluster.

Visiting Professor, Baron Beavis von Buttkopf is preparing a major paper to be published in a further issue of Alternate Universe on significant discoveries being made with this instrumentation, which include the first images of black holes seen contrasted against the bright backgrounds of emission nebulae.

GIANT AMATEUR TELESCOPE IN WISCONSIN

One of the disappointments experienced by Emmanuel Snodgrass during his US tour last year was his missing out on visiting his brother Ezekiel who runs a gopher farm in Pigzharz, Wisconsin.

Readers of Alternate Universe will be aware that Emmanuel involuntarily went straight from the 2004 TSP to the Army Club-Med in Cuba for several months of exciting bondage and discipline games with some uninhibited army girls followed by a non-stop flight back to Dunedoo.

One of the attractions of his proposed visit to Pigzharz was that his brother was not only President of the local Astronomical Society but had just completed the biggest amateur scope in the US, in fact, at 61 inches diameter, one inch wider than the famous Lord Rosse 60 inch leviathan of Parsonstown.

The cost of buying and figuring such a large blank was prohibitive, but Ezekiel found an elegant way around this problem.

He had read in Amateur Telescope Making of early 20th century experiments with vats of mercury rotated at just the right speed to produce a perfect parabola and thus making a liquid mirror.

Problem was however that not only was it exceedingly hard to keep the mercury rotating without excessive vibrations, but that the mirror had to remain pointing upward and could not be tilted.

Ezekiel had reasoned, however, that as the outdoor temperatures in Wisconsin only rose above the freezing point of mercury for two months of the year, all he had to do was rotate his vat in a warm room until the right figure had been achieved and then open the window, so that in a few minutes the parabola froze solid.

For two months a year, the mirror could be placed in cold storage so he got in no observing time during what passed for summer.

This way he got an elegant 61 inch f/4 mirror at low cost as he had used a vat curved so that the mercury

was only a quarter inch thick, and no temperature problems as the daily temperature range in Wisconsin is only one degree for ten months of the year.

He had built his truss mount around a customised WW2 90mm anti-aircraft gun bought for fifty bucks from Joe's Surplus Store, but had moved the gun-layer's seat to the top end so he could observe while seated, with tracking and elevation controls operated by remote.

The gun had come with an optical gun sight which made a great 60mm finderscope.

A minor problem was his eyepieces as although he had a good range of RKE's, his 30mm gave a magnification of around 220x with a field of less than a quarter degree.

This meant that observing Messier objects was generally a piecemeal affair. However, when he has skinned another thousand gophers he hopes to buy a 31mm Type 5 Nagler.

Emmanuel hopes to visit his brother and use this impressive telescope on Polaris one evening if the US Consulate ever gives him another visa.

WHAT YOUR TELESCOPE REVEALS ABOUT YOU

By The Terara Observer

The truth can now be revealed. Not only can we say, 'We are what we eat' but behavioural psychologists have concluded after years spent studying the amateur astronomer that our most treasured possessions, our telescopes, expose the dark matter that lies deep within us all.

1. The 60 mm Refractories

Owners of this instrument are marginally interested in Astronomy and the instrument is usually the gift of a loved one.

It is quite a difficult machine to use, but in the hands of a patient and determined owner affords stunning views of the Moon and planets once these objects can be located.

However, this machine often drains the enthusiasm of the owner within six months and it ends up in

its packing case while the hapless owner moves to another great hobby such as growing orchids or raising ferrets.

Unfortunately, owners of this instrument have now entered the hobby roundabout and will one day end up collecting beer mats or worse still, hub-caps, regarded by experts as the final stages of dementia.

2. The 100mm equatorially mounted Newtonian Neophytes

We are now, unfortunately, looking at an instrument which may look impressive to the untrained eye. Not only is the sleek, black tube eye-catching, but the finely etched setting circles promise sheer mathematical precision.

A comprehensive hand-book adds weight and seriousness to this modest investment and family members and friends readily acknowledge that the owner has joined an elite group. Now watch as the instrument is put through its paces.

The Celestial North or South Pole is sought with scout compass. The counter-weights are added with all the aplomb of a confident Olympic weight-lifter. The finder scope is jiggled into place and the telescope is turned to a setting Jupiter.

The left shoulder sags, the neck is twisted downwards and the unfortunate victim gropes in vain for the RA and Dec controls. Eager viewers crowd around and the frustrated owner keeps them at bay with phrases such as: "Once I've ironed out the bugs, I'll really show you something. Would anyone like to see the craters on the Moon?"

The owner of this instrument will unfortunately end up as a mere sporadic and stunted viewer of the night sky. He or she will forever be weary of machines which include detailed hand-books and will always call on an offspring to program the video recorder.

Their remaining days will be spent in search of a good chiropractor.

3. The 200mm Dobsonian Dyspeptic

The notorious John Dobson is reputed to have brought simplicity and financial ease to the owners of his famous telescope.

Not so! The owner of this moderately priced telescope when observed over a period of six months, will be seen to be infected with an incurable mental dysfunction, namely, Aperture Fever.

In the first weeks of ownership, a long list of Messier objects floats across this observer's field of view. The Tarantula is impressive, the Dumbbell begins to assume the correct shape and even the fainter galaxies of Crus are glimpsed on really dark nights.

Feet are still on the ground and eyepieces are still available for the cost of a reasonable night out. The heady days of Nagler eyepieces are still not born. These days are brief. Enjoy them. One look through a behemoth machine at an accursed star party will change all this forever.

For some inexplicable reason patches are not yet available to cure the bane of this sufferer. The only sense his partner can get out of this wretched individual is, "Look, love, don't worry, I can sell the second car." More on where all this leads later...

4. Folded Optics for True Believers:

Let us be quite clear on these innovative fantasies. They look great and they have the one major advantage of your long lost first telescope: they can be carted in and out of the house between showers.

The wonder-workers of science have surpassed themselves in packing so much telescopic promise into such a small container.

I don't think I am demystifying the aura surrounding these exotic creations when I state that the secret of this design is that instead of having a decently large image form at the end of a mirror or lens of large focal length, your designer has simply put a series of reflecting surfaces at various ends of the tube so that the long focal length is retained in a tube no

bigger than a five litre can of paint with the price tag of a decent world cruise.

It takes little imagination to realise that your light path is not only being reflected but blocked as well. The sorry truth about owners of these machines is that they are folks with abiding faith, big bankbooks and short legs.

5. The Light Bucket Luddites:

Surprisingly enough John Dobson is not solely responsible for these enormous machines that grow in stature by the year.

You have only to visit the backyard or shrine of the fifth Earl of Rosse to see where the madness of this machine started.

Those who visit star parties and have seen the cloud and rain that these insidious machines generate will not be surprised to know that Birr Castle, in the centre of Ireland receives a record 365 days of cloud cover a year.

This, apparently was not always so. Ancient Druidic manuscripts record that in early Ireland the Sun and stars were regularly seen, and for extended periods. Word has it that the Third Earl of Rosse or 'Maddy' as he was popularly known, put an end to all that when the first Leviathan (lit. Sea or Water-generating Monster) was built. So owners of this machine certainly follow a very nefarious tradition and are destined to spend endless nights at what the Celts call pining.

Ladders are climbed and fallen off, life-savings are carelessly thrown away on multiple-lensed eyepieces, planets burn holes in the retina, and all for what? For- it must be said,-dim objects that are merely glimpsed or imagined.

In short, the star atlas has not been compiled or the eyepiece invented that will satisfy these cosmic feeders. And, whatever you do, don't mention the Moon in their presence...

6. The Go To Galaxy Grabbers.

This is the showroom piece for those who would instantly climb the ladder to the esoteric stellar experience.

This machine is programmed to find all the hidden objects in the

universe. No prior knowledge of the sky is required. In fact, this telescope operates better without an owner. Like a good computer, its only limitation is its user.

Sadly, this is the wonder machine that sits there blinking like an abandoned robot at a star party, surrounded by neophytes who are forever on the point of figuring out how this machine works.

The owner is easily recognised. He is the one carrying the handbook and the red lamp and pleading sadly, "It worked OK last week! The reason it is pointing to the ground is because the Whirlpool Galaxy isn't up yet."

7. The ATMs or Advanced Telescopic Myopics

These are perhaps nature's saddest misfits. They are the home hobbyists gone mad. Not for them the manufactured telescope. Instead they work with cardboard, epoxy resin, Teflon, marine ply and matt black paint. No telescope is ever fully finished.

They seek out main mirrors and eyepieces from the remote corners of the U.S.A. Optics are coated, double-coated, super-coated, with ever-increasing wave accuracy. No telescope is complete without the auto-focuser. The laser-collimator, the reducer-corrector and of course the Telrad - that Guide Dog of the night blind.

Make no mistake about it, the Cosmos is not the goal here: the main business is the work down in the back shed - and it never ends. One job leads to another. No sooner is one telescope nearly completed than another has begun.

This activity is well labelled 'The Obsession', by one man who finally saw the truth and had the courage to turn it to his advantage. Unfortunately, not many ATMs reach this plateau of enlightenment.

8. Shooting The Stars

In recent years with the advent of the digital camera and the computer, there has emerged from the dark rooms of suburbia those closeted Lumieres who were once content to take holiday snaps of sunsets or race cars. Now these digital demons have accumulated

enough equipment to outperform the Hubble Space Telescope.

Viewing fields are turned into blood-red darkrooms, with regular lights shunned, while the telescope is a mere addendum to bristling electronic equipment.

The results are staggering to say the least. With digital enhancement, Saturn becomes a rainbow-banded urn surrounded by coloured bangles of rings, never before imagined. Dim Messier objects such as the dismal blob of the Crab Nebula can be transformed into a glowing silk scarf.

The possibilities are endless and the 'wow' factor is high. Don't let this amateur's humble telescope fool you. Make no mistake about it, what we have here in the director's chair is a plenipotentiary from a Steven Spielberg production.

9. The Ultimate Telescope For The Moribund.

Are you aware that there are amateurs out there who have finally packed away their telescopes, eyepieces and cameras on wet nights but yet next morning produce stunning pictures they claim to have taken under clear skies?

This magical illusion can now be finally exposed. For a small fee and with basic computer skills you can connect to a fully remote telescope under a clear sky in a distant continent, take stunning pictures of your favourite objects and collect them through your internet server.

This is beyond the wildest dream of even the most entrenched arm-chair observer. No expensive telescope, no eyepieces, no detailed maps under red lights, and above all no insects, storms, rain, sleet and snow.

If this idea takes off, think of the possibilities for long distant travellers yearning to sip tea among the yaks in Tibet.

From the comfort of our own homes, collectively and for a small fee we could get someone to travel to distant lands and send us back the post cards!

ASTRONOMERS FIND SECOND STARLESS GALAXY

Hot on the news of the discovery by University of Cardiff researchers of a starless galaxy in Virgo, Mt Stromlo Astronomers recently announced the discovery of a Southern Hemisphere equivalent.

Strapped for cash after the disastrous fire of January 2003 was followed by a smaller than expected insurance payout and by the usual Federal Government parsimony towards science which had the observatory getting less cash than that supplied for the imaginary dredging of Tumbi Umbi creek the observatory was forced to innovate.

Concluding that radio astronomy was viable in spite of the light pollution, political bovine fertiliser and hot air that Canberra politicians are noted for, an exciting variant of the Mills Cross was developed at low cost.

Sufficient coaxial cable was purchased to link together every farm fence within a 90km radius of Mt Stromlo to create a flat dish, or radio platter 180km in diameter with one 5 metre steerable dish at each cardinal point of the compass on the outer boundary.

This gave the telescope a significant pointing capacity as once the steerable scopes were pointed at a designated object the rest of the platter could be similarly "pointed" by simply allowing for the minute time lag in signals received by the various components.

It was found that rabbit-proof fences offered particular sensitivity because of a sympathetic reaction between the strands of barbed wire at the top and the 1.6 metres of fine mesh half buried - literally earthed, in the ground.

The signals were fed through a local area network of PC's owned by High School students and the results correlated at Mission Control in a prefabricated farm shed on Mt Stromlo.

The initial and quite unexpected discovery was of a large starless galaxy spanning six degrees of

sky and situated midway between the SMC and the LMC.

Preliminary reductions show that this object was formed by a violent collision between these two objects nine million years ago, so that as the component stars passed through each other like flocks of migratory birds, much gas and interstellar matter was left behind clumped together in tightly orbiting masses moving in stable orbits.



The Mysterious "MURRELL 2"

Once the initial friction had died down, and in the absence of interior stars to light up these clouds they became invisible except at radio frequencies.

Once informed of the discovery, super sensitive observer Andrew Murrell turned his twenty inch Dobsonian in that direction, and though the object was too large to fit in his widest field eyepiece, Andrew convinced himself that he could glimpse it in his Telrad when using a narrow bandwidth ultra-red filter.

Though other observers have so far failed to duplicate this feat this is not unusual as Andrew's night vision is in a class of its own, so superb in fact as to lead other deep sky observers to wonder if he was born long ago in a far galaxy. In honour of Andrew's observational feats, this galaxy has been provisionally designated "MURRELL 2" and the search for starless galaxies expanded to take in the Centaurus galaxy cluster.

CCD IMAGING COMPETITION

An exciting feature of the 2005 South Pacific Star Party is the long awaited CCD imaging competition with a host of valuable prizes for successful entrants.

This year's competition includes a flash CCD event. Contestants are to aim their camera / scope combination at selected objects of their choice and then image at the appropriate time lapse following the ignition of two tonnes of magnesium powder on the western, or higher, observing field at Wiruna.

Due notice is being given to dedicated deep sky observers who will be quarantined in the lecture hall and hooded to supplement the black-out curtains specially fitted to protect their dark adaption during the flash.

Professor Richard Jaywalker has wisely restricted the choice of objects to those in our own galaxy only to prevent the duration of the competition being overly long - extra galactic subjects would require an unacceptable time frame to complete the exposure. Even with this wise restriction the competition results will not be to hand for quite some time.

Other events planned for the star party include the roadkill cooking contest, with prizes for the most tasty and innovative dishes prepared from the most unlikely and far gone objects, with recipes for Wombat Au Vin, Kangaroo Stroganoff and Snake Kebab being tipped as close contenders, and the Star Port Messier Marathon, in which as each object is found by star hopping and the observation recorded, the observer drinks 100ml of Star Port and proceeds to the next object.

The observer recording the greatest number of objects wins the engraved stomach pump.

There is a special visual acuity prize for the observer tallying up the greatest number of naked eye stars seen in the Coal Sack, while it is hoped that the special standing prize for the first comet discovery in the LMC during a South Pacific Star Party may be at last claimed during this year's event.

PRODUCT REVIEW

Test results have just come to hand on a new and exciting eyepiece launched this year by the most respected optical house in Walla Walla, Washington State, and on sale at all good telescope shops and Pizza Parlours.

With a claimed 98 degree field of view, and a seventeen-element optical system crafted from a combination of cubic zirconium, rutile, and flint glass lenses, with a 5mm diameter synthetic diamond lens at the heart of the system, the eyepiece has new levels of clarity, a complete absence of ghosting and is free from coma right to the edge of the field in any optical system from f/3 through to f/18.

Available in 10mm, 20mm and 30mm, being sold under the name "Orthocrapic" these eyepieces are a steal at only US \$999, plus state taxes where applicable.

APRIL'S HORRORSCOPES

♋ Pisces

The annular eclipse of 9 April reflects feebly off Pisces but as most born under that sign are cool fishy types it does not take much sun to dry them out so expect them to exhibit warmer behaviour than usual and behave, well almost, human for a change

♈ Aries

It takes a lot to distract a typical Aries from their usual sport of butting their heads against metaphorical brick walls but seething with indignation at minor planets swanning through non-zodiacal constellations - eg, Hebe through Bootes or Eros through Centaurus may do the trick and actually get them to look around for a bit. They may even notice you.

♉ Taurus

Comet 141P/Macholz drops by this month which is equivalent to waving a cloak at a mad bull, so expect Taureans to charge off in any direction for no apparent reason during April. If you want to motivate one, any distraction will get them moving in the direction of your choice.

♊ Gemini

Saturn is in Gemini and a lot further north than usual, which is, of course, great for observers in the north. Still, the poor devils need something other than Polaris to observe. If you are flirting with twins, the subject of engagement rings may come up.

♋ Cancer

The waxing moon scoots through Cancer on the 17th so Cancerians should ensure that they have thoroughly waxed before mooning anyone and they will SHINE.

♌ Leo

Male Leo's in the wild are noted for laying about while the females do all the work. So normally do most other Leo's, but with Mercury in the descending node and the Moon at perigee, expect Leos to be dynamic, like standing up and scratching their butts now and again. Don't push your luck and expect more as this is heady stuff for Leos.

♍ Virgo

Jupiter, King of the Gods, is chasing Pallas around Virgo, which is the sort of thing the old lecher did most days in classical times. Opposition on April 4 gives you the chance to examine his zits and hickies and to be motivated to avoid getting any yourself - Hickeys, that is. Or occulted like he is in April

♎ Libra

Well balanced Librans don't mind that SFA happens in their sign this month as they value their equilibrium. In fact it takes a major asteroid impact to stir them and that last happened in the late Cretaceous, which was bad luck for Libran T-Rexes.

♏ Scorpio

You proud owners of a great constellation have a happening month with Antares being occulted by the Moon on the 27th. This means your brightest trait might be degraded this month, like having a bad hair day when going on a date or losing your rhythm in the middle of a Tango.

♄ Ophiuchus

Unlike the average astrologer who thinks the world is flat and Polaris is a street light we understand the Cosmos and look after you oppressed Ophiuchuns. As well as having the Sun and Moon zip through, you have Minor Planet 7 Iris swanning through your sign in April and Iris is the Goddess of eyeballs and cameras so keep an eye out for photographers and display your best profile at all times and you may make centrefold in Playboy, or Cleo, or the National Inquirer. Read on.

♐ Sagittarius

At the business end of the Scorpion you Sagittarians have to keep moving to avoid getting done over. However, you have Isis, the Egyptian Goddess of nooky in your corner this month. You will marry a rich widow or two unless you are female and living in the US.

♑ Capricorn

With Mars, the God of War, in your sign, play safe this month and don't sign up for that new Survivor TV series of a pub crawl in Baghdad where the last one alive wins, use particularly blunt needles for knitting and take valium before watching Jerry Springer.

♒ Aquarius

As usual the coolest are the latest. Your total lack of any stars worth a damn is made up for by the passage of comet C/2003 T4 (Linear) at about 6th mag, about as bright as most stars in your sign, so behave as though the Age of Aquarius is already here and spread the sunshine of your countenance around to brighten up those poor souls born under lesser signs.

satellite, Luna. However, not until new research undertaken over the past two years at the Pimba Field station of the Melbourne Observatory, just 8km west of the Woomera Rocket Range in South Australia, has their true nature been discovered.

The Pimba station was a low key endeavour, only made possible for the modest funds available, by cheaply renting two rooms at Spud's Roadhouse, one being used as sleeping quarters and the other as a research lab.

A roll-off roof observatory at the back of the roadhouse contained a C14 and ST10 CCD unit which had been specially modified with customised photomultiplier giving superb sensitivity.

The search for Apogee and Perigee was prompted by a visit by Professor Manuel Labore, director of the Madrid Observatory, who had freshly come from a lecturing stint at Oxford and had noted that possible precursors of the Shoemaker-Levy impact on Jupiter had been observed in the past without the cause being determined.

He had been particularly taken by observations by the Jupiter Section of the British Astronomical Association during the late 19th Century when several members had reported the observation of black spots on the planet, smaller, but similar to those observed during the multiple cometary impact, and wondered if similar observations of strange phenomena had been recorded without the true nature of the

events being determined at the time.

When at the Melbourne Observatory recently, he had been told of a new theory being developed there that Apogee and Perigee were massive, yet very small objects capable of exerting significant forces on the Moon but so small in cross section as to have so far escaped detection.

Computation of gravitational effects using the Observatory's turbo-charged PC suggested they were in an elliptical orbit which sometimes brought them inside the Moon's orbit and actually in notional transit across the Moon's surface without so far being detected.

The most likely candidates, he decided, were very small black holes, only a metre or so in diameter and as such too small to be observed in transit even across the bright lunar surface.

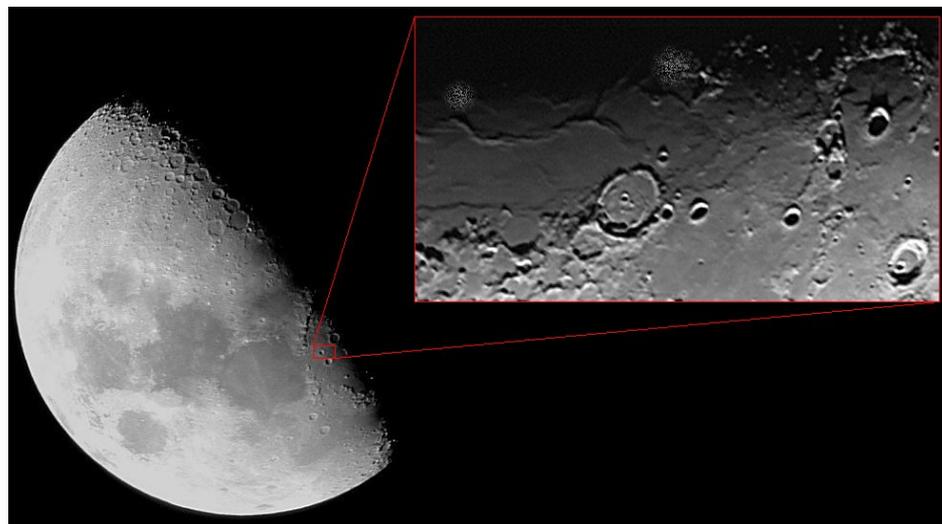
Developing this idea, he considered that such objects may well have collected their own retinues from the fine meteoric material making up that body which causes the Earth's zodiacal light, and which he computed could be as much as a kilometre in diameter.

Has such a thing been observed? Yes, he decided.

The British Astronomical Society publications have for more than a century contained numerous reports of Transient Lunar Objects, recorded by many experienced Lunar observers and interpreted by them as lunar outgassing, or perhaps the melting of frozen gases as the surface warms up.

APOGEE AND PERIGEE

As all serious amateurs and one astrologer knows, each lunar month our Moon comes into conjunction with the mysterious objects Apogee and Perigee. The existence of these objects had long been theorised because of the gravitational forces exerted by them on our (presumed) only



Photograph of Apogee (left smudge) and Perigee (right smudge)

Critics have formerly dismissed such sightings as spurious or mistaken.

Inspired by Professor Labore's insight, Melbourne Astronomers decided to cross-reference the dates and times of such Transient Lunar Object sightings with the times at which gravitational computations inferred that either Apogee or Perigee should be in transit and found an 87 percent match.

Following this, intensive imaging was undertaken from Pimba at all forecast transit times, with multiple exposures of the same spot taken with a variety of filters and then with images stacked, enhanced, and compared with exposures of the same areas taken at non-transit times.

Using a lunar blink comparator the results were astonishing, with faint, but detectable misty objects being revealed just where they were expected to be. A combination of sunlight and moonshine when the moon was waxing turned out to reflect the most scattered light from the almost cometary nucleus, which was best seen when contrasted against dark interiors of large craters where the Sun had not then penetrated.

One can safely speculate that that although these initial findings are not actually images of black holes, they are at least evidentiary confirmation of their existence.

NEWTONIAN TELESCOPES

For many centuries astronomers, scholars and the general public have been taught to believe that Isaac Newton actually intended to invent the reflecting telescope named after him.

However, this topic must be viewed in a new light following on a recent discovery by Oxford University's English Department in general and Doctor Hoo, Professor of Medieval Syntax in particular.

The discovery was made when conservationists were engaged in restoration work on the Oxford copy of the First Folio Edition of Shakespeare's plays to cull the death watch beetles, woodworm,

silverfish and other fibre-eating creatures that Oxford breeds in abundance and which were beginning to make inroads into Henry V, Part I.

In fact, the inside cover had been so badly chewed that it needed to be entirely replaced and as conservationists removed the last traces of the original, it became clear that faint spidery lines dimly seen between the unchewed bits had actually been notations in Newton's own handwriting and this suggested that Newton's esteem for gems of English literature was not overly high.

The full text ran to 27 closely spaced lines and revealed that Newton's original telescope, an example of which still exists was NOT designed as a reflecting telescope but rather was an achromatic refractor, with the rather small objective being what had hitherto been considered to be the eyepiece, while the concave mirror was in fact the single element eyepiece.

One looked in from the top of the tube at the focussed light coming in from the tiny objective, which was really only suitable for lunar observation rather than deep sky objects, or planets which, aside from their positions, did not overly interest him.

Only when Edmund Halley accidentally looked in from the "eyepiece" end and saw a bright image did Newton realise his mistake and cantankerous old goat that he was claim he had intended to invent a reflector all along and was merely "testing" Halley.

At least he had the decency in the newly discovered text to dedicate his discovery to Halley.

The existing Newtonian dating from Newton's time was long believed to be a contemporary copy, and the text revealed that Newton had actually presented the original to his mistress and love of his life, Moll Flanders who used it to supplement her income on slow nights by charging passing people sixpence for a look at the moon, this in fact being the motivation for his invention of the instrument so as to provide for Moll in her old age.

Newton in fact was a little trusting and thought that he was Moll's only lover and that she was a member of the lesser gentry.

She had explained her nights walking the streets of London as indulging her passion for astronomy by searching the sky for naked eye comets and similar extended objects.

It is believed that the Bishop of Oxford had glued a sheet of paper over Newton's writing so as to protect his memory and so as to not give strange ideas to new students.



The First Newtonian Telescope

Apparently Newton and Moll Flanders had been an item ever since attending Sunday school together and she had inspired many of his scientific insights, starting with comparative anatomy and going on to the laws of physics.

It seems he made up the story about his thoughts on gravity being inspired by the sight of a falling apple as in reality the idea had come to him as she fed him grapes and instead of dropping them all straight into his mouth threw some in a curved arc which soon had got him thinking.

From these humble grapes came the laws of gravity, motion, the principle of moments, and the concepts of air drag on trajectory in spite of Moll doing her utmost to distract him.

Newton never officially married, and there has been speculation that he and Moll had secretly been wed at Gretna Green, though they certainly would have spent most of their time leading separate lives - he on his researches and academic career at Cambridge

while Moll pursued a professional career in London.

This at least spared Moll the embarrassment of, in the course of married life, inadvertently encountering the many scientific and ecclesiastical colleagues of her husband with whom she had developed a mutually satisfactory professional relationship, as she had no desire to trouble him with such mundane matters which in any event were totally outside his knowledge or comprehension.

DEEP-SOUTH TEXAS STAR SAFARI 2004

June 2004 saw the inauguration of the first Deep-South Texas Star Safari at Timor Rock, Baja, Texas, with a crack team of hand picked observing veterans to assess the site and the sky.

First to arrive was Rabbi Essene of Missouri City, Kansas, quickly followed by Ada Akin, Lyn and Fran Kirby, Mark Cougar, Rob Vanderson and Don Charles, to join local observers Andrew "Hawkeye" Moral, Donald MacLachlan and Tony Starbuck.

All immediately commenced a well planned observing session and after initial survey with binoculars extensively examined the southern sky with two twenty inch scopes one 14.5 inch and one 12.5 inch.

The debate on exactly what colour the stars making the core of 47 Tucanae were, was sidetracked by the alarming discovery that M13 was actually an open cluster and Omega Centauri in reality a dwarf galaxy captured by our own.

Emus were observed, most on the ground but also a large one extending between Crux and Scorpio, while the list of Caldwell objects recorded, together with those Messier would have included in his catalogue had he been able to observe them from his Paris pub, grew rapidly.

After several nights of non-stop observing two members of the group were seen praying for rain, less because of photon fatigue than from the attractions and delights of dining next to the

well-stocked bar of the neighbourhood Imperial Hotel.

Nearby sites were examined in daylight including Siding Spring Observatory, the Australia Telescope Radio Array and a shameless and photogenic Koala posing full frontal in a gum tree.

By the end of the week the 2005 Deep-South Texas Star Safari was planned in detail and will include observers from those parts of the US nearest the Arctic Circle, attracted by the dual joys of observing new stuff and successfully dodging both frostbite and polar bears.

Massive and comprehensive observing lists have been in preparation for fully six months while the number of observers and telescopes attending will more than double, including a rumoured 25 inch Obsession.

Political asylum will be sought for those US observers who cannot face the thought of returning to the black pit of circumpolar North, inspired by local sightings of that other successful political refugee Elvis running, or rather hopping, with the kangaroos in the adjacent Warrumbungles National Park.

CLASSIFIEDS

Binocular Telrad

Binocular Telrads as used at 2004 Texas Star Party with OIII and UHC filters.

Mounted on Paramount with stainless steel pier and observer's chair. Gives superb views of the Marfa Lights, Newspaper Rock and Hubble Deep Field.

A must for the imaginative observer.

Price on application to Roy Bean 5th, Limpia Crossing Fort Davis, Texas.

Ceremonial Kiva

Genuine Anasazi ceremonial Kiva at Chaco Canyon, New Mexico. Ideal observing site as the surrounding stone walls shield your scope from the wind and make for stable imaging.

Unbeatable vibrations. Dark sky at 6,000 feet and no nearby light pollution.

Price: Only US\$17,000. Apply to traditional owner, Running Bareskin, Trailer Home number 42 Bloomington, New Mexico.

New Book

"Dark Secrets Of Texan Amateur Astronomy". Exciting and steamy reading. Even the National Inquirer dared not print this stuff. Find out which famous amateur from Austin was born long ago in a far galaxy.

Learn which secret herbs and spices served with barbecued Armadillo can enhance your night vision by 50%. Examine the schedule of flights from the secret Roswell UFO terminal to Neverland. See the report by the aliens on their total failure to discover intelligent life in Washington. And much, much more.

Price: Only \$25 in the plain brown wrapper from all good liquor stores.

STAR PARTY RECIPES

Aussie Stew For 100

Take four adult eastern grey kangaroos, two full grown wombats or one cow. Skin, gut and dice into pieces about 2 cm square.

Place in large vessel (defunct box trailer or two 44 gallon drums - preferably clean) and simmer over a log fire.

After two minutes add one bucket of raisins, two handfuls of turbo curry powder, two litres of olive oil, a half kilo of pepper and a kilo of cooking salt.

Cook, stirring regularly with a long handled shovel, over glowing red wood embers replenished when necessary for an hour and a half or longer if none of the guests are in a hurry to try any.

PS - Rent a stomach pump just in case someone does try any.

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HOW TO GET TO MEETINGS

Meetings are held in the ATNF Headquarters building, located in the CSIRO Department of Radiophysics complex on the corner of Pembroke Road and Vimiera Roads, Marsfield. If arriving by car, please dim your headlights, turn right through the main gate, then immediately right past the main office entrance, proceeding about 50 metres to a small car park area. Adjacent to this is the "West Door", which is our entrance. It is advisable to park your car in this area, and walk up the stairs to the Meeting Hall, as it can sometimes be a little difficult to hear the speaker if you are sitting downstairs.

All meetings start at 8pm sharp. The doors will be opened at 7.45, 7.55 and 8.10pm. If you arrive after 8.10pm, knock loudly on the door to attract the attention of the attendant, who works in the adjacent office. There may be a short delay before answering, and this is normal, however if, after 5 minutes, you are still waiting, try prying the doors open using a crowbar or similar, and if this is ineffective, the glass doors should shatter upon impact with a hard sharp blow with that same crowbar.

ALTERNATE UNIVERSE EDITOR

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SOCIETY DIARY

April 2	Crago Observatory	Special Observing Session Timing The Occultation Of Virgo By Pallas
April 8 - 9	Wiruna	Shower Celebration. Anti-Rain Line-Dancing
April 15	Meeting	Joe Crouchy "Using Flash Photography On Deep Sky Objects"
April 22	Meeting	Professor Richard Jaywalker "The Enhancement Of Double Star Observations Using Ethyl Alcohol"
April 29	Lunar Perigee	Moon At Perigee at 6pm. Observations Of The Conjunction With 16 Inch Dobsonian, With Prize For The Best Drawing Of Perigee

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