



## Inside this Issue

Secretary's Column	3
Star Hoping to Messiers	4
Update on Royal Stars	7
Black Holes	8

## MAS Committee

**President**  
John Rombi

**Vice President**  
Daniel Ross

**Secretary**  
Roger Powell

**Treasurer**  
Dick Everett

**Merchandising Officer**  
Stuart Grainger

**Webmaster**  
Chris Malikoff

**Committee Members**  
Lloyd Wright  
Stuart Grainger  
Ivan Fox

**Patron**  
Professor Ragbir Bhathal

## MAS Postal Address

P.O. Box 17  
MINTO NSW 2566

Web: [www.macaastro.org.au](http://www.macaastro.org.au)

**Prime Focus Editor**  
Kate Johnston  
[cyberpiggy@optusnet.com.au](mailto:cyberpiggy@optusnet.com.au)

## Presidents Report

**John Rombi**

Welcome to the March edition of *Prime Focus*.

I would like to thank last month's speaker Ian Cook for a brilliant presentation on "**Your favourite Star**"

I have listened to many professional astronomers speak, and I must say that Ian's presentation was very well executed and **understandable!!** More please, Ian.

### Behind the scenes

It has been very busy behind the scenes lately. Roger and I met with representatives of U.W.S in an effort to open up the Domes on a monthly basis for this year.

An agreement was reached and the domes will be open on the Saturday of first quarter moon each month, (excluding April)

After a difficult start with International House increasing the cost to the cabin from \$8 per person per night, to a blanket \$110 per weekend, discussions were able to bring it down to \$77 per weekend.

The cost of (\$8) per person, per night will continue for the time being, any short fall will be taken care of by the club. M.A.S will only subsidise the New Moon weekends. The \$77 charge will still be in effect for The Lunar Nights, and this charge will have to be split up between the members that attend.

### The Domes, March 7<sup>th</sup>

Was a great success with 23 members attending the event. We had Dr Ragbir Bhathal operating the 16" in the larger dome, with new member Mark Johnston in the smaller dome on the 10"

Both domes were surrounded by 20 other scopes supplied by you the members.

This was more than enough firepower for the 200-300 members of the public that attended.

This certainly indicated to U.W.S that M.A.S is very committed to bringing science in general and astronomy in particular to the general populace.

### April Doings

April will be a busy month for M.A.S, with The Campbelltown Show on the 3<sup>rd</sup> & 4<sup>th</sup> of the month. Later on (18<sup>th</sup>) we will have a get together with The Historical Societies of Campbelltown at The Oaks.

The day session will be at Campbelltown with telescope displays (and hopefully some solar viewing) at 11.00am & 1.00pm Bob Bee will be presenting a talk on The Historical Aspects of Indigenous Astronomy. The event will finish at 3.00pm.

We will then be guests of the The Oaks Historical Society, where Bob will give his talk. If the weather allows there will be a short observing session afterwards.

If you are not exhausted by the end of the day, this evening is an official Stargard observing night!!

### Volunteers

With this busy time ahead, we need volunteers to make these events a success.

Please see me or Roger if you can help on any of these dates.

### Tonight.

It is my great pleasure to welcome [Dr Andrew Hopkins](#) to M.A.S this evening.

Clear Skies, John Rombi

## Observing Dates

### March

16/03/09 General Meeting  
21/03/09 Stargard  
28/03/09 The Forest

### April

18/04/09 Stargard  
20/04/09 AGM  
25/04/09 The Forest

### May

18/05/09 General Meeting  
23/05/09 The Forest

### June

15/06/09 General Meeting  
20/06/09 The Forest  
27/06/09 Stargard

### July

18/07/09 Stargard  
20/07/09 General Meeting  
25/07/09 The Forest

### August

15/08/09 Stargard  
17/08/09 General Meeting  
22/08/09 The Forest

### September

12/09/09 Stargard  
19/09/09 The Forest  
21/09/09 General Meeting

### October

10/10/09 Stargard  
17/10/09 The Forest  
19/10/09 General Meeting

### November

14/11/09 The Forest  
16/10/09 General Meeting  
21/11/09 Stargard

### December

12/12/09 Stargard  
19/12/09 The Forest



"Macarthur Astronomical Society supports Earth Hour on 28th March and urges all members to turn off non-essential lighting between 8.30 pm and 9.30 pm. Switching off your lights is a vote for Earth but leaving them on is a vote for global warming"

# Secretary's Column

Roger Powell

## Notice of Meeting

Notice is hereby given that the Annual General Meeting of Macarthur Astronomical Society will be held on Monday 20<sup>th</sup> April at 7.30 pm.

Business for the meeting will include the presentation of annual reports and the election of a new management committee for 2009-2010. Nominations for election must be in my care by 6<sup>th</sup> April.

~ ~ ~ ~ ~

I heard John say recently that "we are a small club with a big heart" - and he has never spoken truer words. Our first public night in two years was an astounding success, with every member of the public leaving extremely happy after seeing what they did. Most of them had never looked through a telescope before but were very keen to do so. Everyone can be very proud of MAS because the members made such a "big hearted" effort.

Many of the visitors came up with the usual easy questions, mixed with the occasional curly one. I was asked: "how many light-minutes are there between Earth and Saturn?" I said it was probably about sixty but when I checked later I found it was closer to ninety. (How do they manage to steer space probes around Saturn, when there is a three hour delay between communications?).

Part of the MAS charter is to "foster the science of astronomy" and that is what we will continue to do at the various public events arranged for the next few weeks, which will be our busiest period of the year. First we have our own scheduled observing nights on 21<sup>st</sup> and 28<sup>th</sup> March. This will be followed by major public events on 3<sup>rd</sup>, 4<sup>th</sup> and 18<sup>th</sup> April. Then our AGM is on 20<sup>th</sup> April. There will be further members observing nights on 18<sup>th</sup> and 25<sup>th</sup> April and a second public observing night at UWS on 2<sup>nd</sup> May. Let's keep up the momentum.

John in particular has worked very hard in organising all of these events and he will be letting us all know what needs to be done in support. In most cases it is just a case of being there to help out. So I will only say that I hope all members will keep an eye on the website and support the events, to improve public understanding of astronomy.

It was great to see both observatory domes being used at the public night. With UWS staff Ragbir and Mark both also members of MAS; and with the full backing of the UWS College of Health and Science for the Public Nights, it is hoped that an already good relationship with the University will develop to even bigger and better things.

Bob Bee will be doing the talking at the three Historical Societies events on 18<sup>th</sup> April. His lectures will be about the history of Australian astronomy and are always interesting. He will need plenty of members with their telescopes.

Bob will also be giving a brief introductory talk on astronomy, at the Australian Geographic shop on Thursday 23<sup>rd</sup> April. Retailers like AG and Dick Smith sell a lot of 'lower end' telescopes, which helps to get more local people interested in astronomy. However, some of them later contact the Society because they have been unable to use their new instrument. We need to work out new ways of encouraging people with basic instruments, before they give up in frustration. Most of them are probably youngsters and I suspect they get very little back up from the shop assistant that sold it to them.

## 61

My number of the month in February was 60 – the number of confirmed satellites of Saturn. As soon as this was published in *Prime Focus*, they announced yet another one. The good news is that this 'shepherd' moonlet, named S/2008 S 1 is located in the G Ring, is less than half a kilometre in diameter and is the eighth in order of distance from Saturn. The bad news is that if you want to see it yourself, you will need to launch your own space probe.

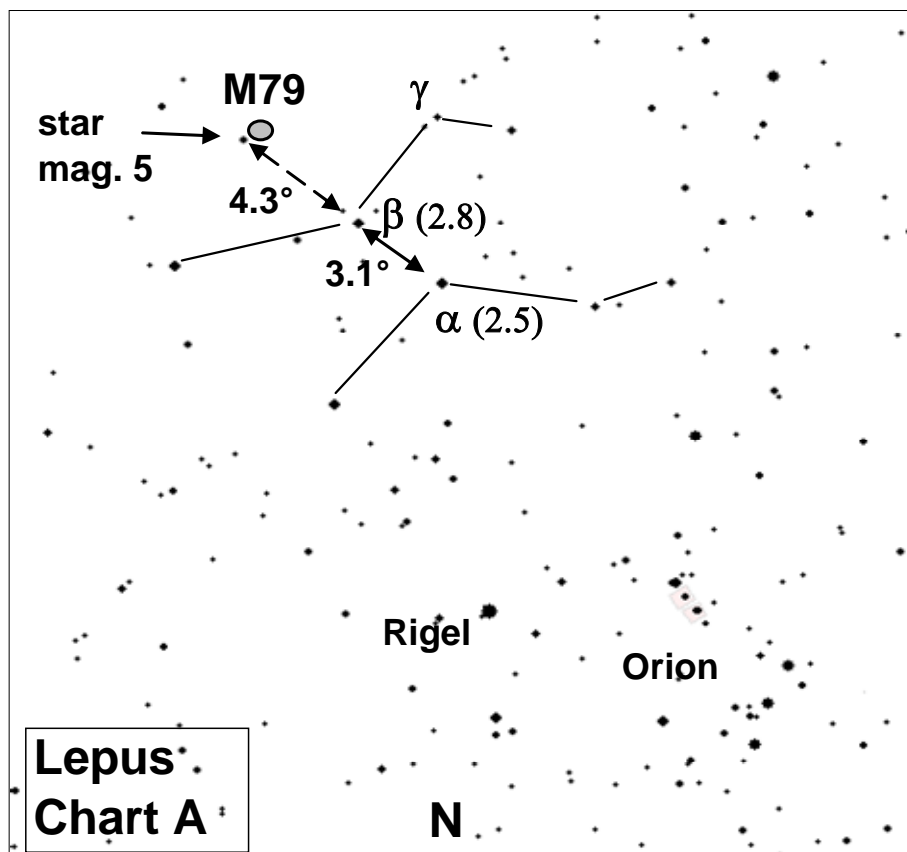
## Star Hopping to Messiers #11

### Lepus (M79) and Puppis (M46, M47 & M93)

Bob Bee

#### Lepus: M79

In Article #10, we looked at M78 in Orion (as well as M42 and M43). Not too far away is M79 in Lepus, the Hare, which lies at Orion's feet. (Try not to confuse Lepus with Lupus (the Wolf), which is on the business end of Centaurus's spear to the south.) From our viewpoint, of course, Lepus is 'above' Orion, and more particularly, above the white supergiant Rigel. See Lepus Chart A below.

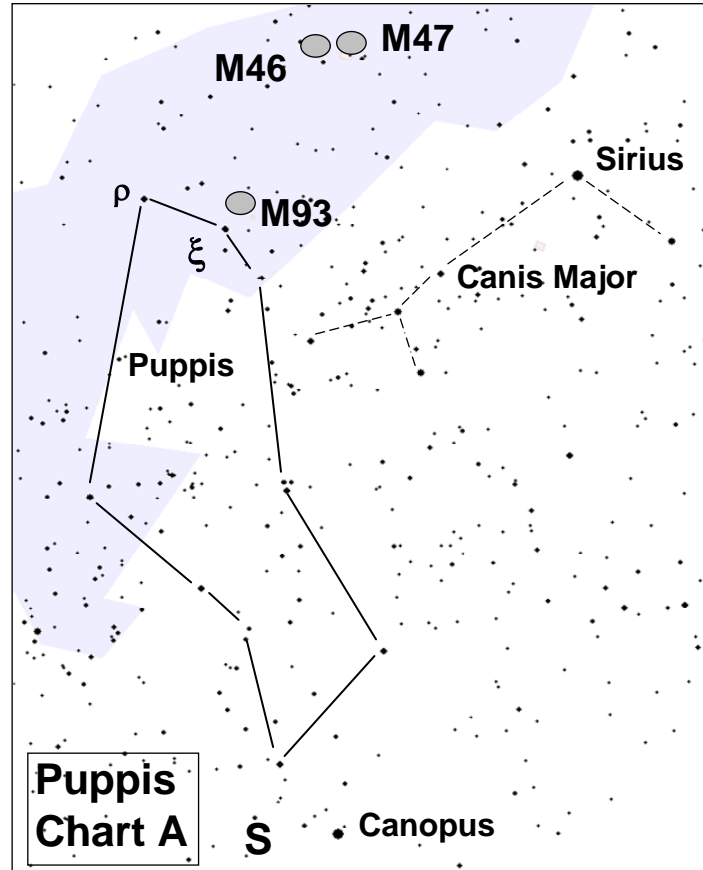


M79 is an 8<sup>th</sup> magnitude globular cluster about 44,000 light years away, visible in your telescope as a fuzzy star. It is fairly easy to locate. As it says in the cook book, first catch your rabbit – that is, find Lepus above Orion. Its main stars,  $\alpha$ ,  $\beta$  and  $\gamma$  are magnitudes 2.5, 2.8 and 3.6 resp, while the others in the shape are around mag 3 and 4.

Now  $\alpha$  and  $\beta$  are only  $3.1^\circ$  apart, fitting easily within your finder scope FoV. If you follow that line from  $\alpha$  through  $\beta$  by another  $4.3^\circ$  (also within your f/s FoV, you'll find a fainter mag 5.0 star. Put the f/s centre on it, and M79 is  $0.5^\circ$  (a Moon diameter) to the south-east. Check in your main eye piece. Got it?

## Puppis: M46, M47 and M93

These three open cluster Messiers are definitely binocular visible, the first two even with the naked eye on dark sites as bright knots in the Milky Way. Puppis has a rather ragged shape with 2<sup>nd</sup> and 3<sup>rd</sup> mag stars, best found by following the chart upwards (north) from Canopus in Carina to the South. (See Puppis Chart A.)



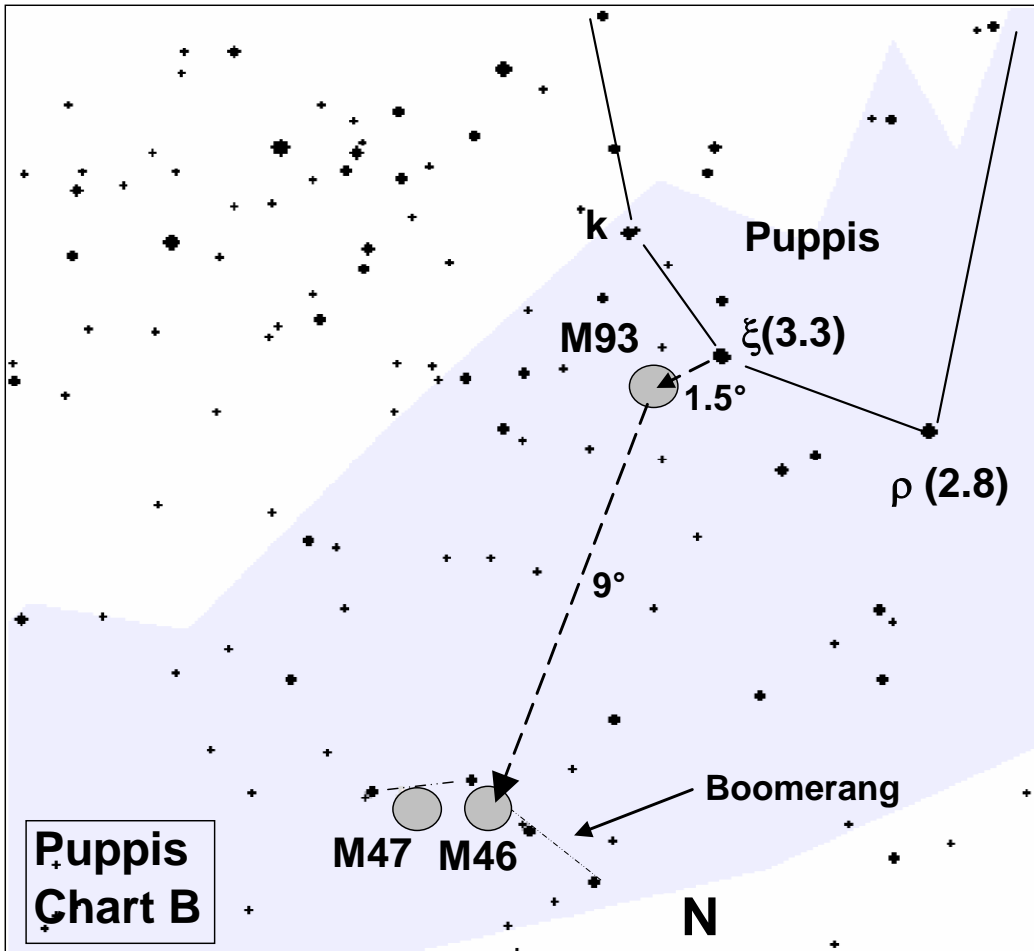
The Messier end of Puppis is in the vicinity of Canis Major, so Sirius is a good marker star. I find it best to spot the guide stars with binoculars first. They'll be easier to identify then in your finder scope.

If you just want to spot these Messiers in binoculars (they are good binocular objects), you'll want a comfortable reclining chair as they are painfully overhead. In fact, though Chart A provided above is from a southern aspect, it may be easier to face the north. For that purpose, the detailed chart B below is shown facing north.

Start by identifying the area with  $\rho$  and  $\xi$  Puppis. With binoculars and finder scope, you can't mistake  $\xi$  as it is a beautiful optical double (4' separation) with a bright yellow and a gold pair. Now refer to Puppis Chart B.

In the same FoV as  $\xi$ , **M93** is located just 1.5° NW from  $\xi$ . You should be able to see its smudge of light in your f/s. Now check your eye piece to see it.

For M46 and M47, they are located, as shown on Chart B, about 9° north of M93 (and also 12° east of Sirius). As a helpful guide, there is a 3° x 1.5° 'boomerang' of 5<sup>th</sup> mag stars (some are actually small knots of stars) inside which both M46 and M47 cradle just 1.5° apart.



The Messiers you are looking for in your eye piece are shown below.



M93



M46 and M47

Good hopping!



## Update on Royal Stars

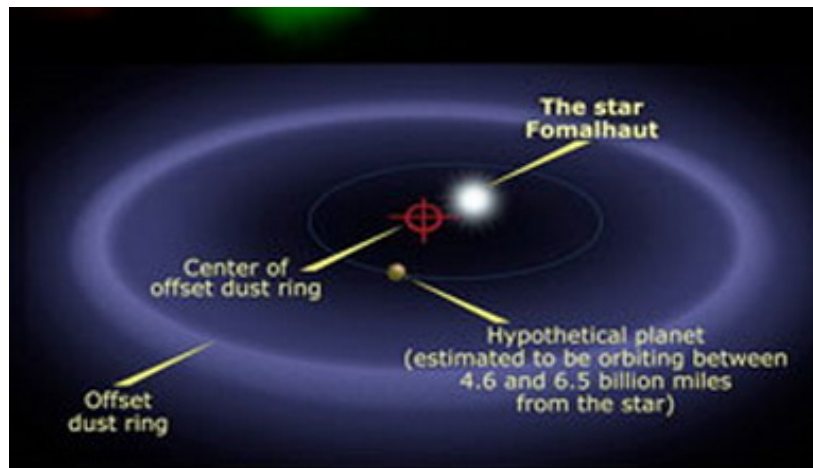
Ian Cook

25 years ago in 1983 the orbiting satellite IRAS, discovered far more infrared radiation coming from the star Fomalhaut than expected.

The radiation appeared to be coming from a huge disk of material, four times the dimensions of our planetary system, surrounding the star. The planets of our Solar System almost certainly formed from the accumulation of dust in a similar disk made of icy dust particles warmed by the star.

Observation of Fomalhaut's dusty disk in the 1990's showed that the star was offset to one side of its' gravitational centre and was surrounded by a cleared space. This is what could be expected in a binary system or in the presence of other orbiting material.

Could this 'hole' be the result of planets that have removed the dust?



Google Image Fomalhaut

In my previous articles on the **Guardians of the Heavens** I wrote, "Well we don't know as yet but closer scrutiny may reveal Fom-al-haut is preparing something special and not just guarding his quadrant of sky.

Are we being watched by other eyes as well as those of the solitary Royal Watcher of the North?"

Well in November 2008, 25 years after the dusty disk was first spotted, Science Magazine reported that a team working with the Hubble Space Telescope has imaged a planet circling the star Fomalhaut. Officially named **Fomalhaut b**, the planet is about the size of Jupiter and orbits at a distance of 119 AU which is three times the size of our own Solar system. It takes more than 800 years to make one orbit.

This is one of the first confirmed direct visible light sightings ever taken of a planet orbiting a star 25 light years from us. Usually exo-planets are deduced from wiggly lines on a graph of the star's velocity or brightness, but this is an actual CCD picture. Google it now!

## IC Stars

## Black Holes Ain't Holes – Part 8

### An essay on the problems perceived with the concept of black holes

Robert Zindler

(Editors Note: Robert Zindler has kindly offered the readers of Prime Focus sections of an essay he producing. Each month you will find the next extract from this essay.)

#### Question?

Why does the *observable* universe (OU), with a radius of say 13.7 billion light years itself, and separate from the *unobservable* universe, not have a black hole centre?

#### Answer:

- The OU is **not** a discrete entity in its own right, although astronomers and cosmologists treat the OU as if it *is* a discrete entity.
- The OU is merely a technology-limited, borderless, anthropocentric, observable universe, which is surrounded and contained by a very much larger unobservable universe, that together form the total *cosmos*.

#### Spaceless energy?

A fundamental premise of physics is that *functional*, as distinct from *potential* energy *has no physical boundaries or dimensions*. But all functional energies – as distinct from potential energy which is locked up and does not require space – fundamentally require space and time to manifest. In the big bang and galactic black holes, however, energy tends to be represented by a focus, a mathematical point. Representation of functional energy by or in a point such as the singularity is for *convenience*, but this may not be taken to be a physical fact. A point is merely a convenient mathematical expression and a tool and, in other words, a human construct with no physical equivalent. It is this inhibiting view of functional energies that forces scientists to limit the properties of the whole, to the properties of its focal singularity, which in effect is no more than a symbolic representation. This tends to confuse many cosmologists and the entire body of the general interested public alike, and leads to insuperable misconceptions about black holes.

#### Cosmological compromise with the hollow black hole

However, in a way cosmologists have compromised on this scientific view of energies and have instead devised a physical cosmic structure with boundaries for black holes in the form of an *event horizon*, a *Schwartzschild radius* and a *content* consisting of solar masses ranging from the Chandrasekhar limit of three solar masses to 'millions or even billions of solar masses'.

In addition, the putative hyper-qualities of temperature, density, pressure and gravity are therefore tentatively not confined to the singularity, but must be seen to be manifesting *throughout the black hole and within the event horizon*, except for gravity which extends well beyond the event horizon.

#### GRAVITY

##### Confused scientists

Scientists are confused about their concepts of gravity – they recognize two diametrically opposite notions of gravity, sometimes in the same publications. One view is that gravity is represented by particles, which are expressed as *gravitons*, that are manifested *beyond* the physical limits of matter, and as *gluons*, which are generally represented by spherical globules *within* the nuclear structures of protons, neutrons and quarks.

Particles have physical properties such as shapes and dimensions, in other words: size. These particles are said to *interact* with other particles, that is, with matter. The word *interact* is meant



to convey the concept *that* action occurs, but it fails to explain *how* this action occurs. *Interaction* (of gravitons or gravitation force) is thus a neutral, non-descriptive and meaningless term that fails to demonstrate the real methodology of the action of gravity.

But if a black hole is said to manifest 'infinite' gravitational force, then this implies that the black hole must be saturated with an infinite number of particles of gravitons – and what about gluons. This is inherently internally inconsistent. Black holes can therefore not be hollow, but must be *solid* with graviton particles.

On the other hand, some scientists accept Einstein's concept of the deformation of space by matter, as represented by a dented rubber sheet with a ball in the middle. This concept is shown by countless illustrations, including in the most prestigious literature by senior scientists. (e.g. Edward Harrison, *Cosmology, The Science of the Universe*, Second edition, Cambridge University Press, 2003, p248, Figure 13.2). But this deformation of space requires the presence of matter. Therefore, if matter is not present, then space cannot be deformed and hence, no gravity can ensue. This is fundamental logic.

In reality, of course, this truism does not present any problems to cosmologists, who accept the absorption into and therefore the presence of 'the weight' of as many as millions or even billions of stars in the putative super large black holes or even smaller ones. Virtually all recent literature claims that large and massive galaxies 'contain' massive black holes cores; in other words, the requisite mass required to generate the putative hyper levels of gravity within and outside black holes. But massive masses of matter within the black hole preclude a black hole from being hollow. In addition, the interior of a black hole reputedly has 'maximum' density, but a density of what in this *hollow* object? In any case, although rarely if ever mentioned, density requires pressure and pressure is not associated with any hollow object, but, instead, requires matter to be present in order to become dense. This too is fundamental logic in physics. All this results from the incorrect interpretation of the process of retro-reasoning.

**Conclusion:** Both visions of the concept of gravity require the presence of matter in order to generate *any* gravity. Thus, the inevitable presence of matter precludes a black hole or any other hole from being hollow and must, therefore be solid. Herewith rests my case. But there is more.

### **Intra-particulate space**

This raises the issue of compression of matter in order to be dense within the black hole. Physicists recognize the relatively enormous 'spaces' within particulate structures of protons and neutrons. I posit, that even their component quarks manifest significant internal spaces within the structural configuration of the *substance* of which quarks themselves are composed. It is these combined internal spaces within all particles of matter, that allow for the ultimate compression of matter down to the ultra-solid primordial and galactic 'black cores'.

I propose that this intra-quark *substance* consist of 'proto-energy strands'. Proto-energy strands are the subject of a separate paper, which, together with my other related papers, form part of a book, which is in preparation, on a challenge to the standard cosmological model and proposes a new alternative cosmological model.

### **The gravity of the singularity**

An interesting issue involves the putative gravity manifested by the singularity. Einstein's equation of  $E = mc^2$ , asserts that energy is represented by matter or 'm', and in the big bang theory, energy is represented by the point-singularity. But matter cannot manifest in a point, as a point has no dimensions and therefore cannot represent or contain the physical existence of matter. Matter requires mass and because matter is *discontinuous* and manifests in discrete quantities, units or entities. Matter also requires space and therefore, matter cannot exist

without space. Thus, as gravity requires matter and matter requires space, and a zero-dimensional point has no space, a physically non-existent hypothetical point-singularity can manifest, exhibit, or generate neither matter nor gravity.

Matter generates gravity and the generation of gravity is a continuous process as long as matter is present. As all matter – and only matter – generates gravity, gravitational propagation ceases when matter is absent. As, according to the standard cosmological model, its central singularity has zero dimensions, and in any case consists only of hyper-quality of energies, and as a black hole can no longer contain matter, the emission and propagation of all gravity must cease. But as gravity putatively continues to propagate from black holes, matter *must* be present, in which case 'the hole' must contain matter and can no longer be a hollow structure. In other words, the hole can no longer be a hole. (Refer to the above descriptions by experts of black holes containing or consisting of "million or billions of solar masses").

Furthermore, gravity neither generates nor self-destructs matter or gravity, nor can gravity exist without gravity-generating matter. Here we observe some significant contradictions with prevailing concepts of *gravity-generated* and *gravity-generating* black holes, their singularities and their putative properties. The standard cosmological model (SCM) represents the formally adopted theory of cosmology and the theory of the collapse of supernovae, as well as the process of *retro-reasoning*. This model suggests that gravity contracts cosmic bodies to the point where matter trans-mographies or re-configurates into gravity and simultaneously into the putative hyper-temperatures, densities and pressures of the singularity – and that this gravity and the other energies are of the order of infinite or near-infinite levels, but which are focused in and are represented by the singularity, in the complete absence of matter in the resulting black hole. This denotes 'naked' temperature, density, pressure and gravity.

### **Gravity cannot be 'naked'**

It is a fundamental principle in physics that all matter emits gravitational energy. This applies even to dark matter, regardless of the absence of any knowledge of the substance and origin of dark matter. It is the gravity ascribed to *dark matter* that facilitated the discovery of the presence of dark matter in the observable universe in quantities many orders greater than that of the mass of *luminous matter*. Thus, all matter generates gravity, but no mechanisms of formation, nor are other origins of *gravity* known or have to date been demonstrated or proved, and it has not been observed that gravity itself generates new gravity in the absence of matter. Consequently, unless proven otherwise, gravity cannot be generated in the absence of matter. This too is an important principle in physics, as this precludes the existence of 'naked' gravity in the absence of matter. Gravity must therefore always be accompanied by the matter which generates that gravity.

### **'Naked' temperature, density and pressure in a singularity**

But what is the physical substance of or in the singularity that manifests the properties of temperature, density and pressure? Temperature is a property of matter, including gasses. Density requires pressure that ensures and maintains density of matter. Question: Can temperature, density and pressure manifest in the physically non-existent point-singularity? The answer must also be an emphatic NO.

### **Gravity cannot self-destruct**

The concept of the black hole and its singularity presents other insuperable primary problems: gravity can never be great enough to cause the contraction and implosion and the subsequent destruction of the structural configuration of its parent matter and its transmographication into gravity. In other words, self-destruction of the mass of a body of cosmic gravity-generating

matter, and with it the generation and concentration of the newly generated hyper-gravity (and other hyper-properties) into a zero-dimension, human construct, mathematical and thus physically non-existent, point-singularity core, is not physically possible. In any case, Pauli's exclusion principle and conservation law simply forbid this.

### **Absence of proven evidence**

Scientists have, to date, been unable and thus have failed to provide unequivocal and incontrovertible evidence and proof of spontaneous generation of gravity in the absence of matter, as it is currently claimed for the singularities of the cosmic big bang and galactic black holes. This failure applies equally to the absence of verifiable proof of the concept of the generation of all cosmic matter and energy from the big bang singularity. In the obvious and unavoidable absence of this proven evidence, it must be concluded, that the concept of the spontaneous and autogenous generation of big bang gravity and all cosmic matter and energy from the big bang singularity, including the presumed generation of space and time, must be relegated to the realm of mere speculation. Adding to this fact, the now questioned veracity of these other concepts, including black holes, presents the real possibility that the entire *framework* on which the SCM itself has been built, is now in real jeopardy.

This failure, or rather inability of science to provide verifiable proof of the veracity of the concept of 'naked' gravity, and the concept of the big bang singularity with its putative hyper-qualities and its putative transition into the entire cosmos, thus challenges the veracity of the very concept of the standard cosmological model, which is predicated on the *unquestioned* acceptance of these concepts.

Scientists have also failed to provide incontrovertible evidence *that, how and where* the transition discontinuity from matter to energy occurs: at or near the event horizon of the black hole, in the hollow (empty) space between the event horizon and the singularity, or at or in the singularity itself? This serious question is entirely neutralized and avoided, by my proposition that the black hole does not exist, that no discontinuity occurs and that all newly arriving matter is *convergently-compressed* at the *surface* of the ensuing *solid core*. Problem solved!

### **Misconceptions**

There may be a misconception in the standard cosmological model that it is the 'suction' or 'pulling power' of gravity that destroys the physical structure of matter and causes matter to disintegrate and trans-configure into energy. In other words, *suction causes destruction* of matter by gravity. This concept constitutes the entire *raison d'être* for the putative mechanism of black hole formation. The inexplicable absence of 'pressure' from the summation of the qualities of the singularities in most, if not all descriptions of these hyper-qualities, is evidence of this cosmological mindset. It is, in fact, this very concept that is the source for the concept of the inexplicable, possibly mono-phasic trans-configuration by gravity, of matter into the hyper-gravity of the singularity.

Instead, in this proposed scenario at least, gravity can only cause matter to contract, resulting in *increased pressure* within the mass of matter. It is this resulting ultra-high pressure generated by *convergent-compression* (refer to Definitions) within matter on itself that ostensibly destroys the structural configuration of matter and thereby trans-configurates matter into its component-energy. In short, it is *pressure* resulting from gravity and not gravity itself that putatively trans-configurates matter into energy. This is the theory. But of course, no amount of pressure of any kind can achieve the physical structural destruction of any particulate matter and can only compact matter into smaller spaces. And *pressure* can never result in the trans-configuration of particulate matter into energy (see section Liquid and solid).

## PROBLEMS WITH LOGIC

### A Sleight of Hand of Logic

The following issue has major implications on the veracity of new cosmological theories. We find that there are laws and rules of logic in every profession for presenting reasoned arguments; cosmology is not an exception. New theories and ideas that appear in copious quantities in scientific and popular magazines often seem to show a lack of logic in their arguments for a new theory or idea; instead, they are full of imagination, sensationalised for attention seeking and for popularising the articles and their authors alike. Only the untrained mind in ways of reasoned arguments may be misled by reading such articles produced even by celebrated and popular authors.

The problem is twofold, namely the lack of understanding the rules of logic set out for use in an argument, and even if one would know them, it takes an intuitive thinking to recognise the pitfalls, when if any or a misleading argument is provided.

There is a simple **rule of logic** introduced by Aristotle 2370 years ago, which says: "When we assume the physical existence of a being in our imagination, which is the **logical order**, we cannot jump from that order into the reality, that is the **ontological order** to prove the physical existence of that being, because this leaves a gap in our reasoning process; it violates a rule of logical argument, which is like a slight-of-hand of logic".

This rule of logic referred to is called the "**Ontological Argument**", which is often used erroneously even by cosmologists from the earlier times right up to date. For example: in General Relativity Einstein tried to prove the veracity of his theory, and apart from his correct prediction of the 1919 eclipse, he assumed that the 3-dimensions + time (which are physical entities) constitute a 4-dimensional "space-time". Thus the physical forces became represented by abstract geometric terms. The result was the physically active energy-mass were transposed into a mere concept of a "dynamic" geometry. In other words: "Energy and mass create warps in the spatial landscape that appear to us as gravitational fields. Instead of following the Newtonian physics, celestial bodies sliding down the slopes of space-time. What looks to us like forces is actually hidden geometry." Simply said: As if physical forces were acting while they were only concepts of gravitational fields, which appears to violate the rule of logic.

Similarly to the above example, when a Black Hole from the physical reality is transposed into an abstract idea of "singularity" that is given a physical existence, as the Black Hole, for the simple reason of understanding it as a complete theory, it appears to violate the rule of logic. (These are excerpts from my private correspondence with a colleague).

## Prime Focus Article Submission

Deadline for article submissions for the April edition of Prime Focus is

**Monday 13<sup>th</sup> April 2009**

All Articles can be submitted via email [cyberpiggy@optusnet.com.au](mailto:cyberpiggy@optusnet.com.au)

Or via snail mail to the MAS Postal address