

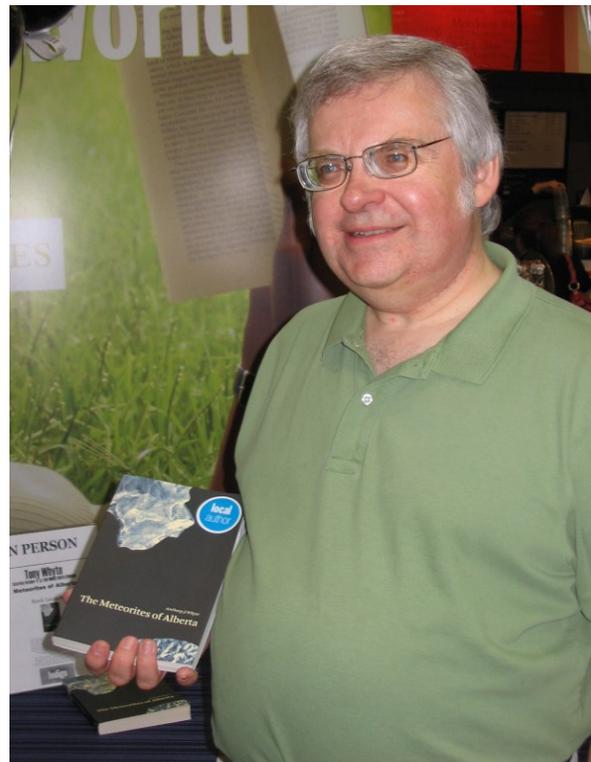
STARDUST

Newsletter of the Royal Astronomical Society of Canada
Edmonton Centre



November 2009

Volume 56 Issue 3



*Tony Whyte proudly holds a copy of his newly-released Meteorites of Alberta.
The book launch was held at Indigo South Common, Saturday October 17, 2009.
Photo courtesy of Dave Cleary.*

Inside this Issue

Contact Information.....	page 2
Upcoming Events, Meetings, Deadlines, Announcements.....	page 3
President's Report.....	page 3
Northern Prairie Starfest 2009.....	page 3
Greek Mythology.....	page 5
EXPENDITURE PROPOSALS and other business.....	page 5
The Planets.....	page 6

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Mailing address	RASC Edmonton Centre c/o Telus World of Science 11212 – 142 St Edmonton, AB, Canada, T5M 4A1
Centre Website	http://www.edmontonrasc.com
Observing Deck	452-9100 ext 2249
Stardust	Articles for Stardust may be submitted by email to mward@interbaun.com . Submission deadline is the last day of the previous month (e.g. for the May issue submit by 30 Apr). Submit in any standard document format (MSOffice, OpenOffice, AbiWord, plain text). TimesNewRoman 10pt single-spaced is preferred. Don't bother with fancy formatting, odd spacing, strange fonts, etc.; it will only be discarded. Graphics (GIF or JPG please) may be submitted as separate files, and clearly identified.

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Upcoming Events, Meetings, Deadlines, Announcements

MEETINGS 2009

	General	Council	Observers	NewMoon	FullMoon
Sep	14	28	2	18	4
Oct	19	26	5	18	4
Nov	9	23	2	16	2
Dec	14		7	16	2

MEETING LOCATIONS 2009

Regular General Meetings are at 7:30pm in Telus World of Science, 11211 – 142 St. *follow the signs, from the main entrance*

Council Meetings are at 7:15 pm in the ATA Building, 142 St & 111 Ave. *follow the signs, from the main entrance*

Observers Meetings: *location varies*

President's Report by Sherry Campbell

Here we are well into fall and little to no snow on the ground. This makes for ideal observing conditions, as the snow does not reflect back up the tube of your scope, diminishing your views of the heavens. The warmer temperatures are ideal too. Now that the Sun sets earlier in the evening, it is entirely possible to have an observing session in your backyard after dinner and still make it to bed at a reasonable time. I encourage you if you are able to set aside the time to take advantage of these skies at this time of the year. Soon enough we will be neck deep in snow and -30 temperatures.

I am happy to report that the George Moores' Astronomy Workshop was indeed a great success. Everyone who attended enjoyed the talks, both from our guest speaker Stephen James O'Meara and the round robin talks. We managed to get clear skies for Friday night, a bit iffy, but better than what I was thinking we would get. Saturday night was a wash out since it rained, but everyone enjoyed chatting in the hall with both Steve and other attendees about astronomy, NASA politics and whether or not it was a career killer for William Shatner to do "Rocket Man". Thank you to Alister Ling, Larry Wood, Orla Aaquist and Rick Huziak (Saskatoon Centre) for stepping up to present topics for the round robin. Thank you to the committee for going over and above to help make the Workshop the success it was. Lastly, but certainly not least, a big thank you to the attendees who helped clean the hall on Sunday before you left. It was much appreciated.

I hoped you enjoyed Tony Whyte's presentation tonight about his book *Meteorites of Alberta*. His book is available at Chapters/Indigo and I am sure that Tony would be more than happy to sign your copy. It is a great read even for someone like me that does not fully understand the physics and technical

jargon behind meteorite falls. Tony delves into the history of each meteor fall, so the entire book is not all equations. For December and January, the meetings will be members' nights, so if you have a short presentation for the club, please contact me and I will schedule you in.

This issue also has a few expenditure proposals in it. Please read through these expenditures, as we will be voting on them at the December meeting. If you have any questions about the expenditures, please contact me and I will pass your questions on to the presenter.

Last month I asked the membership for their opinion on whether or not we should host the General Assembly (GA) of the RASC for 2012. I received a few responses from people, all positive, but I would like to hear from a few more people. At the November Council meeting on November 23rd, I will be making a formal motion to Council to support hosting the GA for 2012. If that is approved, we will need to form a committee very quickly to do some preliminary stuff, such as booking meeting spaces.

Speaking of committees, it is that time of year again when we start looking for volunteers to fill the council positions. If you would like to donate your time and efforts to the club, please contact me and we will find a position that suits you best. All the positions are listed on page 2 of Stardust. The slate of nominations will be published in the December issue and voted on at the Annual General Meeting in January.

I hope the weather co-operates this fall and that you manage to get out and do some observing. If you are taking photos, contact Massimo Torri and he will show them at the general meetings. Clear skies!

Northern Prairie Starfest, September 2009 by Susan and Rick Bramm, NPS co-ordinators

The Sixth annual Northern Prairie Starfest was held from Tuesday September 15 to Sunday September 20 at the Black Nugget Lake Camp ground which is located about 18 km. South east of Tofield, Alberta. Early attendees reported that a photographer from the *Tofield Mercury* weekly newspaper was out on Friday to capture the excitement of the event.

There were four good nights of observing Tuesday to Friday. We observed on Friday night. There were fine dark prairie skies to be sure, but there was a pesky scope-rattling wind to contend with. Saturday skies didn't cooperate astronomically speaking but did give our after dinner speakers more time to shine. Incidentally, since the Northern Prairie Starfest's inception, 17 out of 24 nights have been clear.

Early Saturday afternoon, a number of us enjoyed a nature

walk around the property (up close and personal planetary observing), a remarkable oasis for the local wildlife. We followed a narrow, sometimes easy to miss trail that snakes its way around the northern perimeter. We continued to marvel at the extent to which the land has recovered (probably by itself) from past mining activities. We took a happy hiker group photo at a high point along the trail. The birders amongst us were excited by a number of sightings of a large owl that we seemed to be chasing down the trail.

Saturday afternoon and evening we had the pleasure of listening to our four speakers. The presentations were no doubt facilitated by the fact that the cook shelter now has power! Dr. Moritz Heimpel, Department of Physics, University of Alberta was first up with a talk entitled "A Dynamical Tour of Planetary

Interiors." In particular, Moritz focused on efforts being undertaken by him and others to understand the interiors of the Gas Giants and Ice Giants. Next, Dr. Clare Watt, also from the Department of Physics, University of Alberta gave a very interesting talk on "The Plasma Universe with Emphasis on the Sun and Near-Earth Space." So much for our simplistic notions of the "empty vacuum" of outer space!

Sixty of us enjoyed the potluck barbecue with wieners, buns and refreshments supplied by the Northern Prairie Starfest; and snacks, salads, fruit and dessert, including Bob Drew's "trans-fat delights," supplied by the attendees.

We were fortunate to have 27 door prizes – including binoculars, eyepieces, viewing aids, a signed copy of *The Meteorites of Alberta* by Tony Whyte, and two Galileoscope Refractor Kits – fun and enjoyable. Thanks to RASC Edmonton Centre's International Year of Astronomy Committee for the two Galileoscopes, long-time RASC member Alister Ling, Greg Blundell from the Science Shop in Edmonton, the University of Alberta Press, Ken From of All-Star Telescope in Didsbury, and Alberta and Brian and Joanne Robilliard of Island Eyepiece, Mill Bay, B.C. Before dark we took a group photo.

After dinner, Sverrir Gudmundsson gave a talk on the current state of astronomy and the amateur society in Iceland. We're sure that all those in the audience have a much greater appreciation of this beautiful, isolated island country; and are

amazed at the efforts of a few dedicated individuals to bring knowledge of astronomy to the public. Our last speaker was our own Bruce McCurdy, who gave a very interesting talk called "Space Rocks!" He concentrated on the Buzzard Coulee Fireball that landed near the Alberta/Saskatchewan border on November 20, 2008 - initial discovery of fragments, analyses of meteorite samples and his own meteorite hunting experiences and personal anecdotes. Bruce also talked about his subsequent visit to the Whitecourt Meteorite Impact Crater.

As a token of our appreciation, all the speakers received 2009 Northern Prairie Starfest shirts commemorating the Buzzard Coulee Fireball event.

Many thanks to all who contributed door prizes, our speakers and our team of volunteers: Joan and Doug Hube, Bruce McCurdy, Sherry Campbell, Cornelia Blunck, Warren Finlay, Peter Hall, Donna-Lee May and Mike Noble. Thanks also to Dave Robinson and Roman Unyk for all their hard work to ensure we had power in the cook shelter and for the design of the newly constructed toilet facility close to the shelter.

Mark your calendars now for the seventh annual Northern Prairie Star Party: Tuesday September 7 to Sunday, September 12, 2010. We are looking for volunteers to help plan next year's event as well as your suggestions. Just e-mail us through the NPS web page.



I tend to use Greek names, with the Latin (Roman) equivalent in brackets, where applicable.

Hollywood [1] and others have used these characters to tell a love story. It wasn't originally a love story. Love had nothing to do with it. Andromeda was a prize, a piece of property given to Perseus in return for helping out her parents, Cepheus and Cassiopeia, king and queen of Ethiopia [2]. Perseus is one of the major heroes of Greek mythology. The story of his life and exploits is long and complicated. Andromeda is only one part of that story. I shall begin with the reason for Perseus' lengthy journey, during which he acquired Andromeda.

Perseus was the son of Zeus and Danaë, daughter of Acrisius, king of Argos. Acrisius had received a prophecy that he would be killed by his grandson; in an effort to thwart this prophecy [3], Danaë was therefore locked up in prison. Zeus entered the prison in the form of a shower of gold, and left her pregnant. Acrisius didn't believe a word of Danaë's explanation, and exiled his daughter and child. He had them placed in a wooden chest and set adrift in the sea.

At the time he reached adulthood, Perseus and his mother Danaë lived on the island of Seriphos (where the chest came ashore), ruled by king Polydectes. The king was crazy about Danaë, but she wasn't interested; Polydectes was neither a nice man, nor a good king. He invited a huge number of people to a banquet, stipulating that all guests must bring him a horse as a gift. Although of royal, even divine blood, Perseus and Danaë were not wealthy. Perseus jokingly remarked, within hearing of Polydectes and a whole lot of other people, that it would be easier to bring him the head of the Gorgon than a horse. Mistake. Polydectes, eager to get Perseus out of the way so he can pursue Danaë more vigorously, said (and I'm paraphrasing here), "Well what a good idea, off you go then!"

The Gorgons were three hideous and deadly sisters with snakes for hair, Stheno, Eurale, and Medusa. Those who look at them are instantly turned into stone. In despair, Perseus sets off on his impossible task. Lucky for him, Hermes (Mercury) and Athena (Minerva) decided to help him. Making a long story short, Perseus acquired three magical items: a cap or helmet that made the wearer invisible, winged sandals that could make the wearer fly, and a satchel or bag that could hold anything (handy for carrying Gorgon heads). Hermes also added a scimitar. Simply acquiring this gear was a quest all on its own. Thus equipped, he set out for his real goal, a Gorgon's head.

After he has the Gorgon Medusa's head, he passes through Ethiopia where king Cepheus and queen Cassiopeia are in a bind. It all started when Cassiopeia boasted that her daughter Andromeda was more beautiful than the Nereids [4]. Such arrogance always leads trouble in Greek myths. As punishment, Poseidon (Neptune) flooded Ethiopia and sent a sea monster to terrorize the land. By consulting an oracle, they learn that the

only way to get rid of the monster is to offer up Andromeda to it. She is thus chained to a rock by the shore, to await her fate. Along came Perseus, and either Cepheus or Cassiopeia exclaimed, "Look, a hero!" A deal was struck, whereby Perseus would kill the monster *if* he could have Andromeda as his bride. There is a suggestion that if he can't have her, he wouldn't bother dealing with the monster [5].

Perseus easily dealt with the sea monster by showing it Medusa's head. Perseus and Andromeda met for the first time when he went to unchain her from the rock. There was much rejoicing, followed soon after by a wedding. There is more to Perseus' adventures, but that's the story of him and Andromeda.

What about Pegasus, you may be wondering? In the oldest versions of this story, Pegasus had only a cameo role. The winged horse was born from the dying Medusa (she was pregnant by Poseidon [Neptune]). Perseus did not ride him. He appears in other stories, notably the tale of Bellerophon. Why a winged horse was born from a Gorgon and Poseidon is hard to explain, except that we know the Greeks thought of the sea as deep, mysterious and full of strange creatures. Think of squid, or sea cucumbers, or starfish. *Anything* might be down there, and the result of a union with the god of the sea might be *anything*.

[1] *Clash of the Titans* (1973), for example, the story line of which is a combination of several myths. Hollywood's main interest, let us remember, is putting bums in seats.

[2] Ethiopia: an interesting name. It comes from two Greek words, aithos + ops (αἴθος, ὄψ), literally, *burnt face*, although it could also mean *fiery face* or *fiery eyes*.

[3] Greek myths are full of characters trying to prevent prophecies from coming true. Their success rate is almost zero.

[4] Sea nymphs, the fifty daughters of the sea deities Nereus and Doris.

[5] The modern idea of a hero is rather different from the ancient Greek. We think of heroes as nice guys who do good deeds out of the goodness of their hearts for the betterment of the human race. Not Greek heroes; they were people who were unusual in certain ways; they could do things ordinary folk couldn't hope to achieve, but they are not necessarily nice guys, and you seldom hear of one doing something for nothing. Perseus, like all heroes, has certain characteristics. We've seen a few "hero" traits in this tale: unusual parentage (dad is a god), unusual birth (in prison), unusual talents or abilities, enemies even before he was born (grandfather, Polydectes, and others), a task(s) to perform, often a (dangerous) journey, obstacles to overcome, divine assistance, taboos to observe which lead to conflict and tough decisions. Many heroes share those characteristics: Luke Skywalker, Bugs Bunny, Jesus, Confucius, Buddha, Indiana Jones - the list is endless.

Sources: Euripides *Andromeda*; Herodotus 2.91, 6.53; Hesiod *Theogony* 270-289; Hyginus 57, 63-64; Ovid *Metamorphoses* 4.604-5.249; Pausanias 2.15, 2.21, 2.31, 3.12, 4.35, 9.34; Pindar *Pythian Ode* 10, *Ode* 12; Strabo 10.5.10

EXPENDITURE PROPOSALS and other business

Following are the Expenditure Proposals to RASC Edmonton Centre Council, October 26th, 2009:

Proposal # 1

Massimo Torri proposed the motion to Council on behalf of the Observatory Planning Committee (OPC) to purchase a high quality telescope mount. Namely the Paramount ME Robotic Telescope System at a price of \$15,400 USA dollars which includes shipping,

handling charges, and Duty. 5% GST to be added to the cost of the purchase estimated at \$900.00; and \$1500 Canadian Dollars to purchase a pier for this mount. The funds are to come from the Casino Account. Subject to Alberta Gaming Commission approval. Motion 2nd by Sheldon Helbert. CARRIED. (Note 2 Abstentions)

Proposal # 2

Sheldon Helbert moved that the RASC apply to the Alberta Gaming Commission to spend \$7000.00 from the Casino Fund to be used to support invited lecturers to speak on the influences of light pollution on the night time environment, its ecology, management, policy and education for the 24th Annual ICCB sponsored by the Society of Conservation, the University of Alberta and the City of Edmonton. The cost is for partial support of travel, accommodations and registration for nine authorities. These requested funds cover approximately 45% of the total cost to bring in the nine invited speakers. Motion is subject to Alberta Gaming Commission Approval. Motion 2nd by Peter Hall. CARRIED. (Note: 1 Abstention)

Proposal # 3

Sheldon Helbert made a motion on behalf of Alicja Borowski from the Friends of Cypress Hills Inter Provincial Park. That RASC apply to the Alberta Gaming Commission to spend \$2,050.00 from the Casino Account to Provide a Silver Star Level Donation to help build the Cypress Hills Observatory & Planetarium. This is Subject to Alberta Gaming Commission Approval. Motion 2nd by Peter Hall. CARRIED.

Other Business:

Mark MacDonald made a motion to withdraw the proposal which was approved by RASC Edmonton Membership in November 2006. Subsequently approved by the Alberta Gaming Commission in early 2007. This approved proposal was to spend up to 2/3 of the costs of producing a new set of Planetary Cards for use at the observatory deck and at the Telus World of Science, to a maximum amount of \$10,000.00 from the Casino account. Mark's motion to withdraw was 2nd by Bruce McCurdy. Motion: CARRIED.

The Planets by Murray Paulson

Have you noticed that red star in the morning sky? Well, that's **Mars** and it is back and coming in for that 2009-10 opposition. It is luring me and my telescope out into that fresh morning air. **Venus** is the hall mark of Dawn, and will accompany us for the next month or so before it sits too low in the dawn's glare.

On November 4-5, **Mercury** passes behind the sun in Superior conjunction. May and November are the only months that Mercury can pass directly in front of or behind the sun. Mercury then spends the rest of the month of November climbing toward its mid December elongation. This is an evening apparition and the fall ecliptic is compounded by the negative inclination of Mercury's orbit make this one very hard to find. It will only climb out of the evening sky glow into visibility in December near the time of its Greatest Eastern Elongation.

2009 Nov 17 02:12a Moon and Mercury 3.2° apart, Sep=+03°14'54", Alt=-57°, 100% Dark

Venus has been slowly sliding down the morning sky, and in the early part of November it lies at an elongation of 16 degrees and shines at magnitude -3.9. In the telescope, it will show you a 10.3" disc. You may still find it in the morning twilight but it will harder over the next few weeks. By December, it is now at 9 degrees elongation, and shows a magnitude -3.9, 9.9" disc in the eyepiece. It rises 50 minutes before the sun, and you can sweep it up in binoculars just south of where the sun will rise.

Mars now has returned to prominence in the morning sky, glowing at magnitude 0.3 in the constellation of Cancer. In the eyepiece it will show you an 8.2" disc. By the first week of December, Mars has now moved across the border into Leo, and shines at magnitude -0.1. In the eyepiece it has now grown to 10.3" and shows considerable detail. It rises just after 9 pm, and is above 20 degrees altitude by midnight. Mars will look

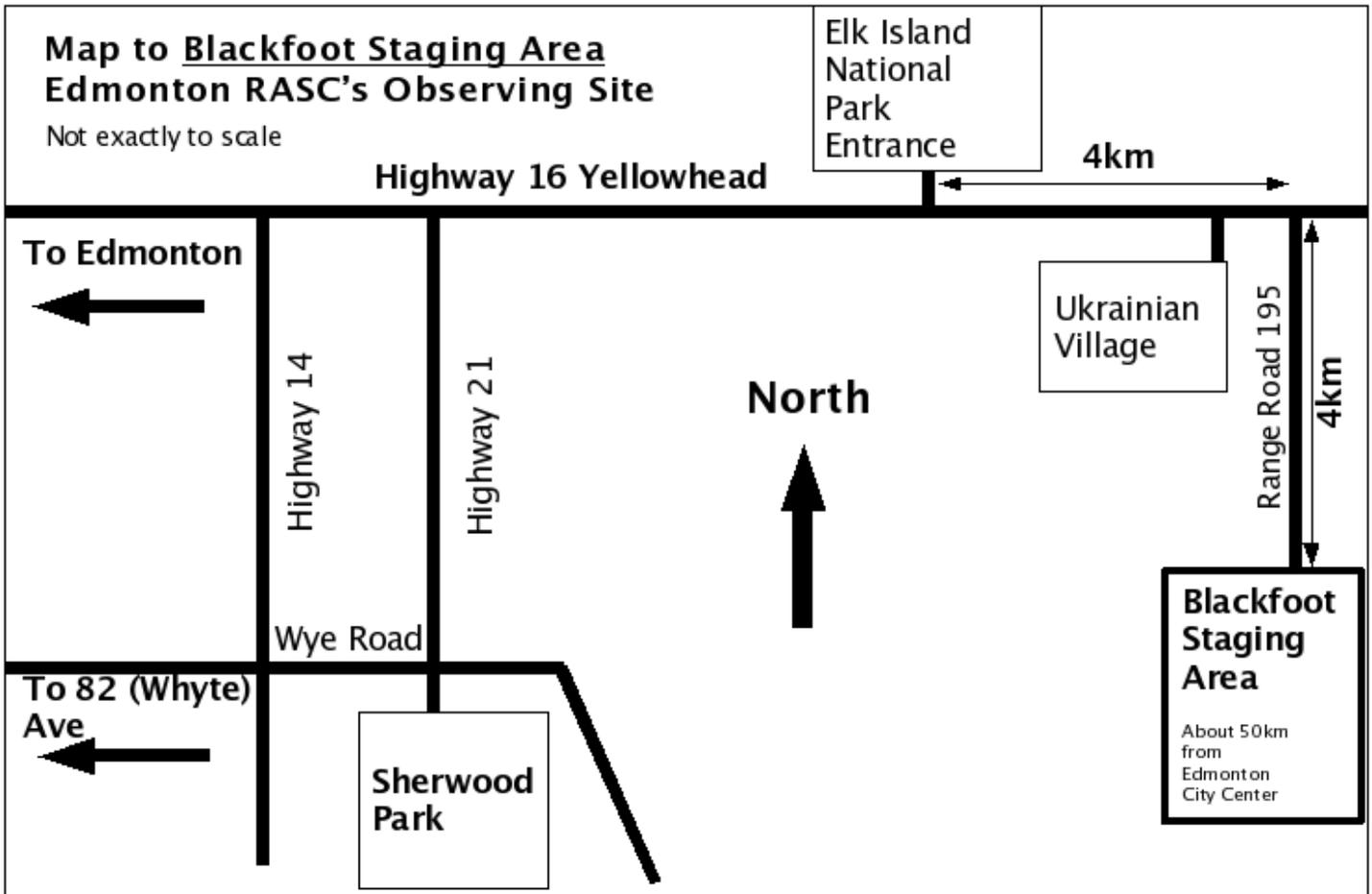
obviously gibbous in the eyepiece, with Syrtus Major facing us. We are a little less than 2 months from opposition. Take the opportunity at the dark site to have a good look at it over the next few months. It will grow and if you are patient, show you plenty of details despite its small size.

Jupiter still lingers with us this fall. It transits at around 7 pm early in the month, but it is heading west fast. At the beginning of the month Jupiter shines at magnitude -2.4, and it shows a 40.7" disk in the eyepiece. It transits about 7 pm, so don't wait too late to get out and view it. Over the month it shrinks as we leave it behind, and by early December, it will now shine at magnitude -2.2 and the disk will shrink to 37.2" in diameter. At this time Jupiter sets at only 10 pm.

Saturn rises 4 hours before the sun at the beginning of November and shines at magnitude 1.0. In the eyepiece you will see its 16.4" disk surrounded by the ring system which will be turned up at 3.4 degrees. Saturn will reside in Virgo this year running interference with the galaxies there. By the first week of December, Saturn will rise 7 hours before the sun, at 1:25 am. It will have expanded to 17" and now shines at magnitude 0.9.

Uranus sits below the circlet of Pisces and shines at magnitude 5.8. Its pale blue green 3.5" disc can be seen at moderately high magnifications. At the beginning of November it transits the meridian at 9 pm local time. By early December, it transits the meridian at 7 pm and is a good evening object. Bring a finder chart for it because it is not obvious among the faint stars of Pisces.

Neptune sits at the east end of Capricorn and shines at magnitude 7.8. Its pale blue disc is only 2.3" but fairly obvious if the seeing supports high magnification. At the beginning of November, it transits the meridian just after 7 pm, so catch it soon if you are interested, December will be too late.



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