

OSFS Statement

Newsletter of the Ottawa Science Fiction Society, November, 2014,

Issue 427, Volume 40, Number 11. Founded May 1977



NEOSSat (Near Earth Object Surveillance Satellite) pictured in orbit

Monthly Dinner- 6:00 PM to 9:00 PM Tuesday, November 25, 2014 at Denny's South Keys, 2208 Bank Street, Ottawa, ON

Please RSVP at our Meetup Site <u>www.meetup.com/ottawasfs-ca</u>, or via email to <u>events@ottawasfs.ca</u>

Contributions may be edited for length and content. All opinions expressed are those of the authors and not necessarily those of OSFS. All material is copyright © 2014 The Ottawa Science Fiction Society unless otherwise indicated. Permission to reproduce material contained herein is granted provided (A)credit is given to the original author and to the OSFS Statement and (B) a copy of the reprint is sent to The Ottawa Science Fiction Society at the above address.

aWe are suspending requirements of membershipdues for now, as we are not paying for meetings.The Executive will review our financial situationregularly.304-1568 Merivale RoadOttawa, ON, K2G 5Y7websitewww.ottawasfs.caexecutiveexec@ottawasfs.caRatesRegular\$0.00Family\$0.00Extraordinary & Senior\$0.00	Board of DirectorsPresidentIVice-PresidentOSecretaryOAppointed OfficersArchivistOAuditorOConstitution AdvisorIEditorOProgrammingATreasurerSWebmasterS	Diane Bruce Grant Duff Grant Duff David Hurst Grant Duff Alex Binkley Sheila Brown Sheila Brown	ContentsAstronomy15Obituary9Coming Events7LOC13Movies5Reviews11OSFS LogoBruce WrightCover art© NASA,Published by the Ottawa Science Fiction Society,Creators of Maplecon

FOR YOUR VIEWING PLEASURE

Jupiter rises around midnight. Mars lies very low in the sunset glow. Mercury lies very low in the dawn sky. The Moon will be New on the 22nd.

MOVIES List submitted by Sandi Marie Coming to Your Theatre

The Hunger Games - The Mockingjay part 1 21 Nov 2014

With Peeta (Josh Hutcherson) captured by Snow and taken prisoner in the Capitol, Katniss Everdeen (Jennifer Lawrence) reluctantly agrees to act as "the Mockingjay"—a poster child for the rebellion spearheaded by District 13.

The Hobbit: The Battle Of The Five Armies

17 Dec 2014

The conclusion of Bilbo Baggins (Martin Freeman),

the Wizard Gandalf (Ian McKellen) and the thirteen Dwarves' epic quest to reclaim the lost Dwarf Kingdom of Erebor from the dragon Smaug (voiced by Benedict Cumberbatch).

Monty Python's Flying Circus is returning soon to a screen near you

http://www.theloop.ca/monty-pythons-flyingcircus-is-returning-soon-to-a-screen-near-you/

Coming Events List submitted by Lloyd Penney

Nov 7-9 - Hal-Con 2014, World Trade & Convention Centre, 1800 Argyle Street, Halifax

Nov 14-16 - SFContario 5, Ramada Plaza Hotel, Toronto. Guests: Robin Hobb, James Murray, www.sfcontario.ca.

Nov 22-23 - Toronto Mini Maker Faire 2014, Toronto Reference Library, www.makerfairetoronto.com.

Jan16-18, 2015 - Back to the ConFusion/ConFusion 41, Dearborn Doubletree Hotel, Detroit. Guests: Karen Lord, Dr. Cynthia Chestek, Heather Dale, Monte Cook, Shanna Germain, Aaron Thul, <u>www.confusionsf.org</u>.

Jan 23-25, 2015 - GAnime, Palais de Congrès, Gatineau, QC. Guests: Doug Walker, John Lang, <u>www.ganime.ca</u>, @ganime on Twitter.

April 10-12, 2015 - Ad Astra 2015, Sheraton Parkway North, Richmond Hill, ON. SF literary convention. Guests: Anne Bishop, more, <u>www.ad-astra.org</u>, Facebook.

April 16-19, 2015 - FilKONtario 25. Filk convention. www.filkontario.ca.

May 22-24, 2015 - Anime North 2015. , www.animenorth.com.

June 6 or 7 - 2015 - Prose in the Park near the Parkdale Market.

Aug 19-23, 2015 - Sasquan/73rd World Science Fiction Convention, Spokane Convention Center, Spokane, WA.

Guests: David Gerrold, Leslie Turek, Tom Smith, Vonda McIntyre, Brad Foster. www.sasquan.org.

Sometime in early 2017 - CostumeCon 35, somewhere in Toronto-Hamilton area. Information to com

Oct 12-15, 2017 - Bouchercon XLVIII, Hotel TBA, Toronto. World Mystery Convention. Guests: Louise Penny, Chris Grabenstein, Twist Phelan, Gary Phillips.

Obituary: Michael Lennick The Passing of My Friend Michael Lennick By Sandi Marie Received sad news of the death of my friend special effects wizard Michael Lennick. Many of you will remember Michael from the Maplecon Convention days. The following obituary is from THE HOLLYWOOD REPORTER as told by Chris Darling, friend and fellow producer.

Michael Lennick, Documentary Filmmaker Behind 'Rocket Science,' Dies at 61.

Chris Darling, one of the producers of Warner Bros.' upcoming Robert Downey Jr. film Perry Mason and The Lost Legion, told The Hollywood Reporter that Lennick died Friday in Toronto from an aggressive brain tumor that landed him in the hospital a month ago. He was surrounded by friends and family when he died Friday after being taken off life support.

Lennick is survived by Shirley Gulliford (his wife and business partner), his brother David, and his sister Julie. Lennick was born on Dec. 4, 1952. His parents, Ben and Sylvia, worked in radio and TV, appearing in many of the Wayne & Shuster sketches featured on The Ed Sullivan Show. Sylvia will always be remembered for that often quoted line "I told him Julie don't go" from the Wayne & Shuster sketch based on Julius Caesar. His mother also cofounded ACTRA, Canada's actors union.

Lennick got his start in Hollywood working as a special effects expert on films including David Cronenberg's

Videodrome, The Dead Zone and The Fly. Michael Lennick's film credits included the award-winning 10-part series Rocket Science and Doctor Teller's Very Large Bomb, both of which aired on PBS. Among Lennick's other credits are The Land of Space and Time and The Highest Step in the World, which won awards at the White Sands and Houston film festivals Lennick's films have been featured as extended material on DVDs and Blu-rays, many from Criterion. Friday The Thirteenth TV show exhibited more of his special effects. He also co-created and co-wrote 'All Night Show' for Toronto's MTV47, which ran for 302 episodes. According to Darling, "Michael's passing will leave a number of projects here in Hollywood unfinished as he was, simply, the irreplaceable element in each one." The duo's friendship also became a professional relationship, optioning many novels together and pitching projects to the studios. Darling also described Lennick as a "friend and confidant of the leading names in the world of astronautics" whose "films featured a veritable who's who of NASA personalities and jaw-dropping footage never before seen by the general public."

More recently, Lennick reunited with Cronenberg for the documentary The Scanners Way, produced for Criterion's 25th anniversary edition of Cronenberg's Scanners.

REVIEW: By Hildegarde Henderson

The Jehovah Contract by Victor Koman – 1987

The place: is a rundown and decayed Los Angeles. The time: two months before the year 2000. Tough-as-nails-on-the-outside and nice-guy-on-the-inside private eye and assassin Dell Ammo, fatally stricken with bone cancer, is visited by the devil in the guise of a TV evangelist who contracts him to hunt down and kill God. So begins the search.

As an atheist, Dell Ammo must first figure out what or who he is to kill. Along the way he finds as allies a telepathic virgin prostitute, a beautiful woman who wins at poker and can be noticed or not as she chooses, and a powerful old woman. This trio, virgin, mother and crone have their own reasons to see God snuffed. So together they start a world-wide campaign to combat the idea that is God with the slogan 'ON THE FIRST DAY OF THE

YEAR 2000 GOD WILL DIE, 'capping a picture of Himself caught in the crosshairs. It spreads like wildfire until the whole earth is abuzz.

The Ecclesia, an alliance of many faiths with vested interests in maintaining the power of religion, appears and allies itself with the devil. They do their murderous best to stop Dell Ammo and his friends as they close for an orbital kill in a second-hand space shuttle. Mystical rites are performed in space, God is confronted and the world is transformed.

So ends my summer reading for 2014. Now back to my five hundred page biography of Malcolm Lowery and maybe I just might tackle 'Under the Volcano.' Comic relief is isn't.

Good reading everyone. Hildegarde Henderson

LOC:

Dear OSFen:

Thank you for issue 426 of the Statement. As the weather gets cold again (no snow here, yet), it's best to stay inside and do some writing. Lots to do, let's get going.

I hadn't read anything about the changing features on Titan, but have seen a lot about the ESA lander Philae, with the Rosetta spacecraft, and Philae landing on the biggest rock of the Churyumov-Gerasimenko comet. It was even a part of the main Google page today.

I've heard such good reviews of the movie Interstellar. Doubt we will see it, though...we've just switched from Rogers cable to Bell Fibe, so who knows what we won't be going out to see in the future. I will send you my newest list of conventions with this letter.

A true shame about Ann Methe's passing. She was one of the few that made sure that fandom in Montreal was busy. I know that Berny Reischl is planning to leave fandom at the end of the year, so I hope there are new people ready to run the show there.

My loc...Genrecon in Guelph was a very good time for us, who hadn't spent a full weekend at a convention in some time, and good for us as dealers; our sales were good that weekend, and we saw lots of old friends, and made some new ones, too. Nice little convention, and I hope it can grow. The absence of Polaris is felt by many.

I will get this out tonight, and I hope there's time for some of you to come down to Toronto for Ad Astra in the spring. We might look at getting a dealer's table there; there's a position at the convention I never did have. Take care all, and see you next issue.

Yours, Lloyd Penney.

Astronomy:

Birth of New Planets

Ken Tapping, 4th November, 2014

A few days ago an amazing image was being passed around the observatory. It showed a bright blob surrounded by concentric fuzzy rings, separated by dark gaps; it looked like a fuzzy archery target. The image was one of the best ever views so far of a planetary system being born. The whole scheme was clearly shown in detail.

Planetary systems – stars with several planets orbiting them (our Solar System is a good example) are formed from collapsing clouds of gas and dust. Since almost every cloud has a little bit of rotation in it, the angular momentum in that rotation is concentrated as the cloud collapses, so that the final result is a rotating disc of material.

As the disc shrinks, dust particles start to collide and stick together. As they get larger the chance they will get hit by other particles increases, and when they get large enough for their gravity to attract more particles and lumps passing nearby, they grow even faster. The newly-forming planet rapidly sweeps up all the material sharing its orbit around the forming star, until there is little material left. The fuzzy

rings in that image showed belts of remaining dust; the gaps showed where new planets are growing. Even though they are far too small for us to see, we know they are there because of the cleared-out gaps in the disc.

The image was obtained using ALMA – the Atacama Large Millimetre Array radio telescope, which is a newlyconstructed instrument sitting on the high, dry Atacama Plateau in Chile – one of the driest high places on Earth. This instrument consists of 66 "dish" antennas, each 12 metres in diameter. It is one of the most sensitive radio telescopes in the world, and in the wavelength range for which it is designed, it has no rival. Radio telescopes intended for use at wavelengths longer than a few centimetres, such as our observatory here in the Okanagan, can be at low altitudes, and we make use of valley locations to screen out manmade radio interference. For them, cloud and rain pose no problem when making observations. However, as we choose shorter and shorter radio wavelengths, things get more difficult. Radio waves are just one part of what is known as the electromagnetic spectrum. At shorter wavelengths, below a centimetre or

so, the waves start to be less like what we understand as radio and more like infrared. Then cloud and rain become major problems, and even water vapour in a clear atmosphere will absorb the cosmic emissions we are trying to observe. This is a serious problem for millimetre wavelengths.

Unfortunately these wavelengths are astronomically important, because this is where it is easiest to study the dust clouds containing the raw material that gets used to make new stars and planets. ALMA was designed for making such observations – among many other cosmic phenomena, which meant it would have to operate at millimetre wavelengths. To minimize the problems posed by the atmosphere and moisture, it was located at a high, dry place, well above the wet, dense lower atmosphere.

Like most modern astronomy projects, ALMA is an

international project, in which Canada is a participant. The development of this instrument led into new areas of technical innovation, in order to develop and build appropriate antennas, radio receivers and signal processing systems. The result is what will be one of the most important astronomical research tools in the world for the next few decades, complementing the Very Large Array and the soon to be built Square Kilometre Array radio telescopes, which work at longer wavelengths. Yes, Canada has a hand in those instruments too. This is an exciting time!

Ken Tapping is an astronomer with the National Research Council's Dominion Radio Astrophysical Observatory, Penticton, BC.

<continues>

How Come We're Here?

Ken Tapping, 18th November, 2014

When, a long time ago I was reading astronomy books on the bus going to school, nobody seemed to be sure how the universe started. One theory was that the universe is eternal, and the other proposed that it started billions of years ago as something very dense and very small. One physicist called this object the "primaeval atom". At some point, now widely accepted to be just under 14 billion years ago, the primaeval atom started to expand very rapidly – an event now referred to as the Big Bang. The expansion and cooling decelerated to a slower rate, which continues today. Two big questions challenging us today is firstly, where did that primaeval atom come from, and what made it suddenly start to expand?

Our understanding of the universe rests upon three pillars: the physical and mathematical ideas of Isaac Newton, Albert Einstein's concept of "Relativity", and Quantum Physics. Einstein helps us to understand the world of the very large and massive, the fast moving and the very longlived. Quantum physics deals with the very small, and Newton can be used with the intermediate – everyday universe. We have yet to successfully marry the physics of the very large and very small.

Newton would have described empty space as just that. Einstein saw it as a flat, multidimensional fabric that can be stretched, folded and twisted. Quantum physics says that empty space is far more bizarre than that, and definitely not empty. It suggests that empty space consists of tiny things flicking in and out of existence all the time. Because some of these things are particles and others their mirror images they cancel out on average, so that space is still "empty". This sounds odd, but there is an analogy – borrowing money.

Imagine you have no money. You go to the bank and borrow \$100,000. You might now have a lot of money in your wallet, but since you also have a debt of \$100,000, you still have nothing. However, you have the power to make things happen. You could start a small business, earn money and pay off the loan, ending up with a working investment, jobs for a few people and hopefully some profit.

The new idea is that out there is an "empty" multidimensional space in which primaeval atoms and their negative images are flicking in and out of existence (one primaeval atom plus its negative image cancel out, leaving nothing). Imagine a wave on the surface of the sea; water has formed a ridge, and alongside it there is a trough. There is enough water in the ridge to precisely fill the trough. However, wind or other things can make the

wave grow, so the ridge gets bigger and the trough gets deeper. In just the same way a primaeval atom forms, with its negative counterpart. However in at least one case, instead of the two immediately canceling, something makes them grow rapidly, to the point where they would continue to grow steadily under their own steam, becoming a universe. It is not clear what sort of cosmic "prod" pushes some primaeval atoms into becoming universes. Maybe it is just statistical, so that some small percentage of them become universes on a purely random basis; maybe something else is involved. This concept fits a recent idea, in which universes appear, grow and fade like bubbles in a multidimensional foam. These new ideas are just another step in the expansion of human horizons that has taken place over thousands of years. Once we rarely considered things beyond our villages. Our world was the universe. Then we thought our galaxy, the Milky Way comprised all of creation. Over the last decades or two it was everything that formed following the Big Bang. Now our horizons may be expanding a whole lot more. Each question we ask yields a bigger answer, and more questions.

Ken Tapping is an astronomer with the National Research Council's Dominion Radio Astrophysical Observatory, Penticton, BC.

<continues>

NEOSSat

These images were taken by the NEOSSat microsatellite the morning of Saturday, November 10. DRDC Ottawa's space systems group has been working on the microsatellite for some time now with partners at the Canadian Space Agency and the University of Calgary to track asteroids and space debris. We've had some issues getting the spacecraft to point with the stability we needed to perform the mission but we've made enormous progress in the past 6 months getting the attitude control system to operate correctly.

Periodically, we (myself, Brad Wallace and Stefan Thorsteinson) will command NEOSSat to look at a bright celestial object in order to check that the satellite pointed where we intended to look. The image (Fig 1) is the Orion Nebula which is a star forming region the belt of Orion about 1400 light-years away and is about 12 light-years across. The wisps and clouds you see are interstellar dust and molecular hydrogen absorbing and reflecting starlight from a group of young stars near the core of the nebula (bright spot in the left of the frame). Stars are being born at

the center of this nebula which are being fed by these molecular clouds.

Satellite tracking images aren't as pretty though as we need to streak the stars intentionally to track satellites and space junk. We've been observing several Canadian geostationary satellites and occasionally GPS satellites during checkout in the past several months. An example of the Canadian satellites Anik F1, Anik F1R and Anik G1 is the second image after the nebula (Fig 2). These satellites are about 40,000 km away (much closer than the nebula) but are tricky to track with a microsatellite which itself is moving at Mach 25. We can see objects down to about 10ft in size up to 40,000 km away.

We have also tracked some main belt asteroids to assist our mission science partners at the University of Calgary to calibrate their science processor as well.

Just a reminder that DRDC extends into space, cyber, not just sea, air and land.

VR/ Lauchie Scott, P.Eng

<continues>

Fig 1 M42 – Orion Nebula as seen by the NEOSSat camera

Editor's note: The Orion nebula is missing its beautiful colours in this image but if you are looking for dim bits of space junk you can't afford to waste pixels especially if you don't know what colour you are looking for.

<*continues*>



Fig 2 Anik F1, F1R, G1 and Echostar 17 (dots on lower right of frame). Streaks are stars

Editor's note: There are also upwards of a dozen other dots in the image probably marking other orbiting "stuff" and a myriad of specks that may just be random pixels (noise).

<ends here –Ignore following blank page>

<There are no even numbered pages. I don't know why>

