



OSFS Statement

Newsletter of the **Ottawa Science Fiction Society, March 2014,**
Issue 417, Volume 38, Number 1. Founded Feb 1977

Dinner-Gatherings start at 6:00 pm.

Tue Mar 24 at Perkins Restaurant

1130 St. Laurent Blvd, Ottawa, @ Coventry ([map](#))

For Your Viewing Pleasure

Jupiter dominates the southern sky overnight. Mars rises about 10pm, and Saturn at midnight. Venus rises around 5am. On 8 March, the Moon reaches First Quarter, and also reaches its highest point in the sky



The dramatic snapshot of Opportunity's shadow

was taken as the rover continued to move farther into "Endurance Crater." The image was taken on sol 180 (July 26, 2004).

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We are suspending requirements of membership dues for now, as we are not paying for meetings. The Executive will review our financial situation regularly.

website www.ottawasfs.ca
executive exec@ottawasfs.ca

Rates
Regular \$0.00
Family \$0.00
Extraordinary & Senior \$0.00

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Contents
Coming Events 4
LOC 9
Astronomy 12
Planetary News 13
Astrophysics 10
Reviews
OSFS Logo Bruce Wright
Cover art © NASA
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Creators of Maplecon

MOVIES List submitted by Sandi Marie
Coming to Your Theatre

APRIL

- Captain America: The Winter Soldier - Apr 4
- Robopocalypse - Apr 25

MAY

- The Amazing Spider-Man 2 - May 2

JUNE

- Edge of Tomorrow - Jun 6
- How to Train Your Dragon 2 - Jun 13
- Transformers: Age of Extinction - Jun 27

JULY

- Maleficent - Jul 2
- X-Men: Days of Future Past - Jul 18
- Dawn of the Planet of the Apes - Jul 18
- Hercules: The Thracian Wars - Jul 25

Coming Events List submitted by Lloyd Penney

- March 15 - Oshawa Comic Con, 15 Harmony Rd. N., Oshawa. \$5 admission, hours 10am-3pm. For more information, www.popculturecanada.ca.
- March 16 - Steam on Queen Spring Bazaar, Gladstone Hotel, Toronto. Steampunk Bazaar. For more information, www.steamonqueen.ca.
- April 4-6 - Ad Astra 2014, Holiday Inn Markham. Guests: David Weber, Anne Groell, Patricia Briggs, Steven Erikson. For more information, www.ad-astra.org, Twitter @adastrasociety, page on Facebook.
- April 6 - GTA Comic-Con, Oakville Conference Centre, Oakville. For more information, www.gtacomiccon.com.
- April 5 - Shwapocalypse 2, 15 Harmony Rd. N., Oshawa. Horror film fest. \$5-10 admission. For more information, www.popculturecanada.ca.
- April 6 - GTA Comic-Con, Oakville Conference Centre, Oakville. For more information, www.gtacomiccon.com.
- April 11-13 - UBcon XXV, University of Buffalo, Buffalo, NY. Gaming and anime convention. For more information, www.ubcon.org.
- April 19 - FanFare Geek Market, Sheraton Hotel Hamilton. Bazaar and gaming event. Hours: 10am-8pm. For more information, www.fanfaremarket.com. Presented by ConBravo!
- April 19 - Bizzarr Bazzarr, 15 Harmony Road N., Oshawa. Victorian fair and steampunk bazaar. Free admission. For more information, www.popculturecanada.ca.

- April 19 - GTA Comic Con 2014, Sheraton Airport Hotel & Conference Centre, Toronto. Hours: 10am-5pm. For more information, www.gtacomiccon.com.
- April 25-27 - FilKONtario 24, Delta Airport West, Mississauga. Guests: S. J. Tucker, with the Heather Dale Band; Gary Ehrlich, Piers Cawley. For more information, www.filkontario.ca.
- April 25-27 - Midwest Media Expo, Detroit Marriott at the Renaissance Center. All-media convention. Guests: Aurelio Voltaire, Vic Mignogna, Steam Powered Giraffe, G.D. Falksen, Time Crash, Group 935, Lewis "Linkara" Lovhaug, Ken Pontag, Adam Smith, Silly Filly Studios. For more information, www.midwestmediaexpo.com.
- April 25-28 - Costume Con 32, Sheraton Airport Hotel, Toronto. For more information, www.costumecon32.com.
- May 2-4 - Eeriecon 16, Byblos Niagara Resort & Spa, Grand Island, NY. Literary SF/F/H convention. Guests: David B. Coe, Mark Leslie, more. For more information, www.eeriecon.org.
- May 4 - Canadian 80s Toy Expo, Delta Meadowvale Hotel and Conference Centre, Mississauga. Guest: Alan Oppenheimer. For more information, www.80stoyexpo.com.
- May 9-11 - Ottawa ComicCon, EY Centre, Ottawa. Comics convention, more. Guests: Kane Hodder, Amanda Tapping, more. For more information, www.ottawacomiccon.com.
- May 10-11 - Toronto Comic Arts Festival, Toronto Reference Library, Toronto. For more information, www.torontocomics.com.
- May 11 - 18th Annual Fantastic Pulp Show and Sale, Lillian H. Smith branch, Toronto Public Library. Admission: \$3. Hours: 10am-5pm. For more information, see Facebook page.
- May 16-18 - CanGames, Rideau Curling Club, Ottawa. Gaming convention. For more information, www.cangames.ca.
- May 17-19 - SuperFan ComicCon, Better Living Centre, Exhibition Place, Toronto. Guests: TBA. For more information, www.superfancomiccon.com.

May 23-25 - Anime North, Toronto Congress Centre + 3 hotels, Toronto. For more information, www.animenorth.com.

May 23-25 - What The Fur!?, Sheraton Montreal Airport Hotel, Montreal. Furry Cconvention with steampunk theme. Guest: Alex Cockburn. For more information, www.whatthefur.com.

June 1 - Burlington Toy Show, Holiday Inn Burlington Hotel and Conference Centre, Burlington. Early Bird price \$10, general admission \$5. Hours: 9am-3pm. For more information, www.burlingtontoyshow.com.

June 6-8 - Bloody Words XIII, Hotel TBA, Toronto, ON. Mystery convention. Guests: Vicky Delany, more.

For more information, www.bloodywords.com.

March 1&2 - Ottawa Geek Market, Nepean Sportsplex, Ottawa. Bazaar for fannish interests. For more information, www.geekmarket.ca.

June 6-8 - Niagara Falls ComicCon, Hotel and Facility TBA, Niagara Falls, ON. Guests: William Shatner, more. For more information, www.NFComicCon.com.

June 12-15 - SteamTopia, DoubleTree by Hilton Hotel Detroit-Dearborn, Dearborn, MI. Steampunk convention. For more information, see page on Facebook.

June 28 - Steam on Queen, Campbell House, Toronto. Steampunk bazaar. For more information, www.steamonqueen.ca.

June 28 - Oshawa Anime Festival/Comic Con/Toy Show, 15 Harmony Rd. N., Oshawa. \$5 admission, hours 10am-6pm. For more information, www.popculturecanada.ca.

July 4-6 - Polar Chill 2, Holiday Inn Toronto International Airport, Toronto. Includes the 2014 Constellation Awards. For more information, www.tcon.ca.

July 11-13 - TFcon 2014, Delta Meadowvale Hotel and Conference Centre, Mississauga. Transformers toy convention. For more information, www.tfcon.ca.

July 13 - Oshawa Comic Con, 15 Harmony Rd. N., Oshawa. \$5 admission, hours 10am-3pm. For more information, www.popculturecanada.ca.

July 17-20 - Detcon 1, Detroit Marriott at the Renaissance Center, Detroit, MI. North American Science Fiction Interim Convention (NASFiC). Guests: Steven Barnes, John Picacio, Bernadette Bosky, Arthur Hlavaty, Kevin J. Maroney, Helen Greiner, Bill and Brenda Sutton, Roger Sims, Fred Prophet. For more information, www.detcon1.org.

July 18-20 - Ryu-Kon 2014, Buffalo Niagara Convention Centre, Buffalo.

Anime/gaming/horror/steampunk convention. Guests: Riley Schillaci, more. For more information, www.ryu-kon.com.

July 18-20 - ConBravo!, Hamilton Convention Centre & Sheraton Hotel, Hamilton. Gaming/cosplay convention, more. Guests: Angry Joe, DJ Cutman, more. For more information, www.conbravo.com.

August 1-3 - Condition vs. The Monsters, Four Point by Sheraton Hotel, London, ON. Furry convention. Guests: Sigil, Wolfbird, Dixie von Fur. For more information, www.conditionfurry.ca.

August 14-18 - Loncon 3/72nd World Science Fiction Convention, ExCeL, London, UK. Guests: Iain M. Banks, John Clute, Malcolm Edwards, Chris Foss, Jeanne Gomoll, Robin Hobb, Bryan Talbot. For more information, www.loncon3.org.

August 28-31 - Fan Expo Canada, Metro Toronto Convention Centre, Toronto. 20th anniversary event. For more information, www.fanexpocanada.com.

Sept. 5-7 - Fan Events Forum, International Plaza Hotel, Toronto. Con runners' convention. More information TBA, sponsored by Anime North.

Sept. 7 - Oshawa Comic Con, 15 Harmony Rd. N., Oshawa. \$5 admission, hours 10am-3pm. For more information, www.popculturecanada.ca.

Sept. 12-14 - Steampunk event, name unknown, somewhere in the GTA. More information to follow.

- Sept. 19-21 - RocCon 2014, Kodak's Theatre on the Ridge, Rochester, NY. Comics, gaming, SF and anime convention. Guests: Brent Spiner, Alaina Huffman, Vic Mignogna, Bonnie Piesse. For more information, www.rochesterscifianimecon.com.
- Sept. 26-28 - JemCon, Airport Hilton, Mississauga. Convention about Jem cartoons and toys. For more information, www.jemcon.org.
- October 3-5 - CanCon 2014, Hotel TBA, Ottawa. Literary SF convention. Guest: Jo Walton. For more information, www.can-con.org.
- October 10-12 - Creation Salute to Supermatural, Toronto Weston Harbourcastle, Toronto. Guests: Jensen Ackles, Jared Padalecki, Misha Collins. For more information, www.creationent.com.
- November 14-16 - SFCOntario 5, Ramada Plaza Hotel, Toronto. Guests: Robin Hobb, James Murray. For more information, www.sfcOntario.ca.
- November 22-23 - Toronto Mini Maker Faire 2014, Toronto Reference Library. For more information, www.makerfairetoronto.com.
- January, 2015 - ConFusion 41, Hotel TBA, Detroit area. Guests: Karen Lord, Dr. Cynthia Chestek, Heather Dale, Monte Cook, Shanna Germain, Aaron Thul. For more information, www.confusionsf.org.
- April 16-19, 2015 - FilKONtario 25. Filk convention. For more information, www.filkontario.ca.
- August 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. For more information, www.sasquan.org.
- October 12-15, 2017 - Bouchercon XLVIII, Hotel TBA, Toronto. World Mystery Convention. Guests: Louise Penny, Chris Grabenstein, Twist Phelan, Gary Phillips. More information TBA.

LOC

Dear OSFen:

Thanks for Statement 418...I was not aware that Sansoucy Kathenor had passed away, My condolences to all of you. This serves as a reminder to all of us in that we're not the kids we used to be, so stay well, the rest of you!

I hope the newest list I sent will be of use to you...just got more information on the Montreal Comic Con and Ottawa Geek Festival coming up later this year, so it's always a work in progress. I gather that the latest Con-G in Guelph, last month, will be the last one. I am sure other conventions will rise up to replace them.

We did very well at the Artisans of the Metropolis...for a general craft show, we did about \$85 worth of business. For anyone who is planning to come down to Toronto for any conventions this spring, Yvonne and I have tables at CostumeCon 32 and Anime North 2014. At AN, we will be in the crafter's table area. We didn't get a table at the March Steam on Queen,

but that's okay, we can attend and have some fun.

As I type, Sunday afternoon, we're looking forward to seeing the newest version of Cosmos, this time with Neil deGrasse Tyson. Let's hope something like this can help to reverse the tide of ignorance. Hard to believe that Stephen Hawking might have mistaken about something, but he's changed his opinions on black holes...I guess they are at most dark grey.

Hope to see some of you down here this spring...we don't get to travel the way we used to. If not, see you next issue.

Yours, Lloyd Penney.

Astrophysics

GRAVITY'S OTHER ROLE

Ken Tapping, 4th March, 2014

All of us must have seen building sites covered with a metre or more of soil or rubble, and then left for a year or more. One reason this is done is to use the weight of that material to squeeze down and consolidate the ground underneath.

This illustrates the “other” important role played by gravity in the universe. In addition to keeping everything orbiting in the right place, it holds everything together and makes building things like stars possible. Without gravity there would be no stars, no light, and no planets to depend on them.

Planets and stars are huge spheres of material, held together by the particles in them attracting all the other particles. The weight of the overlying material compresses the material in their cores. In the case of our Earth, the pressure makes the Earth's inner core behave like a solid; in the outer core the pressure is less, and the material is molten. Gravity has an even more

important role in stars. As in the case of planets, gravity holds them together, but in addition, it makes stars shine.

Around a century ago, scientists realized that the largest concentrations of energy lie in atoms, and even more, in the particles from which they are made. One way to access that energy continues to be to find large, unstable atoms like uranium and plutonium, and put them in an environment where they are even more unstable, so that they come apart, producing heat, radiation and assorted radioactive waste products. We depend upon this process, known as nuclear fission, operated under controlled conditions, to produce electricity.

Space Junk-Zapping Lasers Being Developed

Thomson Reuters Posted: Mar 10, 2014

It may sound like science fiction but an Australian team is working on a project to zap orbital debris with lasers from Earth to reduce the growing amount of space junk that threatens to knock out satellites with a "cascade of collisions".

The project is very realistic and likely to be working in the next 10 years, Matthew Colless, director of Australian National University's Research School of Astronomy and Astrophysics, told Reuters.

"It's important that it's possible on that scale because there's so much space junk up there," he said. "We're perhaps only a couple of decades away from a catastrophic cascade of collisions ... that takes out all the satellites in low orbit."

Scientists believe there are more than 300,000 pieces of debris — made up of everything from tiny screws and bolts to large parts of rockets — orbiting Earth, mostly in low orbits, moving at tremendous speed.

Australia now has a contract with NASA, the U.S. space agency, to track and map space junk with a telescope equipped with an infra-red laser at Mount

Stromlo Observatory. But \$20 million from the Australian government and \$40 million in private investment will help the team set up as the Cooperative Research Centre (CRC) to develop better lasers to track tiny pieces of debris, importing techniques from astronomy used to remove the blurring of the atmosphere.

The ultimate aim is to increase the power of the lasers to illuminate and zap pieces of junk so they burn up harmlessly as they fall through the upper atmosphere. "There's no risk of missing and hitting a working satellite," Colless said. "We can target them precisely" Colless said he imagines an eventual need for a global network of stations set up under international auspices but, right now, the CRC is doing the research to make it possible. The CRC is made up of universities, space agencies and companies including Lockheed Martin, Optus and EOS Space System Australia.

A point here needs clarifying. They speak of "zapping" the debris. This may be good Australian lingo but on this side of the planet it would likely be read as "fragmenting". Their intention seems to be to add orbital energy to the debris, slap (zap) it upwards, and so alter its orbit that it will dip deep into the earth's atmosphere half an orbit later. Ed.

NASA Discovers 715 new worlds

Feb 27th 2014 6:45AM

Call it the \$600 million gift that just keeps giving. NASA announced Wednesday the crippled Kepler Space Telescope put in some serious work, making the largest exoplanetary discovery ever.

The space agency said the Kepler team discovered 715 new planets orbiting stars other than our very own sun. Ninety-five percent of the planets are smaller than Neptune and just four orbit in their sun's "Goldilocks Zone." (Via [NASA](#))

A [statement](#) posted to NASA's website read, "**This discovery marks a significant increase in the number of known small-sized planets more akin to Earth than previously identified exoplanets, which are planets outside our solar system.**"

NASA scientists said Kepler left them with an "oceanful" of homework when it ceased regular operations last year. According to [Space.com](#), the newly-discovered planets came just from Kepler's first half of its time on the job, so there could

soon be another massive haul of planets.

[Ars Technica](#) reports the exoplanet discoveries went from a trickle to a flood not because of Kepler's no-quit attitude, but because of a new technique.

The research team calls the technique verification through multiplicity. Before, Kepler observed planetary candidates orbiting stars. Those candidates would later be confirmed as planets after thorough follow-up observations.

According to the [Los Angeles Times](#), "**The new method ... relies on the idea that planets seem to cluster in systems with other planets, rather like our own.**"

One NASA researcher compared that to observing lions and lionesses in an intergalactic savannah. If two or more lionesses (or planet candidates) are spotted together, they can be reliably identified as being with the same lion (or parent star). (Via [BBC](#))

NASA [launched](#) Kepler in 2009 with the mission of finding planets much like our own. Although Kepler has made good on that promise, researchers hope the telescope will continue

searching for celestial objects.

Kepler has helped discover 961 exoplanets to date. The studies detailing the discovery of the hundreds of new worlds will be published in The Astrophysical Journal March 10.

New Findings from Old Rover

NASA's Mars Exploration Rover Opportunity has been working on Mars for ten years since landing inside Eagle Crater on Jan. 25, 2004.

New findings from rock samples examined by NASA's Mars Opportunity have confirmed an ancient wet environment that was milder and older than the acidic and oxidizing conditions told by rocks the rover examined previously.

In the Jan Opportunity Deputy Principal Investigator Ray Arvidson, of Washington University in St. Louis, wrote in detail about the discoveries made by the rover and how these discoveries have shaped our knowledge of the planet. "These rocks are older than any we examined earlier in the mission, and they reveal more favorable conditions for microbial life than any evidence previously examined," said Arvidson.

While the Opportunity team celebrates they also look forward to how a better understanding of Mars will help advance plans for human missions

in the 2030s.

The original mission was to last only three months. Opportunity has driven 24 miles (38.7 kilometers) from where it landed. The site is about halfway around the planet from NASA's its twin Mars rover, Curiosity.

To find rocks for examination, the rover team at NASA's JPL., steered Opportunity in a loop, scanning the ground for promising rocks. The search was guided by a mineral-mapping instrument on NASA's Mars Reconnaissance Orbiter (MRO), which did not arrive at Mars until 2006, long after Opportunity's mission was expected to end.

Beginning in 2010, the mapping instrument, called the Compact Reconnaissance Imaging Spectrometer for Mars, detected evidence of a clay mineral known as iron-rich smectite. The Opportunity team set a goal to examine this mineral in its natural context — where it is found, how it is situated with respect to other minerals and the area's geological layers — a valuable method for gathering more information about this

ancient environment. Researchers believe the wet conditions that produced the iron-rich smectite preceded the formation of the Endeavor Crater about 4 billion years ago.

"The more we explore Mars, the more interesting it becomes. These latest findings present yet another kind of gift that just happens to coincide with Opportunity's 10th anniversary on Mars," said Michael Meyer, lead scientist for NASA's Mars Exploration Program. "We're finding more places where Mars reveals a warmer and wetter planet in its history. This gives us greater incentive to continue seeking evidence of past life on Mars."

Opportunity has not experienced much change in health in the past year, and the vehicle remains a capable research partner for the team of scientists and engineers who plot each day's activities to be carried out on Mars.

"We're looking at the legacy of Opportunity's first decade this week, but there's more good stuff ahead," said Steve Squyres of Cornell University, Ithaca, N.Y., the mission's principal

investigator. “We are examining a rock right in front of the rover that is unlike anything we’ve seen before. Mars keeps surprising us, just like in the very first week of the mission.”

JPL manages the Mars Exploration Rover Project for NASA’s Science Mission Directorate in Washington. Opportunity’s twin, Spirit, which worked for six years, and their successor, Curiosity, also contributed valuable information about the diverse watery environments of ancient Mars, from hot springs to flowing streams. NASA’s Mars orbiters Odyssey and MRO study the whole planet and assist the rovers.