

ASTRONAUTS, EXPERTS, AND SPACE AGENCIES DISCUSS ASTEROIDS, OPPORTUNITIES, AND RISKS ON ASTEROID DAY, 30 JUNE

LUXEMBOURG, 22 June 2020 /PRNewswire/ -- The Asteroid Foundation returns with Asteroid Day *LIVE* Digital from Luxembourg. This year, the event is a fully digital celebration of asteroid science and exploration. Panel discussions and one-on-one interviews with astronauts and world experts will be broadcast on 30 June 2020.

Each year Asteroid Day presents the public with a snap-shot of cutting-edge asteroid research from the largest telescopes on Earth to some of the most ambitious space missions. Topics of discussion this year include the acceleration in the rate of our asteroid discoveries and why it is set to accelerate even faster, the imminent arrival of samples from asteroid Ryugu and Bennu, the exciting preparations for the joint US-Europe mission to binary asteroid Didymos, and much more.

Asteroids are the leftover remnants of the birth of the planets in the Solar System, and many are the shattered fragments of these diminutive proto-planets that never made it to maturity. "Asteroid exploration missions tell us about the birth of our own planet and reveal how asteroids can serve astronauts as stepping stones to Mars," says Tom Jones, PhD, veteran astronaut and planetary scientist, and Asteroid Day Expert Panel member.

Each asteroid is an individual with its own story to tell. And that's what Asteroid Day is all about: bringing those stories to the widest audience possible. "Space and science have been an endless source of inspiration for SES! This is one of the reasons why we and our partners continue to do extraordinary things in space to deliver amazing experiences everywhere on earth," says Ruy Pinto, Chief Technology Officer at SES. "Through satellite broadcasting, we are able to reach millions of TV households and this enables us to unite people around science, space, and technology topics."

"The valuable expertise of SES and BCE play a central role in making Asteroid Day an international success and enabling us to have a global conversation about space, space resources, and asteroids in these COVID-19 times." says Mark Serres, the CEO of the Luxembourg Space Agency.

Such studies can also protect our planet. "An asteroid impact is a natural disaster we might be able to avoid if we see one coming soon enough," says European Space Agency (ESA) Director General Jan Wörner.

Join Asteroid Day LIVE Digital from Luxembourg to celebrate the solar system's magnificent debris.

<u>Asteroid Day</u> is an official United Nations day of global awareness about the opportunities and challenges that asteroids present. Asteroid Day was co-founded by astrophysicist and famed musician <u>Dr. Brian May</u> of the rock group QUEEN, <u>Apollo 9 astronaut Rusty Schweickart</u>, filmmaker <u>Grig Richters</u>, and <u>B612 Foundation President Danica Remy</u>.

Asteroid Day LIVE Digital from Luxembourg is a five-hour program with panel discussions including:

- "Target Asteroid: How to Move an Incoming Space Rock"
- "Ingredients of Life: Bringing Asteroid Samples to Earth"
- "Asteroid Safari: Finding the Elusive Space Rocks"
- "Preparing the Future: Making Tools to Investigate Asteroids"
- "Seeing is Believing: The Art of Asteroid Computer Simulations"
- "From Satellites to Asteroids: Luxembourg's and ESA's role"
- "Ask Me Anything About Asteroids with Astronauts"

Panel hosts include <u>Sarah Cruddas</u>, <u>Alan Boyle</u>, <u>Lisa Burke</u>, <u>Sabinije von Gaffke</u>, and <u>Stuart Clark</u>. The panel summary descriptions can be <u>found here</u>. Asteroid Day *LIVE* is streaming over Asteroid Day TV and the detailed program schedule can be found on the <u>Asteroid Day</u> website. After Asteroid Day, the panels can be found there as well as on <u>YouTube</u>.

In the week leading up to Asteroid Day, the European Space Agency will produce several Asteroid Day programmes in <u>French</u>, <u>Spanish</u>, <u>Dutch</u>, <u>German</u>, and <u>Italian</u> including asteroid experts and special guests



discussing European planetary defence and asteroid-related activities aimed at general audiences in those countries and. ESA will debut an hour-long <u>English</u> segment on 30 June as part of Asteroid Day LIVE Digital from Luxembourg.

In addition to the ESA programmes, there are independent online talks taking place worldwide as well. "Stones Fallen From the Sky: The Birth of the Science of Asteroids and Meteorites" will come from Spain, and Asteroid Day Chile has organized for 20+ national institutions to give talks, workshops for children, and audiovisual segments. These will be broadcast on Facebook Live and Youtube simultaneously on 29 & 30 June. These and more can be found online at asteroidday.org; only a limited number of independent events are possible this year due to COVID-19.

Partial list of participants in ESA and Asteroid Day LIVE Digital from Luxembourg include:

- 1. André Kuipers, ESA astronaut (ISS Expedition 30/31)
- 2. Anousheh Ansari, astronaut (Soyuz TMA-9); CEO, xPrize
- 3. Dorin Prunariu, Cosmonaut (Soyuz 40); President, ROMSPACE; Chair, UN COPUOS
- 4. *Ed Lu, astronaut (STS 84, 106 and ISS Expedition 7); Executive Director, Asteroid Institute
- 5. Franklin Chang Díaz, astronaut (STS-61 STS-34 STS-46 STS-60 STS-75 STS-91 STS-111) CEO Ad
- 6. Jean-Francois Clervoy, ESA astronaut (STS 66, STS 84, STS 103); Founder, Air Zero G
- 7. <u>Luca Parmitano</u>, ESA astronaut (ISS Expeditions 36/37 and 60/61)
- 8. Nicole Stott, astronaut (STS 128, 133 and ISS Expeditions 20/21); Founder, Space for Art Foundation
- 9. *Tom Jones, astronaut (STS-59, STS-68, STS-80, STS-98); planetary scientist
- 10. *Alan Fitzsimmons, Astrophysicist, Queen's University Belfast
- 11. Alexander Finch, Spacecraft Engineer, Bradford Deep Space Industries
- 12. Anne Virkki, Head of the Planetary Radar Group, Arecibo
- 13. Bill Nye, CEO Planetary Society; Science Educator
- 14. <u>Danielle DellaGiustina</u>, Lunar and Planetary Laboratory, University of Arizona
- 15. *Dante Lauretta, University of Arizona, PI OSIRIS-REx(NASA)
- 16. Franz Fayot, Minister of the Economy, Luxembourg
- 17. Giorgio Saccoccia, President, Italian Space Agency ASI
- 18. Hannah Goldberg, Systems Engineer, GomSpace
- 19. Ian Carnelli, Project Manager, Hera mission, ESA
- 20. Jean-Baptiste Vincent, Planetary Scientist, DLR
- 21. Johann-Dietrich Wörner, Director General, ESA
- 22. Julia de Leon, Planetary Scientist, IAC
- 23. Katharine Joy, University of Manchester, Antarctic meteorite researcher
- 24. *Lynne Jones, University of Washington, Co-Chair, LSST Solar System Science Collaboration
- 25. Marc Serres, CEO, Luxembourg Space Agency
- 26. Marco Fuchs, CEO, OHB SE
- 27. Mariella Graziano, Executive Director Space Systems and Robotics, GMV (Spain)
- 28. *Mark Boslough, Physicist, Los Alamos National Laboratory; Chair, ADXP
- 29. Martin Rees, Astronomer Royal; Co-Founder, Centre for the Study of Existential Risk (pending)
- 30. Mathias Link, Director, International Affairs, Luxembourg Space Agency
- 31. Mayim Bialik, American actress, neuroscientist, and author (pending)
- 32. *Maykoto Yoshikawa, Hayabusa2 mission manager (JAXA)
- 33. Michèle Lavagna, Politecnico di Milano
- 34. Naomi Murdoch, Planetary Scientist, ISAE-SUPAERO
- 35. Natalie Starkey, Open University, UK; Author: Catching Stardust
- 36. *Patrick Michel, Senior Researcher, CNRS; Co-I Hayabusa2, OSIRIS-Rex and Hera
- 37. Peter Gabriel, singer, songwriter, musician, record producer and activist (pending)
- 38. Ron Ballouz, Lunar and Planetary Laboratory, University of Arizona
- 39. Sarah Fleischer, Economic Advisor, Luxembourg Space Agency
- 40. Yun Zhang, Observatoire de la Côte d'Azur

Asteroid Day TV has been and will continue streaming through 4 July. **Asteroid Day LIVE Digital from Luxembourg** and **Asteroid Day TV** are produced and live-streamed in partnership with Broadcasting Center Europe (BCE) broadcast by SES through the unparalleled reach of its <u>satellites</u>.

^{*}Members of the Asteroid Day Expert Panel (ADXP)



ABOUT ASTEROID DAY

Asteroid Day is held on 30 June each year to mark the date of Earth's largest asteroid impact in recorded history, the Siberia Tunguska event. Asteroid Day was co-founded by astrophysicist and famed musician Dr Brian May of the rock group QUEEN, Apollo 9 astronaut Rusty Schweickart, filmmaker Grig Richters, and B612 Foundation President Danica Remy, to educate the public about the importance of asteroids in our history and the role they play in the solar system. In 2016, with the leadership of the Association of Space Explorers (ASE), the United Nations declared Asteroid Day to be a global day of education to raise awareness and promote knowledge in the general public about asteroids. Major events in past years have taken place in London, San Francisco, Washington, DC, Tanzania, Milan and Rimini, Italy; Garching, Germany; and Rio de Janeiro, Brazil; in addition to thousands of events worldwide.

Asteroid Day's major partners include: <u>Association of Space Explorers</u>, <u>B612 Foundation</u>, <u>Broadcasting Center Europe</u>, <u>EC GROUP</u>, <u>European Space Agency</u>, <u>Luxembourg Space Agency</u>, <u>OHB SE</u>, and <u>SES</u>. Asteroid Day, Asteroid Day *LIVE*, Asteroid Day TV and <u>SpaceConnectsUs</u> are all programmes of <u>Asteroid Foundation</u>, a Luxembourg based non-profit.

ABOUT BCE

Broadcasting Center Europe (BCE) is a European leader in media services, system integration, and software development in the areas of television, radio, production and postproduction, telecommunication, and IT. With its extensive experience on the media market, our team provides high-quality services and will always find the solution that matches your project and budget. With more than 200 highly qualified and motivated people, BCE serves about 400 clients in various sectors such as TV channels, radio stations, film distributors, producers, advertising companies, telecommunications operators and public services.

ABOUT EUROPEAN SPACE AGENCY

European Space Agency (ESA) provides Europe's gateway to space. ESA is an intergovernmental organisation, created in 1975, with the mission to shape the development of Europe's space capability and ensure that investment in space delivers benefits to the citizens of Europe and the world. ESA has 22 Member States and has established formal cooperation with seven Member States of the EU. Canada takes part in some ESA programmes under a Cooperation Agreement.

ABOUT LUXEMBOURG SPACE AGENCY

Luxembourg Space Agency (LSA) develops the space sector in Luxembourg by fostering new and existing companies, developing human resources, facilitating access to funding, and supporting academic research. The agency implements the national space economic development strategy, manages national space research and development programs, and leads the SpaceResources.lu initiative. Furthermore, the LSA represents Luxembourg within the European Space Agency and space-related programs of the European Union and the United Nations.

ABOUT SES

SES has a bold vision to deliver amazing experiences everywhere on earth by distributing the highest quality video content and providing seamless connectivity around the world. As the leader in global content connectivity solutions, SES operates the world's only multi-orbit constellation of satellites with the unique combination of global coverage and high performance, including the commercially-proven, low-latency Medium Earth Orbit O3b system. Further information is available at www.ses.com

Join in the Asteroid Day conversation on Social Media!

- Hashtags: #AsteroidDay #Luxembourg
- Website: <u>AsteroidDay.org</u>Twitter: @asteroidday
- Twitch: https://www.twitch.tv/asteroidday
- Facebook: www.facebook.com/AsteroidDay
- YouTube: www.youtube.com/user/asteroidday
- Instagram: https://www.instagram.com/asteroidday

A Media Kit including quotes, photos, video, and B-Roll video is available in the <u>Asteroid Day Newsroom</u>. <u>Photos from 2019 Asteroid Day Luxembourg</u> activities are available.



Media Contact: Asteroid Day Katie Young <u>press@asteroidday.org</u>

ESA Ninja Menning media@esa.int
SES Suzanne Ong suzanne ong@ses.

SES Suzanne Ong <u>suzanne.ong@ses.com</u>
BCE Laurent Seve <u>laurent_seve@bce.lu</u>

LSA Lynn Robbroeckx <u>lynn.robbroeckx@space-agency.lu</u>

Asteroid Day TV is broadcast courtesy of SES:

Europe Africa

Service Name: Asteroid Day 2020 HD
Service ID:5711
Service ID:2000
Transponder: 1.068
Satellite: Astra 1M
Orbital Pos:19.2 East
Service Name: Asteroid Day 2020 HD
Service ID:2000
Transponder: 4.951
Satellite: SES-5
Orbital Pos:5.0 East

Downlink Frequency: 11778.00 MHz

Downlink Frequency: 11919.28 MHz

Polarization: Vertical Polarization: Horizontal Modulation: DVB-S2 QPSK Modulation: DVB-S QPSK

FEC: 9/10 FEC: 3/4

SR: 29.5 MSym/s SR: 27.5 MSym/s

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