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National Science and Technology Forum (NSTF)

media release

International Astronomy Day, 18 May 2024:

Prof Roger Deane shows the Milky Way's black hole and restores the Johannesburg Planetarium

International Astronomy Day, 18 May: International Astronomy Day is celebrated on 18 May every year. The important day allows astronomy enthusiasts and professionals to share their knowledge and love of outer space with the public. It encourages individuals who may be interested in exploring the science of astronomy and space, learn about celestial objects, and appreciate the beauty of the cosmos. The day was started in 1973 by Doug Berger, the then president of the Astronomical Association of Northern California, to spark a greater interest in astronomy and give the public access to more channels to learn more about it.

Prof Roger Deane communicates astrophysics to the public on a national stage. As a result of this contribution to science, engineering, technology (SET) and innovation in South Africa, he received the prestigious 2023 NSTF-South32 Communication Award. Prof Deane is a Director at the Centre for Astrophysics at the University of the Witwatersrand (Wits); and Wits Digital Dome Working Group; DSI/NRF SARChI Chair in Radio Astronomy. His passion and love for Astrophysics does not start now. Prof Deane has always been fascinated by the need to explore the expanse of the cosmos. As a young boy he would often gaze at the night sky for hours at a time and wonder how galaxies and the stars evolve over cosmic time, he was enthralled by how the vastness of the universe makes life on earth seem so small and almost meaningless.

The South African Astronomical Observatory (SAAO) in Cape Town, previously known as The Royal Observatory, was established in 1820 by the British Board of Longitude and is still operational. It is the oldest permanent observatory in the southern hemisphere, 204 years old. Forming a fundamental part of SA's long history of astronomical research, from French academic Nicolas-Louis de La Caille who performed the first comprehensive examination of the Southern African sky in Cape Town, in 1753. Followed by such milestones from the Observatory, as the first measurement of the distance to a star in 1831 by Thomas Henderson. And the first photographic sky survey and the accurate measurement of the distance to the sun among many other feats. The SAAO will be visited in July by this year's students of the [NSTF Brilliants Programme](#) as part of a 3-day educational tour of SET-related facilities. (This programme celebrates the top performers in matric mathematics and physical science.)

The Johannesburg Planetarium is a planetarium owned by Wits and located in Braamfontein. It was the first full-sized planetarium in Africa, and the second in the southern hemisphere. It is often consulted by the media and the public to explain unusual occurrences in the skies over SA. It was established in 1960 through the Festival Committee deciding on developing a Zeiss Planetarium to mark the celebration of the 70th anniversary of the City of Johannesburg. The planetarium used the refurbished Hamburg star projector which was later sold to the University by the Johannesburg City Council, for the students and the public to enjoy.

Communication Award Winner: To mark this significant day, the National Science and Technology Forum (NSTF) acknowledges the work of Prof Roger Deane who won the [Communication Award](#) at the prestigious [NSTF-South32 Awards](#) in 2023. He received the award for raising the funds to do a digital upgrade of the [Johannesburg Planetarium](#) into a flagship science and technology engagement facility. He has shared cutting-edge astrophysics research with the public there, clearly communicated and on a national stage, in combination with leading the communications and fundraising campaign.



When the image of the black hole at the centre of our galaxy was produced by a global research team called the Event Horizon Telescope (EHT) Collaboration, using observations from a worldwide network of radio telescopes, Prof Deane was the only South African of the more than 300 researchers who captured the image. At the time, he worked as Chair of the Digital Dome Working Group, which included scientists, researchers and quantum engineers, for the expansion, digitisation and refurbishment of the Johannesburg Planetarium. The revamp was Prof Deane's crowning achievement as it made the planetarium an immersive flagship for science engagement, especially for young people who are eager for a fun space exploration experience.

"I hosted a press conference in the planetarium ... and we had a live stream synchronous with press conferences in Washington DC and in Munich, Germany", said Prof Deane. "It was just incredible to feel the sense of history in the 62 years that the planetarium had been in operation. But also, this historic moment in sharing this first image of the Milky Way black hole with the community."

Prof Deane is thrilled about the growing STEM (science, technology, engineering and mathematics) capacity building all around the world. Science education is at his core.

"Astronomy is one of the oldest scientific disciplines, yet it relies on the latest technology in equipment, algorithms, data and artificial intelligence."

When he is not finding creative ways to spark public engagement for the new Digital Dome, he participates in several lectures and media interviews locally and internationally, to create interest, increase awareness and propel research on astrophysics. He thinks the Digital Dome is an important step towards the growth of astrophysics research, "especially in strengthening the network of planetariums, and more broadly astrophysics engagement in the South African community." He points out: "Astronomy is one of the oldest scientific disciplines, yet it relies on the latest technology in equipment, algorithms, data and artificial intelligence." "So there is a bigger mission; it's not just about astrophysics," says Deane. "There's been a very high level of strategic investment in astronomy in SA to build up high tech skills and to build up expertise within young people."

About the NSTF (National Science and Technology Forum): NSTF is an independent non-profit stakeholder body and network – a civil-society forum of over 130 organisations involved in science, engineering, technology (SET) and innovation in SA.

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References/Sources:

- [INTERNATIONAL ASTRONOMY DAY - May 18, 2024 - National Today](#)
- [International Astronomy Day \(May 18th, 2024\) | Days Of The Year](#)
- [South African astronomy has a long, rich history of discovery – and a promising future \(theconversation.com\)](#)
- [2022-11 - New high-tech Digital Dome catapults Johannesburg Planetarium into the future - Wits University](#)
- [Celebrating 200 years of the South African Astronomical Observatory by Karel van der Vyver \(Daily Maverick\), 16 October 2020 | South African History Online \(sahistory.org.za\)](#)
- [2022-05 - Wits scientists in the team that made the first image of the black hole in the centre of our galaxy - Wits University](#)

About the NSTF

The National Science and Technology Forum (NSTF), established in 1995:

- is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa
- gathers stakeholders around burning issues of national and global interest, across the public and private sectors, including matters of public policy
- includes a network of professional societies in SET and STEM education (STEM = science, technology, engineering and mathematics) - the NSTF proSET membership sector.
- recognises, awards and profiles the outstanding contributions of individuals and groups to SET and innovation through the prestigious NSTF Awards
- runs and supports collaborative projects and youth outreach, including recognition of top performance in mathematics and science, role modelling and STEM career information
- runs and supports the STEMulator.org which attracts youth and educators to Explore>Discover>Learn the world of STEM including careers. (Established by NSTF proSET)

For more information
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