

# Zadko telescope and Parkes 'dish' join hunt for mystery radio flashes

March 15 2016, by David Stacey

---



(L-R): Zadko Telescope support team including Toulouse University PhD student Damien Turpin, retired Boeing engineer Pierre Thierry, Professor Alain Klotz from Toulouse University, Zadko Observatory manager John Moore and Associate Professor David Coward.

The University of Western Australia's Zadko Telescope and the Parkes Radio Telescope have joined forces in a new mission involving an international team of radio astronomers to hunt for mystery radio bursts in the universe.

Zadko Telescope Director Associate Professor David Coward, from UWA's School of Physics, said the collaboration follows the recent revelation that the skies are teeming with short-lived exotic phenomena, named the "Transient Universe".

The new project, SUPERB (SURvey for Pulsars and Extragalactic Radio Bursts) will try and understand the origin of mysterious [radio](#) flashes.

"These transients – flashes of light and radio bursts – are believed to originate from colliding black-holes or the formation of neutron stars, but no one knows for sure," Associate Professor Coward said.

"They are completely unpredictable so we don't know when the next flash will occur, and where in the sky it will happen. To really understand such a phenomenon requires combining the signals from optical and radio telescopes, something that hasn't been successful in the past.

"Until now it has taken many hours to interrupt other observing programs and to point telescopes in the same direction as the radio burst – our new collaboration will change all of that."

Associate Professor Coward said the Zadko Telescope had already slashed the world record for the fastest response to a Parkes discovery of a radio burst – a near zero time delay – which was achieved by 'shadowing' Parkes, the NSW-based [telescope](#) made famous by the 2001 film "The Dish".

"The Parkes Radio Telescope is in constant communication with the Zadko Telescope through the internet to ensure they are both pointing at the same sky location, something that is only possible when it is done robotically, with no human involvement," he said.

In December 2015 the Zadko Telescope was shadowing Parkes at the same time a radio burst occurred.

"The team is still searching for such an optical signature in the data – if a coincident signal is found it could reveal the hidden source of the

flashes," Associate Professor Coward said.

The cutting-edge project is led by Associate Professor Coward in collaboration with Dr Richard Dodson from the International Centre for Radio Astronomy Research (ICRAR) and French PhD student Damien Turpin, from Toulouse University.

Dr Dodson said UWA's ownership of the Zadko Telescope, WA's premier optical telescope, provided a research-class resource.

"It has an exceptionally wide view of the sky, where almost all the observing time can be dedicated to in-house projects, a combination of factors which has allowed us to perform some very unique science.," he said.

Provided by University of Western Australia

Citation: Zadko telescope and Parkes 'dish' join hunt for mystery radio flashes (2016, March 15) retrieved 20 April 2024 from

<https://phys.org/news/2016-03-zadko-telescope-dish-mystery-radio.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--