

Dark matters to be discussed in Great Western

Astronomers look for dark matter in space, and physicists look for it underground, but both groups will be talking about it in Great Western in central Victoria from this Sunday.

ARC Centres of Excellence CoEPP and CAASTRO will join forces with leading representatives from the Italian National Institute of Nuclear and Particle Physics (INFN) to discuss the latest developments in the search for dark matter. In particular, they'll be considering the first experiment in the southern hemisphere to try to directly detect dark matter, which is slated for the Stawell Gold Mine in Victoria.

This experiment would be the 'twin' of one already running at the INFN facility at Gran Sasso in Italy, and would be important for verifying any possible dark-matter detections made at the Gran Sasso site.

"This partnership with INFN and Gran Sasso is very important on so many levels – both for the science and for relations between Italy and Australia. An experiment of this significance could ultimately lead to the discovery of dark matter," says Professor Elisabetta Barberio from CoEPP, Australian project leader for the proposed experiment.

This partnership between Italy and Australia has been welcomed by Professor Oscar Moze, the Scientific Attaché at the Italian Embassy in Canberra, Australia. "Bilateral scientific cooperation between Italy and Australia is vibrant and growing," he said.

Astronomers first noticed the effects of dark matter on galaxy motions in the 1930s. Decades of work have given them a picture of where dark matter is found and how much of it the universe contains. But its identity is still unknown.

In the last 30 years physicists have been running experiments to try to directly detect some of the more favoured dark-matter candidates, such as 'weakly interacting massive particles' or WIMPs.

Professor Elaine Sadler, director of CAASTRO says "We welcome the chance to meet with our CoEPP colleagues to strengthen research in areas of common interest. This year's workshop builds on the very successful CAASTRO-CoEPP workshop held in 2013, and we look forward to a stimulating set of presentations and discussions which will help to build closer research links between our two Centres."

Spokespeople/ available for interview:

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