



**Australian Institute of Physics
NSW Branch (March Public Talk)**

“Particle Astronomy – the Second Window”

**Dr Marc Duldig
Senior Principal Research Scientist, Australian
Antarctic Division**

Tuesday 23rd March 2010 @ 7.00PM

At the

Slade Lecture Theatre, School of Physics, University of Sydney

Public talk arranged by: The Australian Institute of Physics (NSW Branch)

Entrance is FREE

Summary of talk:

Traditional astronomy relies on light to bring information to the observer. This covers the whole electromagnetic spectrum from radio and infra-red through the familiar visible night sky to ultra-violet, X-rays and gamma rays. However, there is another spectrum available to astronomers – the cosmic ray spectrum.

Cosmic rays are particles travelling almost at the speed of light and they carry different kinds of information about their sources and where they have been in their travels to Earth. We will talk about what they are, how they come to travel so fast and what they are telling about the universe around us.

We will hear a little history about several Nobel Prizes they led to, how they tell us about the sun and its surroundings, and how, even today, they are still interacting with the big bang!

Finally we will hear some aspects of cosmic ray effects that are used every day for practical purposes like sample dating, climate change research and why you increase your radiation dose every time you fly in a jet plane.





Brief Biography of the Speaker:

Dr Marc Duldig is a world leader in Cosmic Ray modulation research and is responsible for cosmic ray observatories in Australia and Antarctica. He is a member of several key international cosmic ray global network collaborations. Marc is a Senior Principal Research Scientist with the Australian Antarctic Division where he manages the atmospheric component of the Division's climate program as well as the cosmic ray observatories.

He is Vice President of the Australian Institute of Physics and Secretary of the Astronomical Society of Australia.



Detailed Schedule for Tuesday, 23rd March 2010:

- 5.30-6.30 pm **LECTURE by Dr Jesse Shore.**
- 6:35-7.00 pm **REFRESHMENTS, Slade Lecture Theatre.**
- 7.00-8.00 pm **LECTURE by Dr Marc Duldig.**
- 8.15 pm **DINNER with the Speakers at Buon Gusto (Italian), 368 Abercrombie Street, Chippendale.**
E-mail Dr Fred Osman (fred_osman@exemail.com.au) if you will be able to join us for dinner.

Travel Directions:

- Train to Redfern station and walk to the **School of Physics.**
- Buses 422, 423, 426, 428, 448, and 450 from Circular Quay to City Road / King, or 412, 435, 438, 470, 483 etc. along Parramatta Road from Circular Quay.
- Drive and park in various parking lots. You will need to pay for parking (**\$6 flat-rate after 4 pm**) and display the ticket in your car. You may also find parking places on public roads outside the Uni.

Event sponsored by:



***The Australian Institute of Physics – NSW Branch
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