



DAVID COOPER MEMORIAL LECTURE 2019

A/Prof. Gordon Cable AM

Faculty of Health Sciences, University of Adelaide
Australasian Society of Aerospace Medicine

The Gravity of Mars Exploration

**Monday September 30
The University of Adelaide
S112, School of Mechanical Engineering
The University of Adelaide
Adelaide, SA 5000
Doors will be open at 6:45 pm**

*This event is part of the 19th
Australian Space Research Conference and a joint event with the AIAA*

The Gravity of Mars Exploration

Presented by Dr Gordon Cable, Australasian Society of Aerospace Medicine

Plans for the exploration of deep space will see humans travel deeper into space and for longer periods than at any time in human history. This new era of space and planetary exploration will expose humans to hazards not experienced since the Apollo program of the 1960s and 70s, but magnified by greater distance and much longer exposures. Human missions to Mars will expose the crews to hazards such as isolation and confinement, distance from Earth, hostile and closed environments, radiation, and of course altered gravity fields. While countermeasures can be identified for many of these challenges, some of the problems of microgravity remain unsolved. This presentation will describe the impacts of microgravity on human physiology during long duration exploration class missions to Mars, and explore possible solutions.



Dr Gordon Cable is a specialist in aerospace medicine and a Senior Aviation Medical Officer for the ADF. He has been a consultant to the RAAF since 1996. Dr Cable is an honorary member of the Australasian Society of Aerospace Medicine, as well as Chair of the Space Life Sciences Committee, and a past president. He holds Fellowships with the Australasian College of Aerospace Medicine, the Aerospace Medical Association, the Royal Aeronautical Society and the International Academy of Aviation and Space Medicine. Additionally, Dr Cable is a Clinical Associate Professor in the School of Medicine at the University of Adelaide, and a Senior Lecturer in Space Medicine at the University of Tasmania. His professional interests include altitude physiology of hypoxia and hypobaric decompression illness, hypoxia awareness training of military and civilian aircrew, space medicine, and postgraduate education in aerospace medicines. In 2015 he was appointed a Member of the Order of Australia for contributions to aerospace medicine.

The David Cooper lecture



This annual lecture commemorates the life and work of Dave Cooper, an Australian space advocate who made a significant contribution to promoting Mars exploration in his home country.

Born in Adelaide, David Cooper worked for many years as a commercial pilot in remote parts of Western Australia and the Northern Territory. He was a member of the Planetary Society since the 1980s and also of the National Space Society and regularly attended space conferences, including one in the United States in 1990.

In 1998 Dave co-founded the Mars Society Australia (MSA), dedicated to promoting Mars exploration and serves as an Australian network for Mars researchers and enthusiasts. He was vice-president until February 2005 and president until his death in 2012.