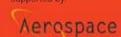


NEAR EARTH OBJECTS A NATURAL HAZARD OF GLOBAL PROPORTIONS

Wednesday 23rd November 2005 No.4 Hamilton Place, London W1J 7BQ, UK















NEAR EARTH OBJECTS A Natural Hazard of Global Proportions

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SYNOPSIS

On the same day that the Indian Ocean tsunami demonstrated that infrequent but potentially catastrophic natural hazards can cause major devastation and loss of life, a newly discovered asteroid (2004 MN4) more than 300m in diameter was the first object to reach Torino Scale level 4 (analogous to the Richter scale but dealing with potential Earth impact). With an average interval of about 100 years, asteroids larger than about 50 metres are expected to reach the Earth's surface and cause local devastation or produce tidal waves that can inundate coastal areas. On an average of every few hundred thousand years or so, asteroids larger than a kilometre can cause global disasters. Collisions with near-Earth objects (asteroids and comets) have occurred in the past and it seems prudent to mount efforts to discover and study these objects, to characterise their sizes, compositions and structures and to predict their future trajectories for potential collisions with the Earth.

When an object is finally verified to be on an Earth colliding trajectory, given several years warning time, existing technology could be used to deflect the threatening object away from Earth. The key point in this mitigation process is to find the threatening object years ahead of time so that an orderly international campaign can be mounted to send spacecraft to the threatening object.

This conference will consider the different types of near Earth objects, how we identify and track them, what would be needed to deflect a near Earth object from an Earth-colliding trajectory, and how we communicate these issues at a public, scientific and political level. Presentations will be given by leading European scientists engaged in NEO research as well as the engineers and policy makers who would need to respond to any impending threat from space.

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09.00	Registration and Coffee
09.30	Welcome
09.35	Chairman's Introduction Prof Richard Crowther, Head, Space Engineering & Technology Division, Rutherford Appleton Laboratory
09.45	Characteristics of Near Earth Objects Monica Grady, Professor, Planetary and Space Sciences, Natural History Museum (Open University)
10.25	Detection and Orbit Determination of Near Earth Objects Prof Alan Fitzsimmons, <i>Professor of Astronomy, Queen's University Belfast</i>
11.05	Coffee break
11.30	2004 MN4: A Cause for concern? Prof Andrea Carusi, Doctor, INAF- IASF
12.10	ESA Activities Relating to Near Earth Objects Dr Andres Galvez, Advanced Concepts Team Manager, European Space Agency
12.50	Lunch
13.50	Deflecting Earth-bound Asteroids with Advanced Nuclear & Solar Electric Propulsion Dr Roger Walker, Research Fellow, ESA Advanced Concepts Team
14.30	Communicating the Near Earth Object Issue to the Public Mr Kevin Yates, Space Communication Manager, Near Earth Object Information Centre
15.10	Tea
15.30	Results of ICSU Workshop on Comet / Asteroid Impacts and Human Society Dr Hans Rickman, President International Astronomical Union, Uppsala Astronomical Observatory (TBC)
16.10	Governmental Response to the Near-Earth Object Issue Mr Richard Tremayne-Smith, Head of Space Transportation & Space Environment, British National Space Centre
16.50	Round Table Discussion
17.30	Reception



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Complete and return this form to:

Melissa Warner Conference & Events Department Royal Aeronautical Society No.4 Hamilton Place London W1J 7BQ Fax: 020 7670 4349

Signature

Register on-line at www.aerosociety.com/conference

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REGISTRATION FEES			
Non-Member	£210.00 +	VAT <i>(£36.75)</i> £ 246.75	
RAeS Corporate Partner (inc. Armed Forces concession)	£190.00 +	VAT (£33.25) £223.25	
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RAeS Retired Member £60.00 +		VAT <i>(£10.50)</i> £ 70 .50	
RAeS Student Members may attend the conference free of charge s METHODS OF PAYMENT	ubject to availability		
All payments should be made in Sterling (UKL). Online: Registration and secure payment through WorldPay can be made on-line at www.aerosociety.com/conference			
Cheque: Cheques should be made payable to the RAeS and enclosed with this registration form. Please add £15 if your cheque is not drawn on a UK bank to cover bank charges / currency exchange rates.			
Bank Transfer: Payments can be made by bank transfer into Account No. 0615 2538, Sort Code 60 02 20, National Westminster Bank plc, Berkeley Square & Mayfair Branch, PO Box 2153, 1-4 Berkeley Sq, London W1A 1SN, UK. Please indicate on your registration form if you have paid your fees direct.			
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SECRETARIAT

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Fax: +44 (0)20 7670 4349 Email: conference@raes.org.uk

www: http://www.aerosociety.com/conference

VENUE

Royal Aeronautical Society
No.4 Hamilton Place
London W1J 7BQ, UK



HOW TO GET THERE

Underground: Nearest stations are Hyde Park Corner, Green Park and Marble Arch.

By Bus: Routes 2, 8, 9, 10, 14, 19, 22, 30, 36, 38, 52, 73 and 74 all stop at Hyde Park Corner.

PARKING

Car parking spaces can be found at either the Intercontinental Hotel (Congestion Charge applies) or the NCP Underground Car Park on Park Lane.

ACCOMMODATION

Flemings Mayfair Hotel is our appointed hotel partner located five minutes walk from the Royal Aeronautical Society. A four star deluxe hotel offering Royal Aeronautical Society discounted rates. To book call Flemings on +44 (0)20 7499 2964 or visit www.flemings-mayfair.co.uk quoting Royal Aeronautical Society for preferential rates.

PROCEEDINGS

Proceedings from this event are free to delegates. If you are unable to attend and would like to purchase a copy, then additional copies can be purchased from Eurospan, 3 Henrietta Street, Covent Garden, London WC2E 8LU.

Fax: +44 (0)20 7379 0609 Email: orders@edspubs.co.uk

SPONSORSHIP & EXHIBITION

Please contact the Conference & Events
Department for details on exhibiting, sponsorship
and insertion of information into delegate packs.

DISABILITY ACT 2004

The Royal Aeronautical Society is now fully compliant with the above. Ramps are available to help delegates gain access to the building and the lecture theatre. A wheelchair access toilet is available on the ground floor.

CANCELLATIONS

Substitutions may be made up to the day of the conference - please notify the Conference & Events Department in writing of name changes as soon as possible. If no substitute can be found for the delegate unable to attend, cancellations must be notified in writing to the Conference & Events Department. The following fees will then apply:

- More than 14 days notice 25% of registration fee (ie. 75% refur
- 14 days or less notice 50% of registration fee (ie. 50% refund)
- 5 days or less and Non-attendance 100% of registration fee (ie. No refund)