



Seeking Peaceful Solutions for Global Security

Association of Space Explorers
Secure World Foundation
CRECTEALC

NEO IAWN Workshop Summary

UN COPUOS

STSC

Feb. 15, 2010

2009 Reminders of Global NEO Hazards

- March 2009 close approach by 2009 DD45
 - 30-40 m in diameter; missed Earth by 75,000 km
 - Only twice geosynchronous orbit altitude
 - Tunguska-sized; impact every 300-500 years
- July 2009 impact on Jupiter
 - Earth-sized scar left in Jupiter cloud-tops
- October 2009 impact over Indonesia
 - 50 million kg of TNT
 - 10-m diameter asteroid → impact occurs every 2-12 years
- Nov 2009: 2009 VA close approach
 - 7-m diameter, came within 14,000 km of Earth

Workshop Report:
Functions and Characteristics of NEO Information,
Analysis, and Warning network (IAWN)

- ASE, SWF, and CRECTEALC are pleased to aid continued work of Action Team 14 (NEO) as part of, and between, STSC sessions
- Mexico City workshop – Jan 18-20, 2010
- Workshop sponsors
 - Association of Space Explorers
 - Secure World Foundation
 - CRECTEALC--Regional Center for Education in Space Science and Technology in Latin America and the Caribbean
- Hosted by Foreign Ministry of Mexico

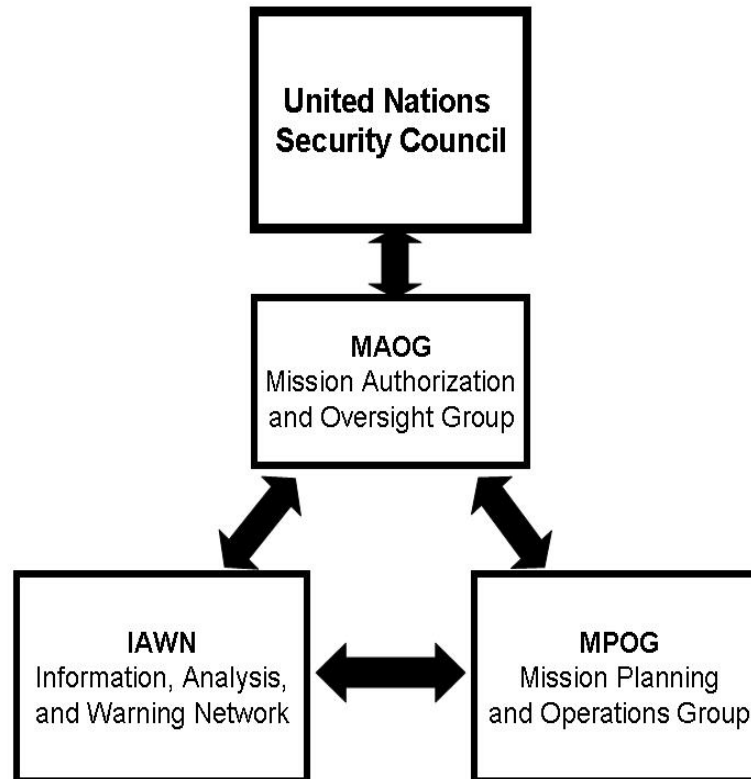
Workshop Participants



Participants at the Workshop on Responding to the Threat of Potentially-Hazardous Near Earth Objects
Mexico City, 18-20 January 2010

Association of Space Explorers Report Recommendation

- IAWN is essential part of global response to NEO hazard
- Identified in ASE report “Asteroid Threats”, submitted to COPUOS STSC a year ago.



IAWN Workshop Summary

- Workshop examined existing elements of NEO detection, orbit analysis, cataloging, and impact prediction
- These elements comprise nucleus of a NEO IAWN
- Workshop discussed following topics:
 - IAWN functions and responsibilities
 - Establishment and Implementation of IAWN
 - Future Questions and Issues for AT14, COPUOS, and NEO decision-makers

IAWN Functions and Responsibilities-A

- Continue current work of NEO detection, tracking, cataloging, and impact prediction entities: JPL, NEODyS, Minor Planet Center
- Conduct NEO capability review
 - Add analysis of physical effects of NEO impact (blast, tsunami, etc.)
- Communications
 - Add strong communications capability based on existing disaster-response models
 - Communications strategy needed to better communicate NEO facts and risk
 - Use existing disaster communication contacts to relay NEO information to member states

IAWN Functions and Responsibilities-B

- Education
 - NEO hazards and effects to public, policy makers
 - Develop outreach and education plan
 - Will alter public's view of a cosmos that has little effect on us
- Risk Management
 - Use existing research on human disaster response to assist IAWN
- Interfaces
 - IAWN should identify effective interfaces and needed information to be relayed to other NEO decision-making functions
- Research
 - Identify needed NEO-related research, addressing knowledge gaps
 - Impact prediction, effects, software tools to predict impact effects (for policy makers)
- Legal
 - IAWN should include space law and international law expertise

IAWN Establishment and Implementation

- Incorporate lessons learned from disaster management community
 - UK Hazards WG, WHO, WMO, CDC, Tsunami Warning System
 - Much expertise already exists and should help IAWN get off ground
- Search for appropriate institutional model
 - Do not create any large bureaucracy or UN entity for IAWN functions
- IAWN Implementation
 - AT14 should create a steering group to propose development of IAWN
 - Phased approach – do not encumber the successful NEO info process
 - Identify what info is needed by MPOG, MAOG
 - Establish effective feedback and assessment process for IAWN

IAWN Questions and Issues for AT14, COPUOS, NEO policy-makers

- Financing –How to provide firm, long-term financial foundation?
 - Strong recommendation for no exchange of funds
- Structure – a standing “center” connected virtually to other resources?
- Best model for IAWN to assume effective NEO info responsibility?
- How to officially designate the IAWN as authoritative NEO info body?
- How to provide long-term endorsement and continued member state support?
- Future work: identify functions of MPOG and MAOG
 - Future workshops on these topics?

Overall Conclusions -- Mexico City IAWN workshop

- Agreed upon utility of IAWN in dealing with NEO hazard
- Identified many international models in disaster-response area and risk management area that can serve to define an effective IAWN
- Optimistic that a NEO IAWN can be successfully instituted
- Many of its elements already exist
- AT14 should move to formulate a proper basis for IAWN
 - Use existing NEO information and analysis institutions
 - Suggest ways to enhance the usefulness of IAWN for member states
 - Sponsor future workshops or conferences to develop the responsibilities and characteristics of other NEO decision-making functions

Association of Space Explorers IAWN Workshop Summary



**NEO Fireball over Utah
USA
Nov 18, 2009**

