

INTERNATIONAL COUNTERMEASURE RESEARCH WORKING GROUP (ICM)

Charter *Draft (19 May 2008)*

1.0 Background

In November 2004, the German Aerospace Center (DLR), the National Aeronautics and Space Administration (NASA), and the Russian Academy of Sciences (RAS), signed an Interim Agreement to pursue joint activities related to artificial gravity through a project known as the International Multidisciplinary Artificial Gravity (IMAG) Project. This Interim Agreement ended with the completion of Pre-Phase I and Phase I activities in November 2007. On June 25-26, 2007, the IMAG Project partners met with European Space Agency (ESA) representatives at the European Space Technology Center (ESTEC) at Noordwijk, The Netherlands and agreed to expand the scope of the original IMAG concept to include activities related to the development, evaluation and optimization of countermeasures for the untoward effects of spaceflight. Further, it was agreed that the partners would benefit if those efforts used standardized measures and conditions, to the greatest extent possible. Recognizing ESA's plans to conduct bedrest campaigns to evaluate countermeasures, including artificial gravity, the partners invited ESA to join the new endeavor and charter a working group. The working group would seek to build upon the work done by IMAG and within ESA to define standard measures and standard conditions for conducting international multidisciplinary research. These activities would enable further meaningful cooperation among the working group members that leverages individual agency investments in research towards fulfilling each agency's research objectives.

2.0 Purpose

The purpose of this Charter is to establish the International Countermeasure Research Working Group (hereinafter called the ICM).

3.0 Scope

The ICM will provide a forum for Member agencies to coordinate activities and exchange research information directly related to the cooperative planning and execution of new countermeasure research on Earth, aiming at future research and application in space. This research is focused initially on bed rest, but also includes research utilizing other ground-based analogs, animal models and various other available research platforms. Such research includes the coordinated development and standardized evaluation of countermeasures, and combinations thereof, to the untoward human changes during space missions of different types, and the coordination of multilateral space research aimed at countermeasure development and evaluation.

Specifically, the ICM will, among other things:

- Define standard measures and conditions used in countermeasure research in space and on Earth;
- Coordinate research campaigns, as appropriate, to minimize duplication of effort and enhance synergy;
- Facilitate interaction between discipline experts in order to have the full benefit of international expertise;

- Identify how the knowledge gained through this activity can be used for terrestrial health and medical care benefits; and
- Pursue development of uniform methods to store, access, and share data generated through such research.

Among the products of the ICM are strategies and plans related to the standardized development and evaluation of countermeasures to the untoward human changes during space missions. This includes, but is not limited to, the:

- Standardization of bed rest conditions;
- Standardization of human data collection during bed rest and other spaceflight analog studies;
- Development of standardized approaches to artificial gravity research using human centrifuges; and
- Development of common approaches to data archiving and sharing.

As mentioned earlier, the agencies may agree that they would benefit from advice that depends upon the wisdom and experience of international experts through the formation of specialized expert teams or discipline working groups. In this case, topical teams focusing on the specific topic(s) of interest will be formed and one or more international workshops on the topic held. These activities will operate under the following guidelines:

- All teams will be convened on an *ad hoc* basis. No standing teams will be formed.
- Teams and the workshop attendees need not consist only of experts from the participating partner agencies. Experts may be invited from countries other than member countries, if it is deemed that they have valuable data and experience related to the topic at hand.
- Workshops should focus on sharing scientific or operational data on the countermeasure or strategic topic of interest and, in some cases, on determining whether standard study conditions and standard evaluation criteria are feasible.
- Every workshop will produce a workshop report that should be presented to the ICM partners at the next ICM meeting following the workshop.
- Whenever feasible, workshops will be held near other scheduled international meetings to minimize costs and travel burdens.

Any ICM Representative may propose a topical theme and workshop by preparing a one-page description of the topic and a draft charge to the experts. These proposals should be circulated among the Representatives and will be discussed and dispositioned at the next available meeting.

4.0 Membership

The Founding Members of the ICM are the European Space Agency, German Aerospace Center, National Aeronautics and Space Administration, and the Russian Academy of Sciences. ICM membership may be extended to any other Space Agency. Such extension of ICM membership to additional Members will be subject to: (i) the approval by consensus of the Founding Members, and (ii) an acceptance in writing by the new candidate Member of the terms and conditions spelled out in this Charter and in any other relevant document related to the activities of the ICM.

Each Member agency will appoint one representative to the ICM, who can be accompanied by appropriate personnel, and provide their names to the other Members. Each representative may designate an alternate to act on his/her behalf.

5.0 ICM Coordination

The ICM will have no permanent Chair. Rather, the Chair for each year will be designated annually by the ICM representatives. In addition, the ICM will identify a Coordinator by consensus who will act as the Executive Secretary for the group and whose responsibilities include facilitating the interactions among the ICM representatives. Any Member agency may provide the Coordinator for the group. The Coordinator will be identified annually by consensus of the ICM representatives.

6.0 Meetings

ICM meetings will be held at least once each year, or more frequently if appropriate. Meeting sites and meeting dates for the next meeting will be determined by consensus of the ICM representatives at each meeting.

Draft minutes of the ICM meetings will be prepared by the Coordinator/Executive Secretary and distributed electronically to the ICM representatives and to each participating Member agency's international affairs office, or its equivalent, no later than 30 days following each meeting. Each ICM representative is responsible for assuring that the minutes are reviewed by the appropriate agency personnel, and for assuring that additions, deletions, and corrections are returned in electronic format to the Coordinator/Executive Secretary within 30 days of the receipt of the minutes. The Coordinator/Executive Secretary will share the revisions with the ICM representatives and final approval of the minutes by the ICM representatives will take place no later than 90 days following each meeting.

7.0 Agency Coordination

Each ICM representative is responsible for ensuring that appropriate senior management personnel and relevant advisory committees, if any, from their agency are fully aware of the activities of the ICM. Each ICM representative is responsible for securing the necessary approvals for all such activities according to the rules and procedures of that Member agency. This Charter does not supersede any existing bilateral or multilateral agreements and/or ongoing projects of any Member agency and any new bilateral or multilateral agreements arising out of the work of the ICM will be implemented in accordance with the appropriate Member agencies laws, policies, rules and regulations.

8.0 Public Information

Release of public information regarding this activity may be made by the appropriate Member agency for its own portion of the program as desired and, insofar as participation of the others is involved, the Member agencies will consult with each other prior to any releases, consistent with the Member agency's respective laws and policies.

9.0 Expenses

Each Member agency will bear the costs of discharging its respective responsibilities related to the activities of this ICM without transfer of funds, including travel and subsistence of its own personnel as required to attend meetings.

10.0 Amendment of Charter

This Charter may be amended by consensus of the Membership.

11.0 Termination of Participation

Individual agency participation in the ICM may be terminated by that agency, with 90 days prior notification to the other agencies.

Founding Members:

For DLR:

For ESA:

For NASA:

For RAS:

Date

Date

Date

Date