

IPEWG 2013

Nice, May 29-31, 2013

France

<http://www.oca.eu/michel/IPEWG2013/>

Patrick Michel
LOC Chair



IPEWG 2013, May 29th-31st, Nice, France



IPEWG 2013

Nice

Organizing Committee

- MICHEL Patrick (LOC Chair, Univ. Nice, CNRS, Côte d'Azur Observatory, France)
- JOHNSON Lindley (NASA Hq, USA)
- KOSCHNY Detlef (ESA/ESTEC, The Netherlands)
- YOSHIKAWA Makoto (JAXA, Japan)
- ABELL Paul (NASA, USA)
- BARUCCI Antonella (Obs. Paris, France)
- BRUCATO John (INAF/Obs. Arcetri, Italy)
- CHENG Andy (APL, USA)
- KLESH Andy (JPL, USA)
- LARSON TIM (JPL, USA)
- YANO Hajime (JAXA, Japan)
- YEOMANS Don (JPL, USA)



Total number of participants: 61

What is IPEWGG?

International Primitive Exploration Working Group

- IPEWGG offers a forum for the community at large to stay abreast of the status quo in small bodies exploration, in terms of the scientific interest of various communities, but also in terms of the programmatic interests of space agencies worldwide.
- It is the only venue yet that offers the opportunity for this diverse community to gather and discuss potential collaborative efforts at the international level.
- The discussions held at this workshop are expected to open new international collaboration opportunities for primitive body space exploration.

The IPEWG Draft Charter

(initiated at IPEWG 2008, Okinawa, Japan)

- **Purpose:**

IPEWG: entity to promote the free and open access of scientific information and archived data **and to foster international cooperation, coordination and collaboration** by offering a forum to exchange information.

While retaining autonomy, coordinated activities through the IPEWG shall aim for the growth and expansion of exploration of primitive bodies for all mankind.

- **Definition/Scope:**

IPEWG covers **primitive bodies that orbit the sun, including comets, asteroids, Trojans, Centaurs, KBO's, dust and meteoroids,** as well as Phobos and Deimos and other irregular planetary satellites

The IPEWG Draft Charter

- **Implementation:**

IPEWG works for:

- (1) Exchange information on current projects and future plans, and coordinate primitive body exploration activities
- (2) Provide or exchange, when necessary or requested, findings and inputs to the ISECG, COSPAR, or any other group involved or interested in missions to the primitive bodies or others
- (3) Promote international cooperation, coordination and collaboration in exploration of primitive bodies through observation and characterization, using ground-based and space-based facilities, as well as sample analysis and curation
- (4) Promote cooperative efforts for exchanging timely information on Potentially Hazardous Objects (PHO) and collaborate on strategies for addressing shortfalls in current capabilities Members of the IPEWG will work to ensure that all data from and about their respective missions are publicly archived according to standards recommended by the IPDA.
- (5) Enhance public Awareness

The IPEWG Draft Charter

- **Steering Committee:**

Steering Committee is composed of space agencies and it will:

- Organize plenary meetings
- Invite participants, e.g., representatives of spaceguard associations
- Establish sub working groups

- **Chair**

The Chair of the IPEWG is selected among IPEWG members and it is a representative of plenary host organization.

- **Frequency:**

- The plenary IPEWG meeting will be held regularly, at least, every two years.

- **Sub WG:**

- Ad hoc sub working group under IPEWG are organized as necessary.

- **Secretariat:**

- JAXA maintains an IPEWG website and records.

IPEWG 2011: Organizational Updates

- Minor revisions of the Charter have been suggested by the IPEWG2011 participants. They will be reviewed and approved by the IPEWG Steering Committee members.
- IPEWG Steering Committee (SC) welcomes CSA as a new member. Now the SC includes 7 space agencies: ASI, CNES, CSA, DLR, ESA, JAXA, and NASA (commitment not formally made yet). The SC meeting should be held during the next plenary IPEWG meeting.
- JAXA continues to update records of IPEWG activities by working with NASA/JPL LOC of IPEWG2011, as well as the next IPEWG LOC in Europe.

Action Items

- **Negotiate to obtain formal recognition of IPEWG by the various international agencies.** Strong participation of the agencies will provide the context and relevance of all subsequent IPEWG activities.
- **Revise Charter** to reflect comments from the community, including membership and roles.
- **Lay out an international strategy for the exploration of NEOs** (to limit scope and identify areas where international collaboration is most suitable). Create inventory of missions/activities that are already approved / planned in order **to identify niches.**
- A common voice amongst various stakeholders should be expressed, but meat is needed to support it – **build a technical memo in support of the international strategy.**
- **Establish common policies across agencies for planetary protection and data storage for primitive bodies.**

Program

- Goals for science and exploration (by NASA, JAXA, ESA, CNES, CSA)
- Observational campaigns of primitive bodies
- **Discussion** about observation coordination of comet ISON; what are the big picture goals/objectives for primitive body science and exploration; how the activities needed to attain these goals can be integrated into sustainable plans both from a science community and agency perspectives.
- Current and possible future space missions to primitive bodies: **Hayabusa 2, OSIRIS-REx, ISIS, MarcoPolo-R, Rosetta, AIDA, Trojans, main belt, CoRE, BASIX, CubeSats/NanoSats, Phobos**

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Program

- Instruments for remote-sensing and in-situ close engagement (landers/rovers, radar tomography, Neutral Particle Analyzer, Magnetometer)
- Data, sample sharing/policy; SBAG report
- NEOs and impact hazard
- Human Spaceflights, Exploration
- Splinter meetings on various IPEWVG topics, including charter revision



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Outcomes



- Definition of primitive bodies
 - Generated a debate
 - Generally, the feeling is that we should keep a broad definition: primitive bodies = small bodies in different degrees of primitiveness
- Observed lack of participation by cosmochemistry experts (at the front line of sample return missions!)
- Resource utilization by companies = win-win connection with IPEWVG; keep the communication open

- Archiving: an important part of any mission or program, and planning is necessary
 - OSIRIS-REx mission's approach: focused effort involving planning and co-ordination with the Planetary Data System early in the mission; several productive meetings between Small Bodies Node (SBD) personnel in Tucson with the O-Rex Archive Scientist.
 - Archive policies is determined by the lead agency and through Memoranda of Understanding involving other participants. SBD has considerable experience for this.
 - Ideally, archiving procedures would be defined, approved and adhered to under the auspices of the International Planetary Data Alliance; however, that

- Invite more space agencies (Russia, Brazil, China, India etc ...)
- Stakeholders like Space Technology Community, Commercial Industries, non-profit organisations, international organisation (like UN) should be more invited
 - Stakeholders beyond just science to meet one place and have common understanding of primitive body exploration
- Interdisciplinary nature of primitive body exploration: interconnect with astronomers, cosmochemists, astrobiologists

Issues and Actions

- Make IPEWVG more recognized:
 - Catalog of missions (Science, Planetary Defense, Exploration)
 - Catalog of Instruments (with TRL, etc ...)
 - Catalog of database and tools
 - Observation assets, data archiving procedures
- Steering committee inactive because of inconsistent level of representations among agencies
- Visibility: international version of SBAG (as ISECG that is formally recognized by agencies); knowledge based, expertise provider

IPEWG 2013: Actions

- Name change? Primitive is too science driven:
International Advisory Group for the Exploration of Small Body?
- Formally open an IPEWG web page with agency logos, furnished as a library: link to each missions + justification of each mission to different stakeholders
- Findings to be reported by LOC Chair and Tiger Team (published, to agencies) in the next months
- Charter to be revised accordingly
- **Next venue:** CSA interested in hosting IPEWG in Montreal in June 2015

THANK YOU

