

## COSPAR update

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### Bureau renewal expected in 2018



Professor Lennard A. Fisk is a renown scientist in the field of solar and heliospheric physics and a former NASA Associate Administrator and Chief Scientist

- The Bureau is composed of nine members, elected for 4 years (renewable once)
  - L. A. Fisk (USA), President
  - Ji Wu (China), V.-Pres.
  - A. Jayaraman (India), V.-Pres.
  - I.S. Batista (Brazil)
  - C. Césarsky (France)
  - K.H. Glassmeier (Germany)
  - M. Panasyuk (Russia)
  - Sho Sasaki (Japan)
  - J.-P. St-Maurice (Canada)
- Blue denotes non-renewable members in 2018



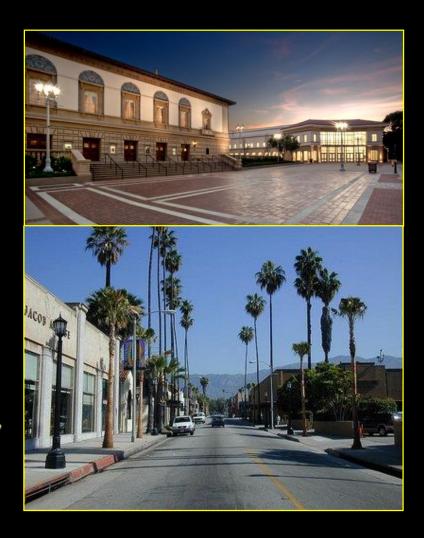
# European situation re: COSPAR membership

- 21 European countries members of COSPAR (out of 43)
- Comparison with ESA's membership
  - Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom.
  - Bulgaria, Cyprus, Malta, Latvia, Lithuania, Slovakia and Slovenia have cooperation agreements with ESA.
  - Canada takes part in some projects under a Cooperation agreement.



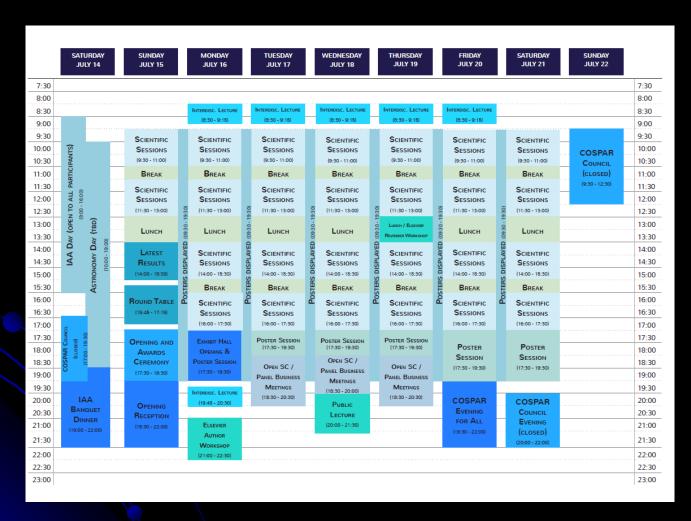
## 42<sup>nd</sup> Scientific Assembly

- The 42<sup>nd</sup> COSPAR
   Scientific Assembly will be held in Pasadena,
   California, USA, 14-22
   July 2018
  - The Scientific Program Committee is chaired by Dr. Thomas Prince (Caltech)
  - Preparatory work is well underway for this Assembly which is likely to set a new record in COSPAR Assembly attendance





## 42<sup>nd</sup> Assembly "Program at a glance"





## Pasadena Assembly Highlights



- Assembly Venue: http://cospar2018.org/
  - Regular registration deadline: 15 June 2018
  - "Week commencing 21
    May, 2014 people have
    registered for the
    Assembly"
  - Serious visa issues, notably for Russia – US consulates closed or not staffed in many cities: waiting time exceeds 8 months!

- Assembly Program: <u>https://www.cospar-assembly.org/</u>
  - Final program posted
  - Latest results session
  - Roundtable discussion of space agency leaders
  - 6 Interdisciplinary lectures
  - 136 scientific events
  - Several Side events
    - Panel on International Space Exploration Scenarios
    - 4S roadmap presentation
    - 60<sup>th</sup> anniversary roundtable



## The 43<sup>rd</sup> Scientific Assembly will be held in Sydney (Australia) in 2020



- The selected Australian bid was competing with Prague, Shanghai and Lausanne
- The 86<sup>th</sup> Bureau meeting opted in March for the period 15-23 August 2020, which coincides with the National Science Week in Australia
- A site visit in January showed off the excellence of the venue and of the organizing team led by R. Boyce from the UNSW
- Prof. Iver Cairns will chair the Scientific Program Committee



## 44th COSPAR Assembly (2022)

- The selection of the 44<sup>th</sup> Assembly site will occur in Pasadena
  - With 2018 Assembly in the Americas (USA) and 2020 Assembly in Asia (Australia), it is due to be held in Europe
- Bids have been received in time from the Czech Republic (Prague), Switzerland (Lausanne), Poland (Warsaw) and Greece (Athens).
- A Site Evaluation Committee will rank the proposals and report to the Council in Pasadena
- The Council's vote will take place on 22 July



## Fourth COSPAR Symposium in 2019

- The Call for Intent to host the 4<sup>th</sup> COSPAR Symposium in 2019 was released on 14 November 2017, with a deadline on 15 January 2018
  - Attempts have again been directed at encouraging a South Africa to host the 4<sup>th</sup> Symposium, which proved unsuccessful
  - Only one proposal was received on 15 January from the Israeli National Representative to COSPAR, Prof. Morris Podolak (Tel Aviv University)
  - The Bureau unanimously approved the very attractive Israeli proposal, with comments about the need to adjust the Symposium title to better reflect the goals of this class of events
  - The proposers came up with the following new title: "Small Satellites for Sustainable Science and Development"



## COSPAR 4th Symposium 2019

- A first meeting of the Symposium Program Committee was held in Paris on 20 March
- Israeli participants were Morris Podolak and Noah Brosch
  - Other Israeli members of the Program Committee include Yoav Yair, Daniel Rosenfeld, Daniel Weihs and others.
  - Arlène Ammar-Israel (CNES, retired) will help coordinate with the Secretariat.
- Some COSPAR Scientific Commissions and Panels have already nominated their representatives to serve in the Program Committee
  - Donal Murtagh (SC A Earth sciences). Other Commission A participants might be Dong Wu from NASA Goddard, Tony Song from JPL, and Shinichi Nakasuka from Japan
  - Pietro Übertini (SC E Astronomy & Astrophysics from space)
  - Michel Boer (Panel on Education)
  - Ralph McNutt (Panel on Interstellar Research)
  - Shuanggen Jin (Panel on Satellite Dynamics)
- A Symposium planning meeting will be held in Pasadena



## Panel on Planetary Protection

- Updated Terms of Reference for the Panel on Planetary Protection were approved by the 86th Bureau meeting
  - A slight change was implemented in these ToRs in order to ensure a good balance between representatives appointed by space agencies and scientists nominated by COSPAR Scientific Commissions B ("Space Studies of the Earth-Moon System, Planets, and Small Bodies of the Solar System") and F ("Life sciences as Related to Space")
- Space agencies involved in planetary exploration were invited to appoint representatives
- Chairs of Scientific Commissions B and F were requested to nominate experts from their community



## New PPP membership

- Chair: Dr. Athena Coustenis
  - Vice-Chairs: Niklas Hedman (UNOOSA) and Gerhard Kminek (Past PPP Chair, ESA)
- Members appointed by space agencies:

China/CNSA	Prof. Lei Li
France/CNES	Dr. Michel Viso
Germany/DLR	Dr. Petra Rettberg
India/ISRO	(pending)
Italy/ASI	Dr. Eleonora Ammannito
Japan/JAXA-ISAS	Dr. Saku Tsuneta
Russia/IKI	Dr. Elena Deshevaya
USA/NASA	Dr. Jim Green

#### Scientists representing SC B and F

Olivier Grasset (France, SC B)	Alex Hayes (USA, SC B)
Maria-Paz Zorzano (Sweden, SC B)	Maxim Zaitsev (Russia, SC B, TBC)
Olga Prieto-Ballesteros (Spain, SC B)	A. Nakamura (Japan, SC B&F, TBC)
François Raulin (France, SC F)	X (USA, TBC)



#### Panel on Space Weather

- At the COSPAR-OOSA meeting in Vienna, space weather was among the topics discussed. A recommendation was made to update at regular intervals the corresponding COSPAR roadmap, and to revise the Terms of Reference and composition of the Panel on Space Weather in a similar way as the PPP.
  - Draft ToRs have been produced and are currently being discussed.
  - PSW new ToRs and membership will be reviewed and (possibly) approved in Pasadena



## COSPAR Scientific Roadmaps

- Small Satellites for Space Sciences
  - Co-chairs: Rüdi von Steiger (ISSI) and Robyn Millan (Dartmouth College)
  - Study Group completed
    - S. Bartalev (IKI, Russia), M. Borgeaud (ESA), S. Campagnola (JPL, USA), J. Castillo-Rogez (JPL, USA), R. Fléron (DTU, Denmark), V. Gass (EPFL, Switzerland), A. Gregorio (INFN, Italy), T. Horbury (Imperial College, UK), K. Kauristie (FMI, Finland), D. Klumpar (U. Montana, USA), B. Lal (IDA, USA), M. McDonald (U. Strathclyde, UK), A. Meir (ISR, Israel), J. Park (KASI, Korea), V.S. Rao (PES U., India), K. Schilling (Wurzburg U., Germany), G. Stephens (JPL, USA), T. Takahashi (JAXA, Japan), A. Title (LM, USA), and J. Wu (CAS, China).
  - First meeting on May 23-24, 2017 at ISSI, followed by regular video conferences
  - First draft report at 3<sup>rd</sup> COSPAR Symposium in September 2017
  - Assignment of writing responsibilities and regular videoconferences
  - Second meeting on April 10-11, 2018 at ISSI
    - Full draft of all sections achieved
  - Quasi-final report at 42<sup>nd</sup> Scientific Assembly in Pasadena in July 2018
    - Two abstracts submitted to sessions A0.1 and B0.2
    - Public presentation on Wednesday, 18 July 2018, 13:00-13:45, Room 16 (Ballroom D).
  - Reviewers comments addressed & submission for publication in ASR (end 2018)



## COSPAR Scientific Roadmaps (cont'd)

#### Roadmap to Exoplanets

- Activities initiated by Pietro Ubertini, working with Giusi Micela (Chair) and Mark Swain (Vice-Chair ad interim serving till Pasadena Assembly)
  - Update the terms of reference of Sub-Commission E4
  - Involve a congruous number of scientists covering the areas of interest, different expertise, geographical areas, age, gender
  - Dissemination of the initiative and time plan toward the reference community, implemented by the SCE Chair, and Sub-Commission E4 Chair and Vice-Chair
  - Prepare an outline of the work focusing on the expected content



## Roadmap to Exoplanets (cont'd)

- Updated outline of the COSPAR roadmap on "Exoplanets"
  - 1) The present scenario: a. Present knowledge (diversity of extrasolar planets)
     b. Detection and characterization methods and their limits c. The Solar System in the context of extrasolar planetary systems d. Current projects from space
  - 2) Missions for next decade and foreseen discoveries a. Synergy with the large project from ground
  - 3) Technological development for future more challenging experiments a. High accuracy radial velocity b. Interferometry c. Coronograph d. Polarization e. Etc.
  - 4) **Models**: status and foreseen developments a. Planetary formation b. Planetary system architecture c. Atmospheres
  - 5) Know the star a. Environment and formation b. Radiation and activity
  - 6) Habitability and life a. Definition, even non-conventional, of habitability and life b. Definition and detectability of organic pre-biotic material and biomarkers
  - 7) Laboratory activity supporting modeling and atmospheric properties studies
- Christophe Sotin will be the interface with SC-B and SC-C



## Roadmap to Exoplanets (cont'd)

#### Ongoing actions:

- 1. The short term objective is to co-opt about 25 people, covering the required competences, with 4-5 people on average focused on each chapter.
- 2. As of March 7, about 35 researchers have been contacted: six of them declined the invitation to participate (mainly because too busy with other commitments), and seven of them gave their availability to be part of the WG.
- 3. Roadmap leaders are still "negotiating" with others. They
  expect to increase the number of contributors during the next few
  weeks.



### COSPAR-UNOOSA collaboration

- COSPAR relationship with UNOOSA has been subject to "highs and lows" in the past few years
  - The new UNOOSA Director Simonetta Di Pippo expressed interest in reviving and strengthening this relationship, based on her appreciation of the importance of science and research with respect to the Peaceful Uses of Outer Space
- A two-day COSPAR-OOSA workshop was held on 22-23 May in Vienna in preparation of UNISPACE+50
  - Three splinter groups of COSPAR experts and OOSA staff looked at the most relevant UNISPACE+50 Thematic Priorities from the perspective of space research
  - The COSPAR President presented the outcomes to the 60<sup>th</sup> session of the COPUOS on 7 June in Vienna. Particular emphasis was put on planetary protection, space weather, global health and resilient societies
  - Little progress was noted since last May, apart from a formal recognition of the role of COSPAR in Planetary Protection with respect to COPUOS



## The PPOSS (Planetary Protection of Outer Solar System) Project

- The ESF/ESSC is the Coordinator of a 3-year project named PPOSS. The PPOSS partnership includes DLR (Germany), COSPAR – leading two WPs –, Eurospace, INAF (Italy), Space Tech Ltd. (Ireland) and Imperial College (UK).
- Associated (non-funded) partners include CAS and CAST (China), IKI (Russia), JAXA (Japan) and NAS/SSB (USA).
- 1st PPOSS Project Review held in Paris on 31 January 2017
  - Web site developed (pposs.org)
  - Interviews with industry
  - 2 workshops held in 2016 (Noordwijk, Köln), 1 in 2017 (Florence)
  - PP "Handbook" available (still requiring refinement)
  - 1 tutorial held in mid-May 2017 in Japan
  - European Engineering Roadmap kick-off meeting held in Paris, October 2017
  - Science requirements, industry roadmap: second progress review successful
- Next steps:
  - Three more "Tutorials" Pasadena, Beijing and Bremen
  - Updated Handbook



## COSPAR Office in Montpellier

- Since September 1<sup>st</sup>, the COSPAR Secretariat is relocated in Montpellier, in the premises of the "Maison de la Télédétection", on a University scientific campus
  - COSPAR Headquarters remains in Paris, in the CNES building, where regular meetings in March (Assembly and Symposium Program Committees, CSAC, Bureau) will still be held
  - New activities will develop in Montpellier, taking advantage of the active scientific environment (remote sensing, small satellites, astronomy, planetary studies, etc.)
- COSPAR will be delighted to host an ESSC meeting in Montpellier at any future opportunity



## Appointment of a new Executive Director

- A Search Committee evaluated and ranked the four applications received after the publication of a vacancy notice and job description.
- The COSPAR Bureau asked the President to make an offer to Dr. Bernard Foing to be appointed as the new Executive Director of the COSPAR Secretariat as of 1<sup>st</sup> January 2020.



## Thank you for your attention!



Visit the COSPAR Web site

http://cosparhq.cnes.fr