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The Ecsite Space Group
Pre-Conference Workshop
"Space for Life" – engaging audiences
Ecsite Annual Conference 2018
"Creative Collisions"
Report

5-6 June 2018 -CICG Convention Centre, Geneva, Switzerland



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Pre-conference workshop participants visit the Observatory of Geneva at Sauverny. © Sylviane Blum, CSH/University of Bern

1. About The Ecsite Space Group

The Ecsite Space Group offers a platform for science centres and museums to improve and extend communication about ESA and European space activities by sharing experiences, expertise, knowledge, tools, resources and best practices.

The group is chaired by Marc Moutin, Director of Exhibitions at Cité de l'Espace, France, Ana Noronha, Executive Director of Ciência Viva, Portugal, and Maria Menendez, Head of ESA Corporate Exhibitions and Events, France.

Joining the Ecsite Space Group is an opportunity to get closer to space professionals and science centres willing to communicate about space. It also allows participants to be better informed about space news, programs, achievements and next launches.

For European Space Agency (ESA), national space agencies, industries, research institutions, and academia, the Space Group offers the possibility to build close collaborations with science communication professionals. The group benefits from the already established European networks of Ecsite and the European Space network of ESA and its member states.



2. Workshop summary

In 2018, the Ecsite Space Group continued to consider the current theme for collaboration of the group - "Space for life" - with a particular focus on engaging audiences with the question "Is there Life out there?".

According to decisions taken by the Space Group during the Annual Meeting in ESA/ESAC, 27-28 November 2017, the two-day workshop focused on:

- The ESA Cosmic Vision programme, with an overview of the topic of the search for life in the universe;
- The participation of Switzerland in European Space activities;
- ESA and Ecsite Space Group resources such as the cooperative print-and-play "Alive!" board game developed by City of Arts and Sciences, Valencia, Spain, including the chance to play the game;
- An interactive discussion on innovative ways of communicating about life in the universe (with potential links to storytelling, immersive experiences, gamification, pop culture and science fiction), drawing on the experience of the Ecsite Space Group community;
- Showcase of space projects by participants.

A total of **34 participants representing 12 countries** attended the pre-conference workshop.¹

The first day of the workshop took place at the CICG Convention Centre and started with a welcome from Ecsite President Herbert Münder. The co-chairs of the Space Group Ana Noronha, Maria Menendez and Marc Moutin also welcomed the participants and reaffirmed their support for collaborative work with the science centres and museums community. The co-chairs thanked Guido Schwarz, University of Bern, for his support in organising the second workshop day.

A tour de table was followed by an inspirational address from former ESA astronaut and Professor Emeritus in Aerospace Engineering at the Swiss Federal Institute of Technology, Claude Nicollier. Subsequently, ESA representatives Maria Menendez and Cátia Cardoso presented the latest developments in terms of mission launches and education school projects.

Insights into engaging audiences with the question "Is there Life out there?" were explored via a fishbowl discussion with three presentations and contributions from sci-

¹ For a detailed list of participants, see Annex 2.



1

ence centre and museum professionals and a hands-on play session with the print-and-play "Alive!" board game developed by City of Arts and Sciences, Valencia, Spain and moderated by their representative **Rosa Martí.**

The afternoon session was dedicated to sharing preliminary ideas on Pilot Project 3 "Climate Change: Monitoring the Atmosphere and Oceans from Space", led by **Ana Noronha**, and a discussion of the next steps of the Ecsite Space Group.



Reliving the moments of a space launch with former ESA astronaut Claude Nicollier. © Ecsite/Museum Geneve/Olivier Miche

The **second day of the workshop** comprised of a visit to the Department of Astronomy, University of Geneva: the **Observatory at Sauverny** and the **Écogia** site, host of the IN-TEGRAL Science Data Centre, two facilities that are at the forefront of Swiss space research, including exoplanetary research. The visit featured an in-depth look at the research, outreach and education work of the two institutions and offered insights into several ESA missions with Swiss participation directly from the principal investigators and engineers working on them.

All presentations made available by the participants can be downloaded via this link.

3. Day 1 speaker presentations

This year's workshop programme was mainly built around presentations and exchanges between the participants. Below you can find summaries of all the speaker presentations given on the first day of the workshop.

3.1 Space Exploration, now and tomorrow (Claude Nicollier, Swiss Federal Institute of Technology)

Claude Nicollier shared with the audience inspirational reflections on the past, present and future of space exploration. He took participants through the emotional moments of a space shuttle launch and remarked that speed and silence were the particularities of being in Space. In terms of future space exploration steps, Claude Nicollier envisaged that humanity would go back to its nearest neighbour, citing the moon village proposed by ESA Director General Jan Wörner. He also suggested that Mars could be probed this century by private means or public investment, the possibility of visiting asteroids, and humanity becoming a multi-planet species. As for his key lessons regarding space exploration, Claude highlighted among others the need for clear objectives, discipline and thorough preparation; the belief that space exploration brings nations and people together; and a "you can do it" attitude.



In conversation with former ESA astronaut Claude Nicollier © Ecsite



3.2 ESA latest news: What's next? (María Menéndez, ESA)

María Menéndez gave participants an overview of useful ESA resources (<u>presentation</u>) and touched upon several upcoming mission launches (Alexander Gerst's Horizons mission on board the ISS, GALILEO, Aeolus, MetOp-C and BepiColombo), including their mission, orbit, applications, estimated launch date and lifetime (<u>presentation</u>).

3.3 New ESA Education school projects (Cátia Cardoso, ESA)

Cátia Cardoso presented several ongoing or soon-to-be-launched ESA education school projects (Mission X, CanSat, Astro-pi challenge). She also introduced Moon Camp, a collaboration between ESA, several European Space Education Resource Offices, Airbus Foundation and Autodesk, to be launched during World Space Week 2018. Its biology educational resources for secondary schools around the question "What is life?" were highlighted as being of relevance to the Ecsite Space Group's Pilot Project 2 "Is there Life out there?". Finally, the project Climate Detectives scheduled to start in October 2018 was presented, in connection to Pilot Project 3 "Climate Change: Monitoring the atmosphere and oceans from Space". Consult her presentation <a href="https://example.com/here-new-market-new-mar

3.4 "Is there Life out there?" - Engaging audiences

Ana Noronha, Space Group Co-Chair, moderated a fishbowl discussion with insights into storytelling, immersive experiences, science fiction, pop culture, to facilitate an indepth exploration of the different approaches to the question "Is there Life out there?", the tools available and the challenges met. Initial presentations were made by Pierre-Yves Frei, Head of Exhibitions, Natural History Museum, Geneva, who shared insights into the development of the interactive museography of the exhibition "Exoplanètes" (2015) at the Natural History Museum of Geneva (presentation); Guido Schwarz, Founder & Project Manager at Swiss Space Museum, who shared with the group insights into gamification and immersive experiences such as the Project Discovery, a citizen science experience searching for real-life exoplanets in the EVE online game; and Ines Prieto, Head of International and Institutional Affairs at Cite de l'espace, who reflected on how to juggle between science and science fiction in exhibitions, as answering "Is there life out there" sometimes feels close to science fiction.

3.5 Interactive session on "Alive!" board game (Rosa Martí, City of Arts and Sciences)

Participants were invited to "play and discover more about origin and evolution of life". After Rosa Martí introduced the "Alive!" game's aims, rules, materials and educational



and scientific background (<u>presentation</u>), six teams had the chance to try first-hand this resource scheduled to launch in the autumn of 2018.



"Alive!" board game play session

3.6 Resource share

For more information, consult Section 5.

3.7 "Climate Change: Monitoring the Atmosphere and Oceans from Space" (2019) - sharing resources (Ana Noronha, Ciencia Viva)

Ana Noronha shared with the audience some preliminary thoughts about the resources to be developed during their upcoming work on third Pilot Project "Climate Change: Monitoring the Atmosphere and Oceans from Space". The project would make good use of the wealth of data and resources currently available, such as from Sentinel 3's Ocean and Land Colour instrument. It would feature inserts with details of European cities, adaptable to the region where the resource will be used. Other ideas being considered include an augmented reality sand box for hands-on activities, educational materials for printing and online, audio-visual materials to download for tablets and screens and the use of QR codes for detailed captions. Ana Noronha ended her presentation by outlining the wealth of opportunities to discuss about the Ocean in the coming years and invited participants to take advantage of synergies between space and the Ocean to promote European space activities. Access her presentation here.



3.8 Ecsite Space Group - Next steps: Annual Meeting 2018 and Preconference Workshop 2019

Several topics were addressed during the planning session.

Ecsite Space Group's Annual Meeting 2018: It was agreed that an invitation to host the upcoming Annual Meeting between November 2018 and January 2019 would be launched in July 2018. Science centres and museums that are not so much in contact with the space world were invited to express their interest; hosting the Annual Meeting could be an opportunity to develop their contacts with national space agencies and industries, and ESA bodies on the ground. An application form would be circulated by Ecsite.

Ecsite Annual Conference 2019: Tina Ibsen (Tycho Brahe Planetarium) and Michael Lindholm Nielsen (Brorfelde Observatorium) expressed their commitment to contribute to developing the next Ecsite Space Group's pre-conference workshop to be held in Denmark in June 2019. ESA representatives remarked this would be a great opportunity to connect with Denmark's small but active space delegation.

Governance matters: It was announced that elections would take place at the next Annual Meeting, around November 2018, with further communication to follow. There are two possible ways to be involved, for a three-year term: in a co-chair role or steering committee member role. The latter allows for flexible levels of commitment and involvement, according to the possibility of interested institutions and their representatives.

4. Day 2 speaker presentations

The **second day of the workshop** comprised of a visit to the Department of Astronomy, University of Geneva: the **Observatory at Sauverny** and the **Écogia** site, host of the IN-TEGRAL Science Data Centre, two facilities that are at the forefront of Swiss space research, including exoplanetary research. The visit touched on the science engagement activities of these institutions and helped participants build a strong link with the host country's space science research and science engagement community.

For more insights into the visit, consult also this <u>NCCRPlanetS article</u> and this <u>video</u> produced by Museum Geneve.

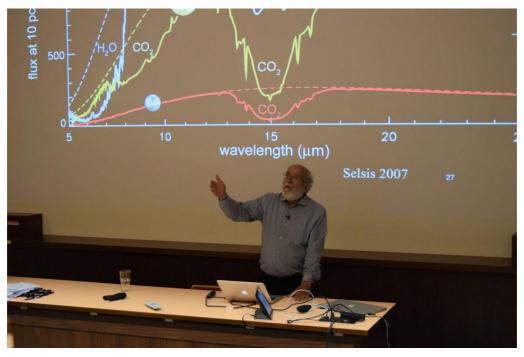


4.1 Welcome note & Introduction of the NCCR PlanetS and Space Missions with Swiss participation (Francesco Pepe, Department of Astronomy, University of Geneva)

Francesco Pepe, Astrophysicist and Principal Investigator of HARPS-N and ESPRESSO with the Department of Astronomy of the University of Geneva), welcomed participants to the facility and provided an overview of the research (observation, theory and simulations) and education and outreach components of the Observatory at Sauverny. He also introduced NCCR PlanetS, an organisation at the forefront in exoplanetary research. On this topic, Francesco Pepe invited the participants to consult the Data Analysis Centre for Exoplanets (DACE), a data repository offering, among other resources, special visualisation tools (dace.unige.ch). His presentation can be accessed here.

4.2 The discovery of 51 Peg b (Michel Mayor, Emeritus Professor, Department of Astronomy, University of Geneva)

Michel Mayor gave a comprehensive presentation on exoplanetary research: from old philosophical questions to today's search for life. He remarked that there had been a shift in paradigms in the last century regarding the existence of life and habitable planets, a development he considered very interesting from the perspective of the history of science.



Professor Michel Mayor addresses participants at the Observatory of Geneva



4.3 Earth-bound observations in Chile (Francesco Pepe, Department of Astronomy, University of Geneva)

Francesco Pepe presented the infrastructure available for earth-bound observations in Chile and the use made of the data by the team at the Observatory of Geneva.

4.4 Visit of the Control Room CHEOPS and Clean Room (Francesco Pepe and Nicolas Billot, Department of Astronomy, University of Geneva)

The tour of the Observatory started on the rooftop of Astrotech and included visits to the future control room of CHEOPS (led by Nicolas Billot, Operations Manager) and to the Clean Room (led by Francesco Pepe) where the mission's instrument was integrated.



Francesco Pepe guides participants on a visit to the Astrotech building of the Observatory of Geneva

4.5 Visit to Écogia, host of the INTEGRAL Science Data Centre (Stéphane Paltani, Department of Astronomy, University of Geneva)

Stéphane Paltani described the main implications of University of Geneva in ESA space missions with a strong emphasis on Euclid, to be launched in 2020 with the aim of determining the origin of dark energy using the gravitational lens and the redshift method. His presentation on Euclid is available <u>here</u>.





Nicolas Billet, Operations Manager, introduces the CHEOPS mission instrument

4.6 Outreach resources of the European Southern Observatory ESO (Tania Johnston, ESO Supernova Coordinator)

Tania Johnston presented the outreach resources made available by the European Southern Observatory and the activities of the ESO Supernova Planetarium and Visitor Centre.

4.7 CHEOPS – the first ESA S mission (Thomas Beck, CHEOPS System Engineer, University of Bern)

As the System Engineer for the CHEOPS mission, Thomas Beck shared with participants his insights into the development, testing and integration of the flight instrument. Access his presentation <u>here</u>.

4.8 Focus on the Observatory of Geneva's science engagement activities

- CaSSIS (ExoMars) (Antoine Pommerol, University of Bern) insights into the development of the instrument and outreach actions such as the possibility for the public to select targets for observation
- New automatic public & student telescope (Pierre Bratschi, Communication Officer) a 60 cm telescope dedicated to observation for the general public and to students' practical work



- Exhibition of vintage astronomical instruments (Michel Grenon, formerly of the Department of Astronomy of the University of Geneva) instruments used in the past by astronomers at the observatory to measure time
- 3D animations (Sylvia Ekström, Department of Astronomy of the University of Geneva)

5. Resource share participant presentations

As a long-standing tradition, participants were able to share during Day 1 their innovative projects and ideas with fellow attendees. This year, the project showcase was titled "Resource share" and consisted of 5-minute pitches from 7 participants followed by 30 minutes of networking. Presenters took seats around the room, allowing others to gravitate from one project to another according to their interest. Below you will find summaries of their pitches and links to their presentations, if available.

 "Expedition Solar System: A research journey through space", Silke Ballmer, focusTerra, ETH Zurich, Switzerland

Silke Ballmer presented an exhibition that seeks to disseminate insights from the three space missions that focusTerra partner universities are involved in, and other fundamental research they carry out. It does so through visual scientific storytelling that breaks down research into main ideas, presents science as a process and adds a personal touch by featuring local researchers as the superheroes of the stories. Hands-on experiences and augmented reality accompany the exhibition develop by scientists themselves in collaboration with an illustrator. Download her presentation here.

• Sarah de Launey, Centre for Life, Newcastle, United Kingdom

Sarah de Launey presented plans for a new permanent Space exhibition at the Centre for Life which is being designed as an innovative and authentic space that make visitors feel like they are doing "real" science. Download the presentation <u>here</u>.

• **Tina Ibsen**, Tycho Brahe Planetarium, Denmark

Tina Ibsen pitched the inclusion principles behind the 'Made in Space' exhibition that opened in February 2018 at the Tycho Brahe Planetarium. Watch the exhibition trailer here.

• Julie Leclair, Ingenium, Canada



Julie Leclair introduced an international astronomy symposium that will be hosted by Ingenium.

Marion Budde, Universum® Bremen, Germany

Marion Budde discussed Universum® space projects: the science show "Skyward" and preliminary ideas about a new temporary exhibition space: "Train for Space" (including cognitive, physical, Russian language training) and a space travel experience to the International Space Station, the Moon or Mars. Download the presentation <a href="https://example.com/here/budden

• Audrey Korczynska, La Casemate, France

Audrey Korczynska pitched mixing astronomy and Fab Lab activities during the annual cultural programme "Une Saison dans les Etoiles". Possible ideas of activities that bring the Fab Lab approach and the space topic together include the building of space furniture or a space suit in open source built in the FabLab, with activities being open to different publics.

• Guido Schwarz, Swiss Space Museum & University of Bern, Switzerland

Guido Schwarz presented preliminary ideas about LiftOff, a new space exhibition planned in Messe Basel between April-October 2019 and the University of Bern's Starmus Festival in Bern, scheduled for 24-29 June 2019. Download the presentation <u>here</u>.





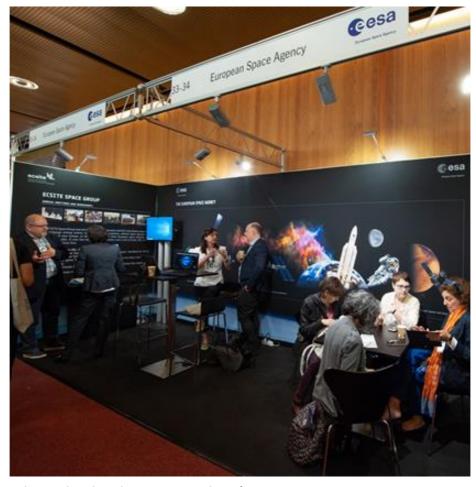
Networking among participants during the "Resource share" session. © Ecsite



6. Other activities during the Ecsite Annual Conference – ESA at the Business Bistro

During the Ecsite Annual Conference 2018 "Creative Collisions" in Geneva, Switzerland, the ESA and the Ecsite Space Group were present at the Business Bistro. The stand represented a platform to promote existing resources and the upcoming pilot project "Alive!", and visitors could learn about the opportunities offered by the Space Group to collaborate and develop new projects around the topic "Space for life".

This exhibit attracted a lot of interest from the conference participants and played an important role in improving and extending communication about European space activities.



The ESA booth at the Ecsite Annual Conference 2018 Business Bistro. © Ecsite/Museum Geneve/Olivier Miche



7. Next steps

The Space Group Annual Meeting

The Space Group will issue an invitation to host the next Annual Meeting to all interested science centres and museums in July 2018. The goals of the meeting are to finalise work on the pilot project "Is there Life out there?", to discuss the topics of oceans, climate change and Earth Observation in preparation for Pilot Project 3: "Climate Change: Monitoring the Atmosphere and Oceans from Space" and to update participants on European space news from ESA, national space agencies and industry. As in previous meetings, there will be room for the showcase of space projects and exchanges on space-related topics. Finally, a session will be dedicated to preparing the next Space Group pre-conference workshop at the Ecsite Annual Conference 2019 in Hellerup, Denmark.

The location of the meeting will be communicated in September 2018 and a preliminary programme will be available in October 2018.

Join the Space Group

All space-related institutions, as well as non-space science centres and museums are invited to join the Space Group to discuss collaborative projects, build partnerships, exchange ideas and best practices. For further information on how to join the Ecsite Space Group or if you are interested in participating in the Space Group activities, please contact: projects@ecsite.eu.



ANNEXES



ANNEX 1. PROGRAMME

Ecsite Annual Conference 2018 Pre-conference Workshop "Space for Life" Focus: Is there life out there? Develop and share resources 5-6 June 2018

This workshop is organised by the European Space Agency (ESA) and the Ecsite Space Group.

In 2018, the Space Group continues to explore the topic "Space for life", with a particular focus on the question: "Is there Life out there?". Experts in the field of "astrobiology" will bring the audience on a journey in the Cosmos to explore the solar system, and beyond, looking for signs of life.

How life originated in the Universe is one of the fundamental questions of science. Fossil records show that life began and evolved on Earth about 3.5 billion years ago due to the presence of liquid water. In order to reveal the conditions that allowed life to form and spread, Europe has launched a number of ambitious space missions that are making significant discoveries. After the first planet orbiting a star outside the Solar System was observed in 1995 from a ground-based telescope in Switzerland, hundreds such extra-solar planets have been discovered.

Over the coming years, ESA will continue to investigate some of the most intriguing enigmas in the cosmos. New spacecraft will study how our neighbouring planets formed, life emerged and how the Solar System works, and will test the fundamental physical laws of the Universe and study what it is made of.

How do we approach the task of communicating these endeavours and make the most of their potential to engage our audiences with science? Join this pre-conference workshop to explore potential answers with the Ecsite Space Group community!

According to the decisions taken by the Space Group during the Annual Meeting in ESA/ESAC, 27-28 Nov. 2017, the 2-days workshop will focus on:

Day 1

- The ESA Cosmic Vision programme, with an overview of the topic of the search for life in the universe
- The participation of Switzerland in the European Space activities
- ESA and Ecsite Space Group resources such as the cooperative print-andplay "Alive!" board game developed by City of Arts and Sciences, Valencia, Spain, including the chance to play the game



- An interactive discussion on innovative ways of communicating about life in the universe (with potential links to storytelling, immersive experiences, gamification, pop culture and science fiction), drawing on the experience of the Ecsite Space Group community.
- Showcase space projects by participants

Day 2

Visit to two facilities of the Department of Astronomy of the University of Geneva: the **Observatory of Sauverny** and **Écogia, host of the INTEGRAL Science Data Centre**, at the forefront of Swiss space research, including exoplanetary research.

The visit will also touch on the science engagement activities of these institutions and help participants build a strong link with the host country's space science research and science engagement community.

Representatives of ESA, the national delegation in Switzerland, and space industries will join the workshop and exchange with delegates of science centres and museums.

Ecsite Space Group Co-chairs

- Marc Moutin, Head of Exhibitions, Cité de l'espace, Toulouse, France
- Ana Noronha, Executive Director, Pavillion of Knowledge Ciência Viva, Lisbon, Portugal
- Maria Menendez, Head of Corporate Exhibitions and Events, European Space Agency, HQ, Paris, France

Programme – Tuesday 5 June

Time	Session	Speaker
9:00-09:05	Welcome by Ecsite	Herbert Münder, Ecsite President
9:05-9:15	Ecsite Space Group goals & achievements	Co-Chairs of the Space Group
9:15-9:45	Tour de Table	All participants
	Featured speeches	
	Moderator	Maria Menendez, Space Group Co-Chair
9:45-10:30	Space Exploration, now and tomorrow	Claude Nicollier, former ESA astronaut and Professor Emeritus in Aerospace Engineering at the Swiss Federal Institute of Technology
10:30-10:45	ESA latest news: What's next?	María Menéndez , Head of ESA Corporate Exhibitions and Events



10:45-11:00	New ESA Education school projects	Cátia Cardoso , ESA Education Office
11:00-11:30	Coffee break	
	Moderator	Marc Moutin, Space Group Co- Chair
11:30-12:30	"Is there Life out there?" - Engaging audiences A fishbowl discussion with insights into storytelling, immersive experiences, science fiction, pop culture	All participants Pierre- Yves Frei, Head of Exhibitions, Natural History Museum, Geneva Guido Schwarz, Founder & Project Manager at Swiss Space Museum Ines Prieto, Head of International and Institutional Affairs at Cite de l'espace Moderated by Ana Noronha, Space Group Co-Chair
12:30-13:15	"Alive!" board game Play and discover more about origin and evolution of life	All participants Moderated by Rosa Martí, City of Arts and Sciences, Valencia, Spain together with an ESA Education Representative
13:15-14:15	Lunch	
	Moderator	Maria Menendez, Space Group Co-Chair
14:15-15:30	Resource share 5 minute pitches followed by 30 minutes of networking to further explore resources and activities	All participants Pitches from: Silke Ballmer, focusTerra, ETH Zurich Switzerland Sarah de Launey, Centre for Life, Newcastle, United Kingdom Tina Ibsen, Tycho Brahe Planetarium, Denmark Julie Leclair, Ingenium, Canada Marion Budde, Universum® Bremen, Germany Audrey Korczynska, La Casemate, France Guido Schwarz, Swiss Space Museum & University of Bern, Switzerland
15:30-16:00	Climate change: Monitoring the Atmosphere and Oceans from Space (2019) – sharing resources	Ana Noronha, Ciencia Viva, Lisbon, Portugal
15:45-16.15	Coffee break	
	Moderator	Maria Menendez, Space Group Co-Chair



16:15-17:15	Ecsite Space Group - Next steps	Co-Chairs of the Space Group All participants	
17:15-17:45	Discussions & Overview of the 2nd day	Co-Chairs of the Space Group All participants	

Programme - Wednesday 6 June

Time	Session	Speaker
08:00	Bus pickup at the main entrance of the Congress Centre	
08:15-08:45	Bus ride from Geneva to the Observatory, Versoix	
08:45-09:15	Welcome refreshments	
09:15-09:30	Welcome note & Introduction of the NCCR PlanetS and Space Mis- sions with Swiss participation (incl. Q&A)	Francesco Pepe, Astrophysicist and Principal Investigator of HARPS-N and ESPRESSO, Depart- ment of Astronomy, University of Geneva
	Featured speeches	
09:30-10:00	The discovery of 51 Peg b (incl. Q&A)	Michel Mayor, Astronomer and Discoverer of the first exoplanet 51 Pegasi b
10:00-10:30	Earth-bound observations in Chile (incl. Q&A and walk to Clean Room)	Francesco Pepe, Department of Astronomy, University of Geneva
10:30-11:00	Visit of the Control Room CHEOPS and Clean Room (2 groups)	Francesco Pepe and Nicolas Billot, Department of Astronomy, University of Geneva
11:00-11:30	Coffee break (incl. walk back to entrance hall)	
11:30-11:45	Bus ride to Versoix	
11:45-12:45	Visit to Écogia, host of the INTE- GRAL Science Data Centre INTEGRAL mission (current) & Eu- clid mission (planned)	Stéphane Paltani, Department of Astronomy, University of Geneva
12:45-13:00	Bus ride to the Observatory	
13:00-14:00	Lunch	
14:00-14:15	Outreach resources of the Europe- an Southern Observatory ESO	Tania Johnston , ESO Supernova Coordinator
14:15-14:45	CHEOPS – the first ESA S mission (incl. Q&A)	Thomas Beck, CHEOPS System Engineer



14:45-16:15	Focus on the Observatory of Geneva's science engagement activities (4 groups) - CaSSIS (ExoMars) - New automatic public & student telescope - Exhibition of vintage astronomical instruments - 3D animations	Antoine Pommerol, University of Bern Pierre Bratschi, Communication Officer, Michel Grenon and Sylvia Ekström, Department of Astrono- my of the University of Geneva	
16:15-16:30	Conclusion of Ecsite Space Group pre-conference workshop	Ecsite Space Group co-chairs	
16:30-17.15	Bus ride back to Geneva, arrival at the main entrance of the Congress Centre		

ANNEX 2: LIST OF PARTICIPANTS

	Name	Surname	Position	Organisation	Country
1	Silke	Ballmer		focus Terra, ETH Zurich	Switzerland
2	Rebecca	Barnes	Education, Directorate of Science	European Space Agency - ESA	Int. org.
3	Jaclyn	Bell	Space and Physics Project Manager	The Association for Science and Discovery Centres	United King- dom
4	Mathieu	Beylard	Planetarium Manager	Museum of the Air and the Space, Le Bourget	France
5	Sylviane	Blum	Communication & Outreach	Center for Space and Habitability, University of Bern	Switzerland
6	Jakub	Bochinski	Head of Education	Copernicus Science Centre	Poland
7	Thierry	Botti	Head of communication and out- reach	Observatoire des Sciences de l'Univers Institut Phytéas	France
8	Barbara	Budassi	Ecsite Space Group coordinator for ESA	European Space Agency - ESA	Int. org.
9	Marion	Budde	Head of Exhibitions and Programmes	Universum Managementges GmbH	Germany
10	Cátia	Cardoso	STEM Didactics Expert	Aurora Technology B.V. for ESA - European Space Agency	Int. org.
11	Naama	Charit Yaari	Physics facilitator and curator	Clore Garden of Science	Israel
12	Ingrid	Constantin	Assistant in Mediation	Natural History Museum of Geneva	Switzerland



13	Luke	Currall	Head of Exhibitions	We The Curious Ltd	United dom	King-
14	Sarah	de Launey	Exhibition designer	International Centre for Life	United dom	King-
15	Zvia	Elgali	Head of Technology in Education Unit	Clore Garden of Science	Israel	
16	Pierre-Yves	Frei	Project officer	Natural History Museum of Geneva	Switzerla	and
17	Walter	Guyot	Head of Facilitation	Vaux-en-Velin Planetarium	France	
18	Mischa	Horninge	Product manager	Columbus Earth Center, Museumplein Limburg	Netherla	nds
19	Tina	Ibsen	Head of Science and Outreach	Tycho Brahe Planetarium	Denmark	(
20	Tania	Jonhston	ESO Supernova Coordinator	ESO – European Southern Observatory	Germany	/
21	Audrey	Korczynska	Project Manager	La Casemate	France	
22	Julie	Leclair	Director, Travelling Exhibitions	Ingenium - Canada's Museums of Science and Innovation	Canada	
23	Rosa	Martí	Exhibitions Department	Ciutat de les Arts i les Ciències	Spain	
24	Maria	Menendez	Head of Corporate Exhibitions and Events	European Space Agency - ESA	Int. org.	
25	Marc	Moutin	Exhibitions, Shows and Develop- ment Director	Cité de l'Espace	France	
26	Claude	Nicollier	Former ESA astronaut and Professor Emeritus	Swiss Federal Institute of Technology	Switzerla	and
27	Michael Lind-	Nielsen	Astronomy Outreach Officer	Brorfelde Observatorium	Denmark	(



	holm				
28	Ana	Noronha	Executive Director	Pavilhão do Conhecimento - Centro Ciência Viva	Portugal
29	Cristina	Paca	Project Assistant	Ecsite	Belgium
30	Ines	Prieto	Head of International and Institutional Affairs	Cité de l'Espace	France
31	Manuel	Roca	Head of Exhibition Production	Parque de las Ciencias	Spain
32	Guido	Schwarz	Communication/Outreach	University of Bern/NCCR PlanetS	Switzerland
33	Annie	Sorlin	Exhibitions Officer	European Space Agency - ESA	Int. org.
34	Rob	van den Berg	Director	Space Expo	Netherlands
35	Maria	Zolotonosa	Senior Project Manager	Ecsite	Belgium

