

Press Release

## CSEM hosts a prestigious space conference

### On the way to space — stellar inspiration from three world-renowned astronauts

Neuchâtel/Bern, April 9, 2014 — Under the banner “MARS and beyond: ventures to the frontiers of science” and as part of its 30-years’ anniversary celebrations, CSEM invited 200 clients, industrial partners, and peers to an exclusive and prestigious conference. Three world-renowned astronauts from Russia, the United States, and Switzerland shared their experiences of space and discussed, with representatives of industry and academia, the future of manned, interplanetary missions such as the Mars expedition scheduled for 2030 and beyond.

Russian heroine and pilot cosmonaut Elena Kondakova, in 1994–1995 the first woman to make a long-duration spaceflight, began the conference with an impressive description of her six months living and working off-Earth. She was followed by Charlie Duke, astronaut and moonwalker, who gave the audience an unforgettable glimpse of his missions with Apollo 16 and his flights to the Moon. “*The moon is the most beautiful desert that I have ever seen. Untouched, unspoiled, and serene*”, said Duke. Swiss astronaut Claude Nicollier discussed the remarkable challenge and the rewards of his Hubble Space Telescope repair missions, concluding: “*The value of human Mars exploration is [...] to give us extra options for our long term future.*” This round of presentations provided the audience with new views and impressions on living and working in space.

ESA Director of Technical and Quality Management Franco Ongaro shared his views on the technologies that will get humankind to Mars, and beyond, and Suren Erkman, professor at the Faculty of Geosciences and Environment at the University of Lausanne, brought the round of presentations to a close with his thoughts on the impact of manned missions on terrestrial sustainability: “*As the constraints and challenges on Earth keep growing, long and remote space missions become a useful analogue for studying and implementing terrestrial sustainability*”. The panel discussion addressed questions regarding the position of newcomers such as China, India, South Korea, or the UAE, and the involvement of space agencies versus well-funded private companies’ own initiatives. The conference also provided valuable insights into psychological aspects of long-duration extra-terrestrial missions to the next solar system and other issues including investment opportunities in a market that does not yet exist and legal questions related to a possible future ‘new frontier’.

Questioned about the relationship between a company specializing in micro-components and the often huge devices and equipment needed for extra-terrestrial missions, Mario El-Khoury, CEO of CSEM and conference host, answered: “*Behind every giant instrument, there are a lot of microtechnological marvels. CSEM’s competencies match the very demanding standards of the space industry and contribute to fostering Switzerland’s reputation in high-precision instrumentation.*”

#### 30 years of non-stop innovation

With this prestigious conference, CSEM takes another step in celebrating its 30 years of non-stop innovation at the service of Swiss industry. Ever since its foundation, CSEM’s mission has been to develop and transfer microtechnologies to the industrial sector in order to reinforce that sector’s competitive advantage. CSEM fulfills this mission either by entering into collaborative agreements with established companies or by creating start-ups and new ventures. CSEM’s development of flexures, or compliant mechanisms, for use in space exploration has led to quantum leaps in performance and to remarkable results: they have allowed scientists to observe the universe’s oldest galaxy and to engineer terrestrial telescopes, and the first airborne telescope, which outperform the Hubble Space Telescope. These developments in modern astronomy, a field that continues to push the limits of optical systems, have spillover effects in domains such as Earth observation, space exploration, and watchmaking.

Throughout 2014, CSEM is inviting friends, clients, and partners to a range of debates and events in order to spend some quality time together in networking and scientific and technical discussion. Information is available at [www.csem.ch/events](http://www.csem.ch/events).

## About CSEM

### CSEM – technologies that make the difference

CSEM, founded in 1984, is a private research and development center specializing in microtechnology, nanotechnology, microelectronics, system engineering, photovoltaics and communications technologies. Over 400 highly qualified and specialized employees from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach and Landquart.

Further information is available at [www.csem.ch](http://www.csem.ch)

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