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## **Keynote speech - Manned Space Flights: Lessons Learned from Space Craft Operation and Maintenance**

*Wednesday 13 November 2013 18:30 (45 minutes)*

Following graduation in 1973 from the Ecole de l'Air (the French Air Force Academy), Michel Tognini served in the French Air Force as an operational fighter pilot, flight leader in 1976, flight commander in 1979, test pilot then chief test pilot from 1983 to 1985. In 1985, France opened a recruitment program to expand its astronaut corps, and Michel Tognini was one of seven candidates selected by CNES. In July 1986, he was one of four candidates to undergo medical examinations in Moscow. In August 1986, he was assigned as a back-up crew member for the Soyuz TM-7 mission. Although he remained a French Air Force officer, he was placed on detachment to CNES for his space flight activities from September 1986 onwards. In 1991 he went to Star City, Russia, to start prime crew training for the third Soviet-French ANTARES mission. During his stay in Russia, he linked up with Mir (ANTARES mission) and spent 14 days (July 27–Aug. 10, 1992; Soyuz TM-14 and TM-14) carrying out a program of joint Soviet-French experiments. Michel Tognini then attended ASCAN Training at the Johnson Space Center during 1995. He was initially assigned to the Operations Planning Branch of the Astronaut Office working technical issues on the International Space Station. He flew aboard Space Shuttle Columbia on STS-93 (July 22–27, 1999). During the five-day mission his primary task was to assist in the deployment of the Chandra X-Ray Observatory and to conduct a spacewalk if needed. He retired from active astronaut status in May 2003. After having been Head of the European Astronaut Division, he was Head of EAC (European Astronaut Centre) in Cologne, Germany. He is currently in France working for Human Space Exploration and performing speeches for the general public.

Working and living in a space craft requires a tremendous effort of organization; everything must be planned very carefully and accurately. And of course, particular attention must be paid to the preventive and corrective maintenance of the space craft. In this keynote speech, Michel Tognini will give some insights on how these missions are organized and run, and will share the lessons learned.

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**Track Classification:** Others - Please specify in the comments fields