

Report: SpaceOps2018

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Summary

The 15th International Conference on Space Operations, known as "SpaceOps 2018", was held in Marseille, France from May 28th to June 1st. The SpaceOps conference is held every 2 years, in various locations around the world. This year's event was hosted by France's CNES (National Centre for Space Studies) government space agency, and co-hosted by the AIAA (American Institute of Aeronautics and Astronautics).

The conference took place at the Pharo Palace, surrounded by the Émile Duclaux Park, located near the



Pharo Palace

entrance to the old Port of Marseille. Pharo Palace is a fascinating place, built in the nineteenth century as directed by Louis Napoleon Bonaparte, as a gift to the Empress Eugenie. It offered magnificent views of



Marseille, the Old Port, and the northern coastline of the city.

Approximately 850 people attended, mainly from Europe, North America, and Asia. About 30 attendees were from Japan, including 10 from the tracking and control department and exploration division of JAXA. Another 15 Japanese attendees represented government and private organizations active in earth observation and ground stations. Regarding Asian representation, exhibitions provided by South Korean organizations were notable. The previous event, SpaceOps 2016, was hosted in Korea.

There was a total of 36 exhibitions, many provided by European companies and organizations, some of which are not well-known in Japan.

The conference covered 13 themes, including mission design and management, operations concepts and implementation, engineering and data management for earth segments, and planning and scheduling. Organizers seemed intent on covering all subjects related to space operations, apart from hardware design.

Our Impressions

I had some difficulty determining what the main topic of this conference was, as so many different subjects were dealt with. I suspect

that there was not a single over-arching theme. This event was not technical in nature, like the Ground System Architectures Workshop (GSAW), and reminded me of Japan's Space Sciences and Technology Conference or the International Astronautical Congress (IAC). I had heard from those that frequently attended that previously, there were many presentations about deep space operations and government satellite science missions. However, at this year's event, there were quite a few publications about satellite constellations. This is to be expected, considering recent growth in the field of commercial small satellites.

A panel session titled "Outstanding Achievements in Space Operations, to Inspire Future Operators" was provided by



Panel

representatives engaged in the operation of planetary probe satellites, science mission satellites, commercial earth observation satellites, and commercial geostationary communication satellites. "Operations" would be the only word common amongst the presentations, and each person provided only their viewpoint, and no discussion was carried out amongst the group.

A large number of papers were presented at the conference. These presentations were carried

out in 4 rooms simultaneously, over 5 days, and the total number of papers reached 430. Papers were either presented orally over a 30 minutes time frame, or via posters and e-posters. I had hoped for lively Q&A discussions about the presentations, but most were provided without any follow-up feedback from the audience. A Q&A session was provided after each oral presentation, but it seemed that little discussion was related to the topic at hand.

All applications were approved for papers to be provided at the conference, as there was no peer-reviewing process. I felt that this resulted in a wide variety of quality levels in the papers.

I attended sessions regarding the operation of ground systems and commercial satellites, and was left with the impression that common and standardized platforms for operating numerous satellites, and the automated operation of satellites using Artificial Intelligence (AI), have both become big trends. Regarding the current status of operation for Radarsat-2 and Pleiades, presentations explained problems faced and measures taken – this information was useful.

Exhibitions that included pitches from European startup firms led me to believe that they were assembled without a grasp of the current business situation in the United States. I wonder whether or not these European firms are isolated from the U.S. and other areas, due

the large market that exists in Europe. It does appear that few European companies are aggressively attempting to enter the U.S. market or compete with American companies.

Presentations and Exhibitions

(1) Current Trends in Ground systems

<<Omitted below>>

(2) Satellite Operations Experience

<<Omitted below>>

(3) Operations Planning for Observation Satellites

<<Omitted below>>

(4) Pitches from Startup Companies

<<Omitted below>>

Other Miscellaneous Comments

Seafood cuisine is one of the fascinating highlights of a visit to Marseille. Oysters were a bit out of season when I had visited, but bouillabaisse was delicious, as was seafood served eglio e olio with mayonnaise and garlic flavors. One of the reasons I had attended this conference was for a chance to enjoy the local cuisine. I especially enjoyed the reception meal and lunches, which I'll describe here. As the conference was at a royal palace, the meals were exceptional. Canapé-style dishes were bite-sized, and served so that they could be eaten while standing, but each plate was elaborate and fancy. Some commented that the portions were small, but I had thought that the presentation and quality were well-suited to the occasion. I wouldn't quite call it Nouvelle Cuisine, but the wide variety of small and beautifully-arranged dishes could be considered a new type of French cooking.

The photo shows a gazpacho-style vegetable soup served at the reception. It



At the reception

was arranged nicely, with a vegetable juice sherbet in a cocktail glass. This really served to whet one's appetite on a lovely, hot, and sunset-lit terrace.

If you have any questions about this report, please contact:



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