

## HUMAN SPACEFLIGHT SYMPOSIUM (B3)

Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia (4-B6.5)

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## CONSOLIDATING COLUMBUS OPERATIONS AND LOOKING FOR NEW FRONTIERS

**Abstract**

In January 2014, the Columbus Flight Control Team (FCT) started with a modified real-time operations scenario. During nights and at weekends, the 2-person shift consisted of the Col-Flight Director and the STRATOS position only. The whole year of 2014, and also partly 2015, was needed to consolidate the new set-up, with its new and profound constraints, to find workarounds for special operational cases, to finalize operational product adaptations, but also to reduce the workload of the Columbus Flight Control team taking into account the reduced resources. Nonetheless, it is clear that the Col-FCT is at the limit of their capabilities, especially during high activity phases. The consolidation phase was necessary due to the short preparation and implementation phase in late 2013 and early 2014. In parallel, the Columbus Execute Level Planning team was merged with the Operations Coordinator team.

Also in 2014, NASA started to introduce a new planning system called OPTIMIS, consisting of SCORE, WebAD and Viewer. It is intended to replace the well-proven, but less user-friendly, planning system suite composed of CPS and OSTPV. After overcoming some initial challenges, SCORE will be used in operations from Increment 43/44 onwards, with the other modules following later in 2015.

The years 2014 and 2015 show the highest frequency ever of ESA astronauts on-board the ISS. Shortly after the six-month sojourn of the German astronaut, Alexander Gerst, which ended mid-November 2014, the Italian astronaut, Samantha Cristoforetti, flew to the station. She will stay until May 2015. In September 2015, a Short Duration Mission is planned with the Danish astronaut, Andreas Mogensen, and in December 2015, the next, long-term, British astronaut, Timothy Peake, is bound for the ISS.

Samantha Cristoforetti started a completely new type of experiment called Airway Monitoring, which broadened the experience of the Col-FCT outside of the Columbus module, and gave them the opportunity to prepare an experiment in both the Destiny module and in the US airlock. Col-CC supported the responsible USOC, DAMEC, to prepare the Ops Products, coordinated the preparation work, and established and maintained the necessary interfaces to NASA for the new environment, i.e. the airlock.

This paper will focus on the highlights and experiences of the Columbus Flight Control Team in 2014. In addition, it will provide an overview of ongoing preparation work and operation of some experiments.