

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Microgravity Sciences Onboard the International Space Station and Beyond - Part 1 (6)

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DECLIC RELOADED

Abstract

DECLIC is a multi-user facility to investigate critical fluids behavior and directional solidification of transparent alloys.

As part of a joint NASA/CNES research program, the payload was first operated onboard the ISS in October 2009 and the initial program was fully covered. A complementary program, including several retrofits of the existing inserts, was initiated and also gave its first results [3].

Unfortunately, in September 2014, a critical anomaly occurred and the instrument could not be powered on anymore, preventing from any anomaly analysis from the ground. It was then returned to the ground with SPX5 flight (February 20, 2015).

The root cause of the anomaly was quickly found and a communication board had to be replaced. The instrument has successfully passed the post-fix functional and environmental tests. Some more functional tests are still needed to declare DECLIC ready for flight again.

The objective is to launch DECLIC back to the ISS with SPX9 in July 2016 or with SPX10 flight in December 2016.

After quickly summarizing the completed program up to the anomaly, the paper will detail the retrofit activities. Then, an overview of the upcoming program will be given.

- [1] G Pont and Al. "Declic, First Results on Orbit" IAC-10-A2.5.1(2010)
- [2] G Pont and Al. "DECLIC, Soon Two Years of Successfull Operations" IAC-11.A2.5.4(2011)
- [3] G Pont and Al. "DECLIC, now and tomorrow" IAC-13,A2,5.5 (2013)