

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Facilities and Operations of Microgravity Experiments (5)

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FIRST MIDDLE EAST AIRCRAFT PARABOLIC FLIGHTS FOR ISU PARTICIPANT EXPERIMENTS

Abstract

Aircraft parabolic flights are widely used throughout the world to create microgravity environment for scientific and technology research, experiment rehearsal for space missions, and for astronaut training before space flights. As part of the Space Studies Program 2016 of the International Space University summer session at the Technion - Israel Institute of Technology, Haifa, Israel, a series of aircraft parabolic flights were organized with a glider in support of departmental activities on 'Artificial and Micro-gravity' within the Space Sciences Department. Five flights were organized with manoeuvres including several parabolas with 5 to 6 s of weightlessness, bank turns with acceleration up to 2 g and disorientation inducing manoeuvres. Four demonstration experiments and two experiments proposed by SSP16 participants were performed during the flights by on board operators. This paper reports on the microgravity experiments conducted during these parabolic flights, the first conducted in the Middle East for science and pedagogical experiments.