Design and Calibration Runs of the Facility for Education and Research on Re-entry Instability

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Abstract. Supersonic parachutes have been essential devices for atmospheric reentry of interplanetary probes since the dawn of space exploration. Despite decades of experience, their design remains critical, as even small errors can jeopardize or even abort a mission. The Facility for Education and Research on Re-entry Instability, FERRI, has been developed aiming to experimentally study the inflation of supersonic parachutes, serving as both a research infrastructure and an educational platform for aerospace engineering students. The design, realization and calibration run of FERRI are discussed in this paper.