



Ground calibration of SIMBIO-SYS integrated experiment: scientific objectives and setup description

Francois Poulet (1), Julian Rodriguez (1), Yuying Longval (1), Pascal Eng (1), Yves Langevin (1), Fabrizio Capaccioni (2), Gabriel Cremonese (3), Michele Dami (4), Gianrico Filacchione (2), and Pasquale Palombo (5)

(1) Universite Paris Sud / CNRS, IAS, Orsay Cedex, France (francois.poulet@ias.fr), (2) INAF-IASF, Rome, Italy, (3) INAF-OAP, Padova, Italy, (4) SELEX GALILEO, Space LoB, Firenze, Italy, (5) INAF-OAC, Naples, Italy

SIMBIO-SYS consists of integrated sensors, including a stereo imaging system (STC), a high-resolution imager (HRIC) and a visible-near-infrared imaging spectrometer (VIHI). In order to properly extract and derive the relevant scientific information, an in-depth characterization of the instrument effects is required from subsystems to integrated systems levels. The main goal of the on-ground calibration is to evaluate the instrumental responses as a function of various parameters that can evolve while the instrument will be in operation. The on-ground calibration of the SIMBIO-SYS instrument will consist in two steps. The first one will be done at the channel level by Selex-Galileo (Firenze) and the scientific team of each channel. Once integrated, the performances of SIMBIO-SYS will be then evaluated at Institut d'Astrophysique Spatiale (Orsay). The major objectives of the calibration at the instrument level are: 1- cross- and absolute radiometric, namely to connect the instrumental signals recorded with actual values of calibrated sources radiance; 2- straylight evaluation; 3- calibration with mineral analogues. As a secondary goal, the on-ground calibration at the instrument level is a unique opportunity to validate operational procedures and test the reception and quick look analyze of the instrument telemetry. In this poster, we will present in detail the on-ground calibration setup developed at IAS for this space instrument.