Interplanetary SmallSat Missions Session A Paper code A.1 EM1-deplyoed Lunar Ice Cube Mission A.2 BioSentinel – Lessons Learned During I&Test of the Spacecraft EDU A.3 A.4 Development of the LunaH-Map Mission Near Earth Asteroid Scout A.5 Session B Interplanetary Small Satellite Mission Concepts and Instrumentation Title Flexibility, Validity and Susceptibility of Cylindrical Langmuir Probes for CubeSat and Pico-Satellite to Characterize Paper code B.1 B.2 Cubesat Instrumentation Concept for Asteroid Exploration - The ASPECT Platform B.3 Exploring Off-World Lave Tubes and Caves Using Small Robots B.4 Mars Aerosol Tracker (MAT): An Areostationary SmallSat to Monitor Dust Storms and Water Ice Clouds OVERVIEW AND RESULTS FROM THE ESA CDF STUDY ON SMALL PLANETARY PLATFORMS B.5 Heliophysics Interplanetary Small Satellite Missions and Enabling Optical Communication B.6 B.7 CubeSub- A Submersible Concept For Underwater Planetary Exploration Session C Propulsion, Trajectory Design, and Launch Support for Interplanetary SmallSat Missions Paper code C.1 IFM Nano Thruster: High total impulse propulsion for Small- and Nanosatellites enabling interplanetary missions C.2 C.3 An Orbital Maneuvering Vehicle for Transport Beyond Earth Orbit - Updated Trajectory Design for Asteroid Proximity Exploration C.4 Interorbital Systems: Launch Services to LEO, Luna, and Beyond C.5 Modular Solar Steam Propulsion Units for Interplanetary Applications Cubesatellite Replication of Deep Space Fuel Transfer Essentially Free: Shipping from Asteroids, Moons and Planets to Earth C.6 C.7 Session D Interplanetary Samll Satellite Mission Concepts Paper code Cupid's Arrow – a Small Interplanetary Probe Concept D.1 Primitive Object Volatile Explorer (PrOVE) - Waypoints and Opportunistic Deep Space Missions to Comets. D.2 D.3 PRISM: Phobos Regolith Ion Sampling Mission with Compact SIMS ZodiScout: A Small Satellite to Explore the Origins of the Interplanetary Dust in our Solar System A Venus SmallSat Orbiter for Remote Sensing of Seismic Activity, the VAMOS Concept D.4 D.5 D.6 MISEN: The Mars Ion and Sputtering Escape Network D.7 Deep Space 9 mission concept Telecommunications and Ground Support for Interplanetary SmallSat Missions Title Paper code E.1 Progress Update on the Morehead State University Ground System Development for Interplanetary CubeSat Missions E.2 Deployable Faceted Cassegrain Reflectarray Antenna for CubeSats DTN for Interplanetary SmallSat Missions E.3 Advanced Multi-Mission Operations System Instrument Toolkit: An open source instrument and small satellite operations E.4 Structurally reconfigurable modular inflatable reflectors F 5 Recent Developments in Small Satellite Antenna Technology E.6

Session F Paper code Technologies for Interplanetary Small Satellite Missions Title

F.1 New Avenues for Planetary Science Using On-Orbit CubeSat Centrifuges

F.2 Autonomous Path Planning for Climbing in Low Gravity Planetary Bodies

Guidance, Navigation and Control of SPIKE for Descent, Landing and Hopping on an Asteroid F.3

F.4 6U deployable solar arrays for deep space missions

An Advanced Packaging Approach for a High Performance Deployable Photovoltaic System R-HaWK F.5