

## SMALL SATELLITE MISSIONS SYMPOSIUM (B4)

Joint Session: Small Spacecraft Launch, Injection, and Orbit Transfer Systems (5.-D2.7)

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## FLYMATE: THE NEXT GENERATION OF PICOSATELLITE ORBITAL DEPLOYERS

**Abstract**

The CubeSat standard introduction made space technology and experiments more accessible for students, universities and research institutions around the world. Now it becomes a field of enhanced innovation and breakthrough technologies demonstration: deployable solar panels, new deorbitation concept devices, as well as distributed and swarm space missions can be developed, launched and proven in the space to a large extent due to the cost-effective nature of CubeSat standard. The FlyMate project contributes to this trend in the domain of Picosatellite Orbital Deployers. The existing PODs (PPOD, X-POD, ISIS-POD) are all based on the same concept of spring ejection. Their passengers are compacted in the deployer's body and ejected all-at-once into the orbit. FlyMate, through the use of high-precision motorized ejection system, proposes a remedy to all these drawbacks. FlyMate's passengers are ejected individually at adjustable speeds and distances. Apart from offering a dedicated service to individual passengers, the unique features of the Flymate make our system the sole ready for the coming distributed and formation flying demonstration missions. The deployer, developed in cooperation with CNES and INSA de Lyon, is scheduled to carry out the 1st In Orbit Demonstration by the end of 2009.