



Microcosm is a recognized world leader in space mission engineering, with an emphasis on identifying and developing methods to dramatically reduce space mission cost and schedule, often called **Reinventing Space**. Microcosm has recently joined with USC to create the *Reinventing Space Project*, both to do academic research in this area and to aid the entire space community in reducing cost and schedule by disseminating information via seminars, workshops, and graduate and professional courses. (More information is available at www.smad.com/ReinventingSpace.html.)

Among the specific technologies developed by Microcosm, and its sister corporation, the Scorpis Space Launch Company are:

- **NanoEye**—a small spacecraft with submeter resolution on the Earth, several km/sec of maneuvering capability that gives it exceptional agility with a recurring cost of less than \$2 million (plus an interplanetary version called **Hummingbird**)
- **Scorpis®**—a family of very low-cost, responsive small launch vehicles
- **PressurMaxx**—all carbon composite, cryogen-compatible tanks and structure for space and launch vehicle applications that can greatly reduce both the mass and cost of space structures
- **Plug-and-Play space software** that allows more robustness software solutions and a much higher level of software reuse

In addition, Microcosm has created many of the standard texts and reference works in use in the space industry today, including *Space Mission Analysis and Design (SMAD)*, the standard mission design text for over 20 years, *Space Mission Engineering—the New SMAD*, entirely rewritten and recreated in 2011, and *Reducing Space Mission Cost*, which addresses the most fundamental problem facing our industry today. For more information, contact Dr. Richard Van Allen at rvanallen@smad.com or 310-219-2700.



Reinventing Space
Project



Scorpis® Mini-Sprite Launch Vehicle



NanoEye

