sent to aerospace machinists due to lab machine size constraints.

After the satellite is fully constructed, it will be tested for durability and control. One trial is on an air-bearing table, which, like an air hockey table, is a nearly frictionless surface. “It’s kind of like being weightless but on a flat surface,” she explained. McBryan will then review the effects of the robotic arm movement on the satellite body motion in this two-dimensional study. Her team will also place the subject in the SSL’s thermal chamber, where it will experience extreme temperatures for up to a few months to test the satellite’s endurance in harsh, space-like conditions.

The DYMAFLEX team is made up of both graduate and undergraduate students, all with aerospace engineering interests. McBryan sees the benefits of having undergraduates in the lab, and has her own method of identifying good workers. She gives prospective undergrads a tour of the SSL, and tells them to email her about coming back. “Eighty percent of them won’t come back,” she said. “If they come back, we say, ‘Great, join a project!’”

McBryan mentioned that the lab even prefers freshman and sophomores, so they can be trained appropriately and their skills utilized. “Once an undergrad proves themselves, we basically treat them like graduate students,” she explains. “Enthusiasm is the only requirement for undergrads.”