Licensee –

The University of Texas at Austin
Texas Spacecraft Laboratory
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Mission Description –

The ARMADILLO spacecraft is a modular 3U CubeSat designed by Texas Spacecraft Laboratory engineers from initial concept to build of the flight unit over a time span of 6 years. ARMADILLO contains three payloads. The first, the Piezoelectric Dust Detector (PDD) was developed by Baylor University and is dedicated to a characterization of the sub-millimeter space debris environment in LEO (more specifically the deployment orbit of the spacecraft). The second payload on the spacecraft is the FOTON (Fast, Orbital TEC, Observables, and Navigation) dual frequency GPS Receiver developed by the RadioNavigation Laboratory (RNL) located at UT Austin. The FOTON was designed for space weather applications and will probe ionospheric activity via the GPS Radio Occultation (GPS RO) technique. The third and final payload is a retro-reflector provided by AMES Research Center. As allowed, the spacecraft will be pointed towards a ground station for laser ranging.

The ARMADILLO spacecraft will be launching on the STP-2 mission in September 2016 on a Falcon Heavy launch vehicle. The spacecraft will be deployed as a secondary payload. ARMADILLO will be deposited into an ISS orbit, with target apogee 860 km, perigee 300 km, and inclination 28.5 degrees.

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