Taiwan’s ARGO Satellite Science Mission

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Taiwan’s National Space Organization (NSPO) plans to launch a series of scientific satellites (about one every 3-4 years) during the next 15 years and will actively pursue international collaboration on scientific satellite missions. NSPO is presently in the process of designing and building a LEO satellite, ARGO, which weighs about 450 kg, has an orbit of 97.9 deg. inclination and ˜620 km altitude, and is planned for launch in 2009. Besides carrying a remote sensing camera for earth observation, ARGO will have four space science instruments to carry out the science mission of studying space weather with emphasis on magnetosphere-ionosphere-thermosphere coupling physics, space weather monitoring, and particle and electromagnetic wave phenomena. These four instruments are: a flux gate magnetometer (MGF), an auroral electron spectrometer (AES; covers few eVs - 18 keV energy range), an imaging and rapid-scanning ion mass spectrometer (IRM; covers 0.5 - 100 eV energy range), and a neutral particle analyzer (ANA; covers 0.1 - 2 km/s neutral velocity). These instruments will be built in collaborations with collaborators from Canada and Japan. The ARGO science operation will be open for coordinated observation campaigns with other satellite missions (FORMOSAT-2, Reimei, THEMIS, Cassiope, QuickSat, etc.) and ground-based observations.