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AMAJ, AN INTERNATIONAL CUBESAT PROJECT TO FORM A CONSTELLATION WITH STUDENTS' POCKETQUBES

Abstract

AMAJ is a project to achieve a constellation of three satellite, one 1U Cubesat and two 1P Pocketqubes, trying to support a simple IoT mission and test some of technologies in orbit. Each pocketqube will have a Payload for IoT and also a short range omni-directional InterSatellite Link (ISL) module which lets them to communicate with the Cubesat easily. These 1P Pocketqubes will be loaded into a Cubesat which not only own similar Payload and ISL module as Pocketqubes, but also a Communication Link for the Ground Control, for Release Command and Monitoring. The proposed Concept is to Deploy the Pocketqubes out of the Cubesat called the Mother, as the smallest possible platform in an oversized 1U structure to inject another Satellite in Orbit. The Cubesat then provides a Launch Service for Two Pocketqubes and the Constellation will Form in One Orbit. The whole system will operate in orbit for IoT services and Pocketqubes will add to the number of possible members to such IoT network.