

## Earth Imaging System for KITSAT-3

Kyung-In Kang, Hyon-Sock Chang & Sang-Keun Yoo  
SaTReC, KAIST

The KITSAT-3 spacecraft is planning to be launched into the circular sun-synchronous polar orbit late 1996 or early 1997. It has the newly developed small bus system with deployable solar panels and 4 main payloads which are Earth Imaging System, Space Environment Scientific Experiment, Data Collection System and Store-and-Forward System. The KITSAT-3 Earth Imaging System consists of optical system, camera support electronics 0 & 1 including camera flight processor and solid state mass storage unit for each, data compression unit and dedicated image transmission system. The optical system has the 3 channel linear CCD push-bloom mechanism with the ground resolution of 15 m/pixel and the swath width of 52 Km. The camera support electronics 0 has camera control flight processor, JPEG compression processor and 2 Gbit SRAM solid disk module. The camera support electronics 1 includes camera control flight processor and 8 Gbit Flash Memory and 2 Gbit SRAM solid disk modules. The transmission system uses Store-and-Forward due to the mismatch of the data rate between the output data rate from the optical system of 36 Mbps and the transmission data rate to the ground of 30Mbps using QPSK.