

**PICO SATELLITE : MODELLING AND FABRICATION PROCESS FOR STUDY OF
ATMOSPHERIC CONDITION-A Review**Harish.M ^a, Dinesh Kumar.P ^a, Manimaran.V ^a, Hariharan.N ^a Dr.R. Arravind ^b^aU.G Students, ^bProfessor , Dept. of Aeronautical Engineering Paavai Engineering College, Pachal,
Namakkal, TN - 637 018 ,India**ABSTRACT**

In the last few decades the number of small scale satellites has been in an increasing pace. The numbers of market players competing in the global scenario are highly motivated to develop satellites of micro and Pico scales, in order to reduce the time frame and project cost. However more complex task have to be performed and even more lifetime and reliability must be provided. The responsibility of an engineer starting from design to delivery (D to D) of a satellite has such an enormous complexity that it can only be solved through team work. The subsystems of a satellite consist of power (EPS), communication (COMM), On board data handling (OBDH), structure, mechanics, thermal, attitude and orbit control (AOCS), telemetry and tracking requires a multidisciplinary approach to achieve within the time span.

The first Pico Satellite will verify the satellite platform and new highly efficient solar cells from industry. It is a CubeSat in single-configuration (10x10x12 cm³) which features deployable solar arrays. Also the system engineering tool can be used to dimension several design parameters like solar array size or battery size. In this thesis an already existing generic model of dimensioning the satellite is used for modelling the project Pico Satellite, while at times the generic models needs to be either updated or changed according to the project requirements and verified with the literature references. The major aim of this project is to fabricate the PicoSat module for measuring the atmospheric parameters such as humidity, temperature, altitude and speed of the object.

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