

# PEASSS

## Introduction

PEASSS is an EU funded project that aims at launching a nano satellite to demonstrate new Piezo Assisted Smart Satellite Structure.



European space objectives include Earth Observation to monitor the health of the planet and the impacts of human activities. In addition, Europe seeks to stay on the cutting edge of space technology. The technologies that will be developed in the PEASSS project directly enable European space observation and in-space activities. The project will create a cutting edge technology based on piezo actuated smart composite panels, which can improve the accuracy and stability of nearly all Earth Observation sensor platforms.

## The Project

The PEASSS project has a total budget of almost 2.47 M€. The project started on 1 January 2013 and ended on 30 April 2017. To enable the launch the project is suspended for 11 months and an extension of 5 months is granted to finish the flight hardware.

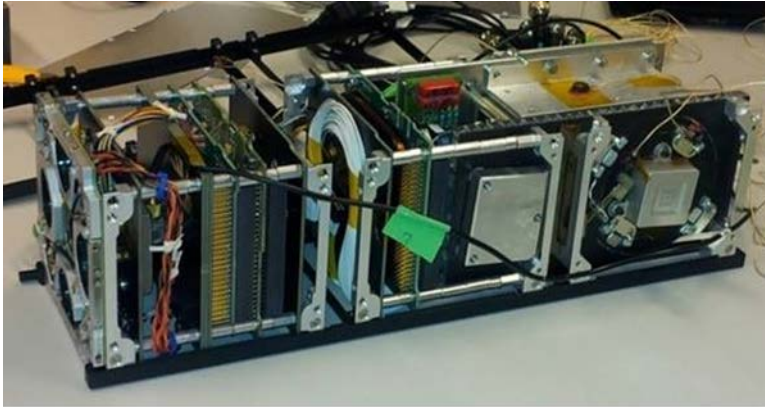
## The Consortium

The PEASSS consortium, with its six partners, aligns established aerospace contributing organizations with SME's and university researchers, including members from Germany (Sonaca Space), The Netherlands (TNO, ISIS) Belgium (Sonaca), as well as Israel (NSL, Technion).



## The objectives

The main objective of the PEASSS project is to develop, manufacture, test and qualify "smart structures" which combine composite panels, piezoelectric materials, and next generation sensors, for autonomously improved pointing accuracy and power generation in space. The smart panels will enable fine angle control, and thermal and vibration compensation, improving all types of future Earth observations, such as environmental and planetary mapping, border and regional imaging.



## The results

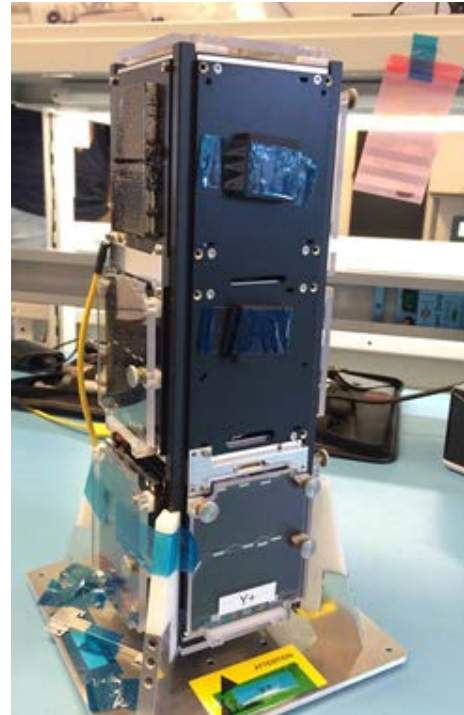
The project starts with the design of the CubeSat platform bus, definition of system components, design payload interfaces, satellite configuration, power supply, software and avionics logic. The system components include new nanosatellite electronics, a piezo power generation system, a piezo actuated smart structure, and a fiber-optic sensor and interrogator

system. The designs are prototyped into breadboard models for functional development. Following completion of functional and environmental tested operational breadboards, the Flight system components have been designed, manufactured and passed the functional and environmental tests, This has resulted in flight-ready hardware, that is integrated into a working satellite. Once the nanosatellite is assembled and related software is developed, the on ground tests are performed



## The launch

Finally the satellite is successful launched on 15 February 2017 with PSLV mission C37 from India. All new developed system components are operational. After commissioning of the platform and the payload, the functional tests in space are performed successful.



## The website

[www.peasss.eu](http://www.peasss.eu)