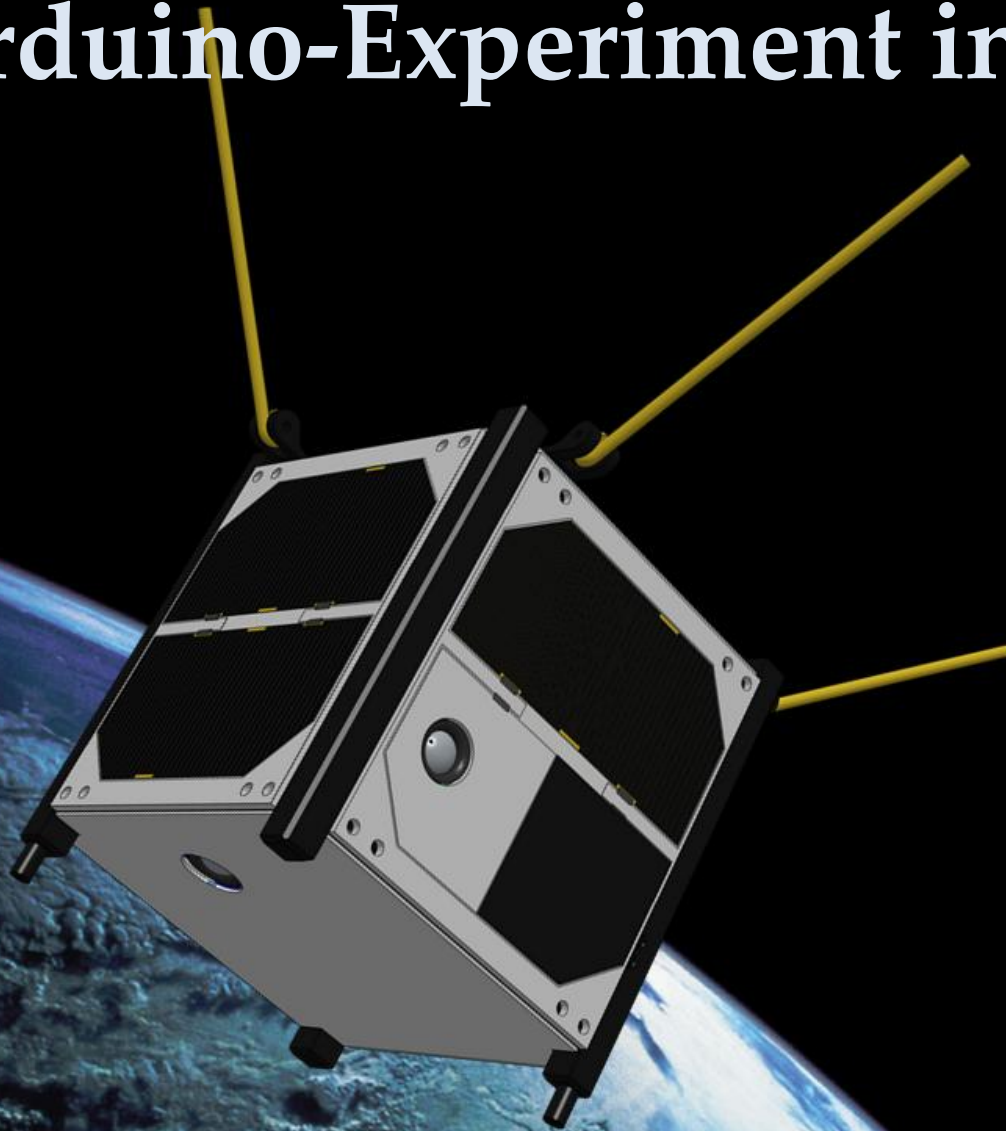
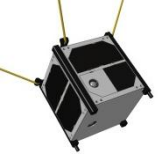


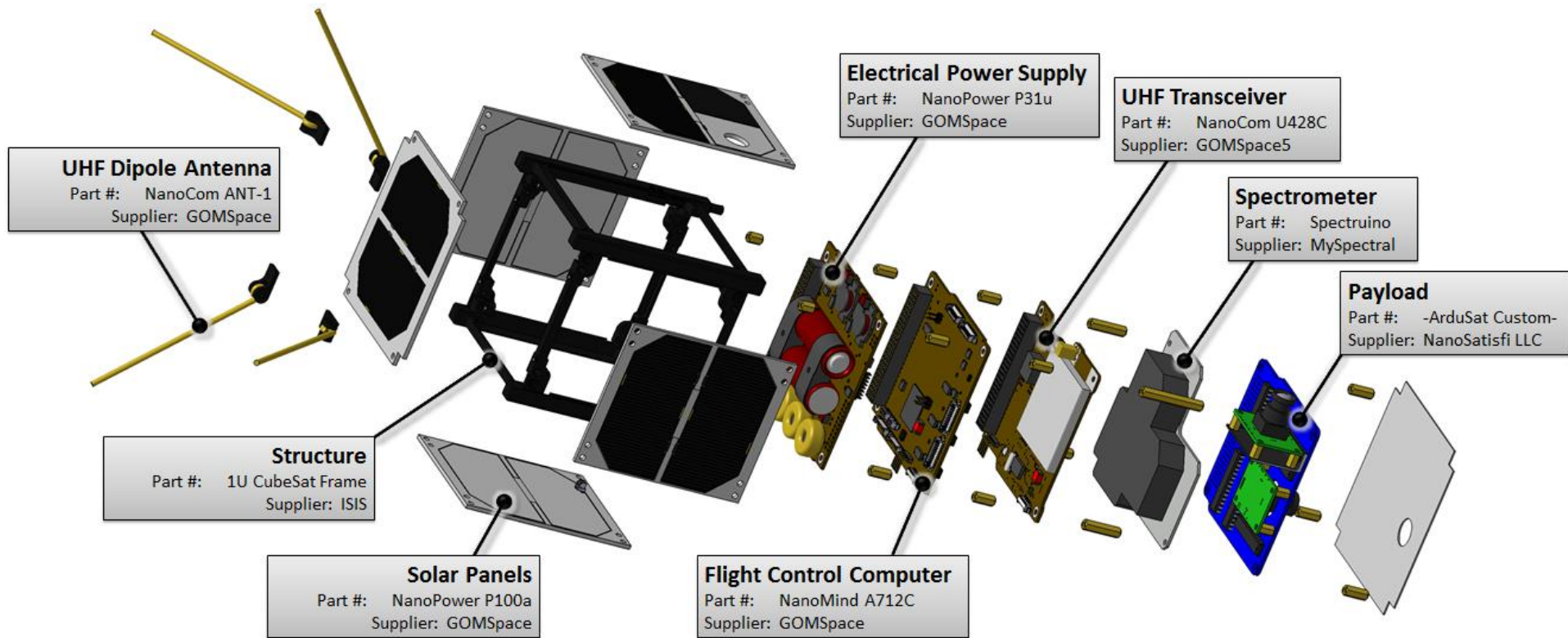
ArduSat

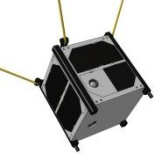
Your Arduino-Experiment in Space





ArduSat





ArduSat

Arduino



CO₂ and O₃
Sensor



GPS



Magnetometer



Geiger Counter



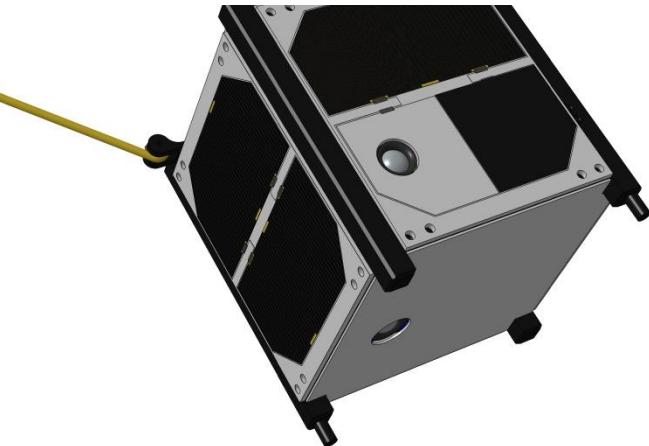
Camera

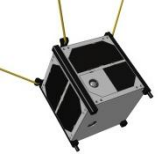


Vibration
Sensor

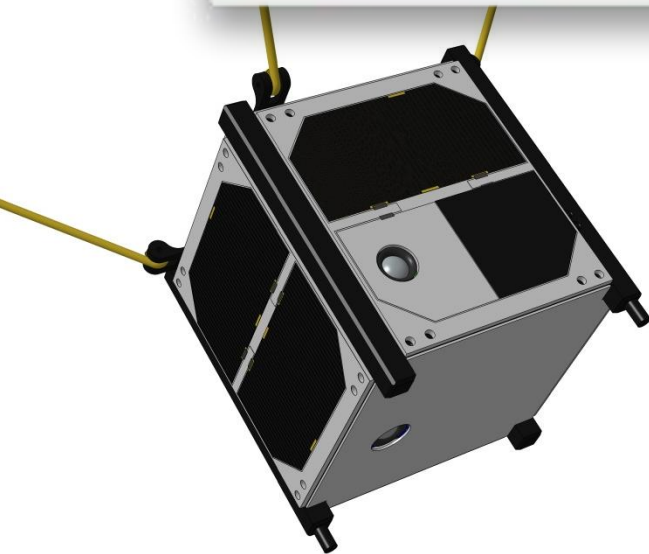


EM Sensor





ArduSat



Arduino



CO₂ and O₃
Sensor



GPS



Magnetometer



EM Sensor



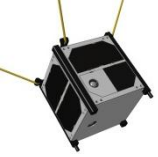
Geiger Counter



Camera

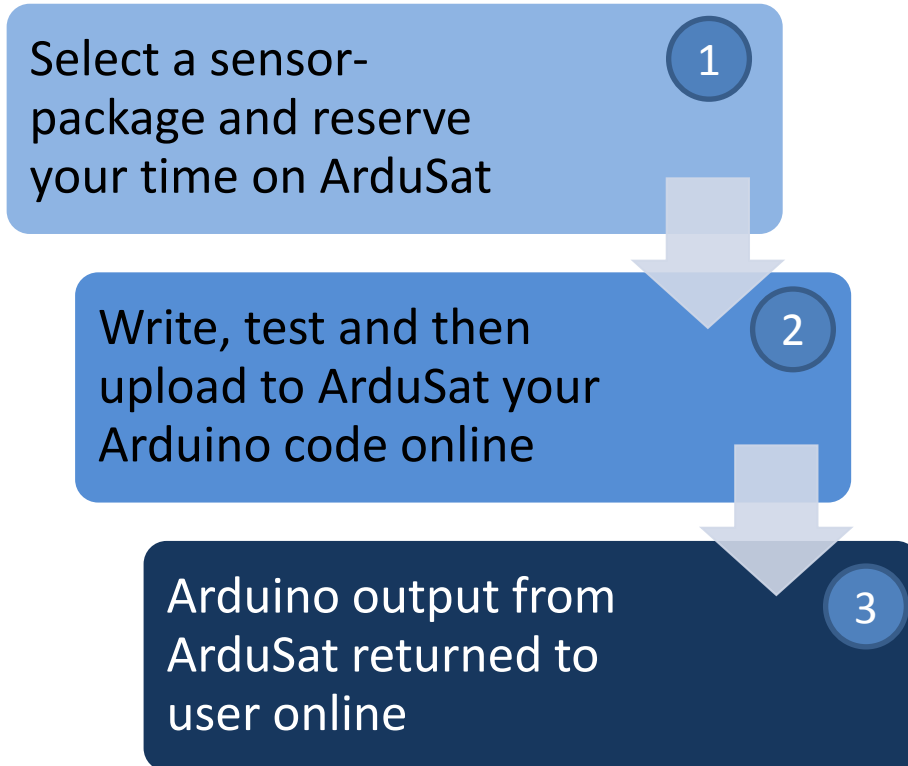


Vibration
Sensor

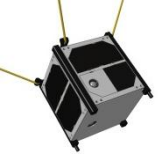


ArduSat

Typical user process

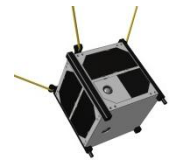


- The user gets access to a number of sensors, cameras and control parameters¹ onboard
- The user then designs, writes and tests his own Arduino code
- Via web-interface, the user then uploads the code to the satellite
- The experiment is run e.g. for a couple of days or a week
- Data is collected in space, downlinked & processed and returned to the user online
- Since Arduinos and sensors are cheap and readily available, the user can easily build a replica of the experiment at home / school



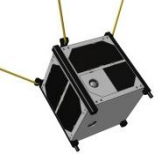
The Goal

**Driving STEM education through
affordable and convenient
access to space
for everyone!**



ArduSat - Community

- High-Schools
- STEM and Space focused organizations
- Parents
- DIY / Arduino Enthusiasts
- Space Enthusiasts
- University Students
- University Professors



Some Mission Ideas

Entertainment

Geo-caching in space
Social Game – Heat the Sat
Space Instagram Competition

Education

Meteor Hunter
How to Detect Life on Extra solar planets
Make a 3D picture of Earth Magnetosphere

Engineering

Build a Webserver in space
Graph thermal stress and snap
Build a Fileserver in space

Science

Measure the South Atlantic Anomaly
Basic Radio Astronomy / Pulsar detection
Build a Solar Activity Meter + iApp



ArduSat – Curriculum

Modeled after famously successful Stanford AI Class



INTRODUCTION TO
Artificial Intelligence






In partnership with
STANFORD ENGINEERING



Sebastian Thrun Peter Norvig

Lecture 5

Using the I2C Bus on the Example of the BMP085 Pressure Sensor

-  1. Introduction
BMP085 Part 1.mp4
-  2. The I2C Bus – part 1
BMP085 Part 3
-  3. The I2C Bus – part 2
BMP085 Part 4
-  4. Setting up the Arduino
BMP085 Part 2
-  5. Using the BMP085 On the Satellite
BMP085 Part 5.mp4

**Join us, be part of the
ArduSat Community
and have your own
*Arduino Experiment in Space!***

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