ARLISS 2013

KINGS Result Report

Kyushu Institute of Technology

Space Dynamics Laboratory

Yuma Yanaga, Kei Ushijima, Hiroyuki Konagamitsu

Shohei Yamada, Ammarin Pimnoo, Kaketsu Syu

Nobuhiro Mie, Daikai Zaitsu, Nicolas Windrif

Pierre Bruchet, Zui Tou, Ryuhei Sakamoto, Satoshi Usui

MOTHER EARTH BY WILLIAM A. TARDIMC CARTHY WWW.CRESTOCK.COM

About Team

- The members of this team belongs to the space dynamics laboratory
- Members who came to the ARLISS is all bachelor 4th grade.

About Cansat

- Three-stage deceleration device, streamer , parachute and parafoil
- Parafoil is handmade.

About Chassis

組木
KUMIKI

Wood Combine

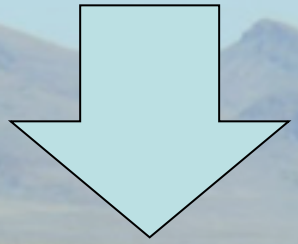
- Our Cansat is made of wood and each parts is combined by tight fit , like japanese traditional construction method , "*KUMIKI*".
- We product chassis by hand. All wood parts is also cut down and shaved by hand.
- *KUMIKI* structure is so strong that our cansat never break…unless otherwise Rocket crashed on ground.

First Throw

Flight time	Unknow
Opening parafoil	Failed
Control record	Failed
Down link	Failed
Recover Cansat	Succeed

First Throw Cause

It was not a state write data to the SD card

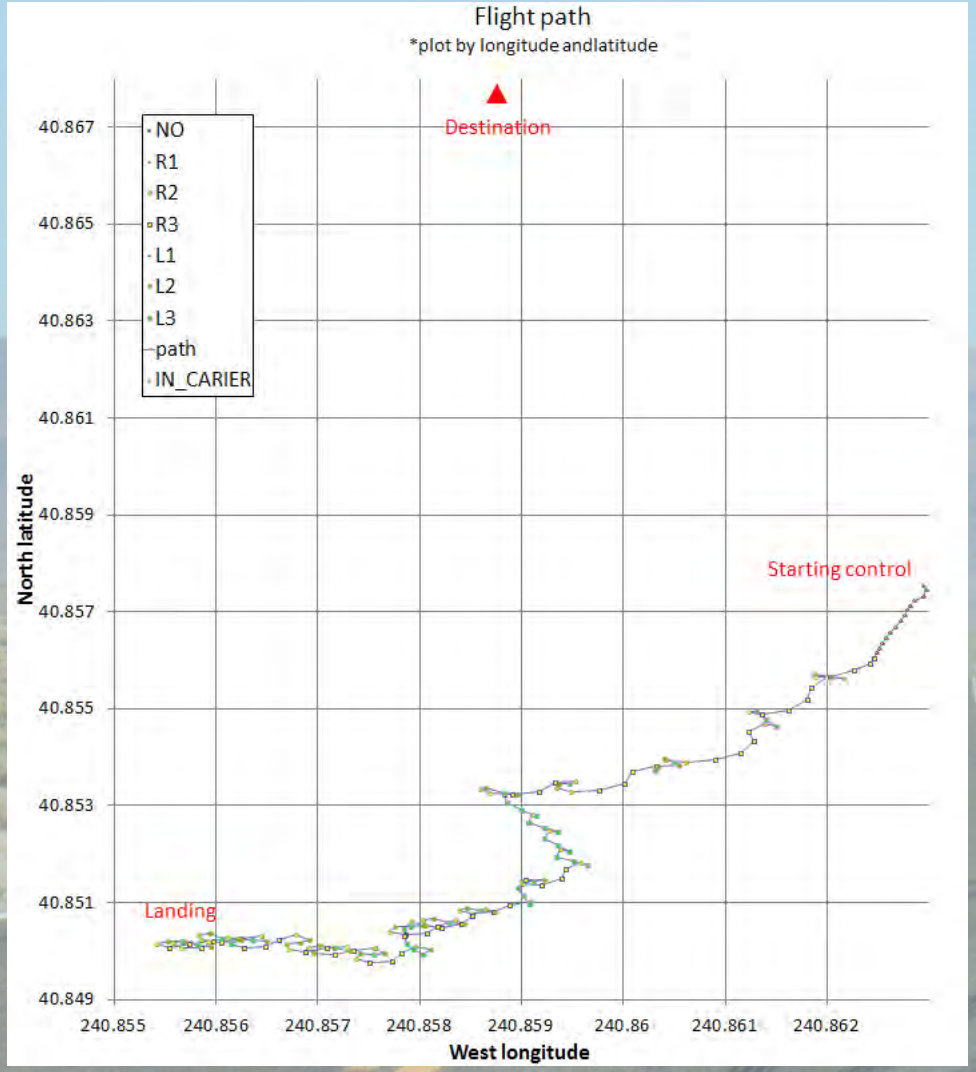


The control program is stopped by the condition persists

Second Throw

Landing point	**1977.936m**
Flight time	**6min**
Opening parafoil	**Succeed**
Control record	**Succeed**
Down link	**Succeed**
Recover Cansat	**Succeed**

Second Throw Trajectory



Third Throw

Conclusion & Future Works

Assessment for Success Criteria

[Full success]
Flyback to the destination less than 200 meters in radius.

…..Failure

[Minimum]
Recover cansat.

…..Success!

Future Works

- The design would be acceptable errors in avionics system.
- Improve aerodynamic performance of parafoil and chassis not to be carried away by wind.

Thank you for kind listening!

Why made by wood ?

Wood is easy to work, to get, light.

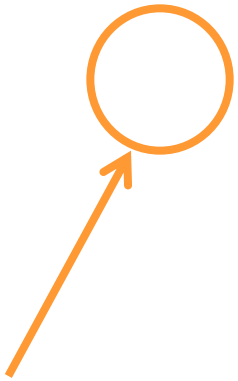
Parts that under high power made from Hinoki that strang. And other parts is made from plywood.

Why choose fly back ?

We want to carry payload without trouble that a cansat fall into ground’s hole and pool.

What's devised?

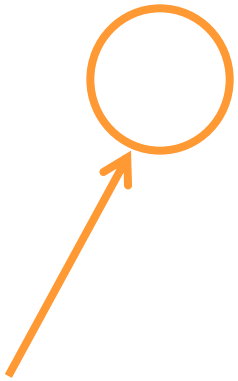
It is possible to determine the state of the sound



Light when GPS switch is turned on

What's devised?

It is possible to determine the state of the sound



Light when GPS switch is turned on