Progress report on Rocket Launching

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since2011

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Abstracts

1.What's "FROM THE EARTH"? 2. The schedule of this year 3.Report of Hybrid Rocket projects 4.Repot of Cansat projects 5.Report of Engine project 6.Report of Social action works



Group photo and our rocket and cansat in this summer

1.What's "FROM THE EARTH"?

Regular activity

- To make and launch model rockets and hybrid rockets
- To develop cansats
- To make engines for hybrid rockets
- To do social action works



Hybrid rocket



Social action work

Member

Total 129	
Junior	28
Sophomore	33
Freshmen and women	68



Freshmen



Launcher

1.What's "FROM THE EARTH"?

Higher records of F.T.E.'s Hybrid Rocket projects and our goals this year.



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2.The schedule of this year





How to launch our rockets

Propellants of the motor



Motors used by amateur rocket groups











Goals

- To reach 1500 m
- To recover without any damage
- To republish essential way to make rocket

Detail	
Length	1.9 m
Weight	5.2 kg
Motor	HyperTEK K-240



Overview

No Launched
Izuoshima Island
no data

We couldn't launched the rocket by ourselves because of 3 factors.

- strong wind
- \cdot GSE trouble
- avinonics

So,we couldn't collect enough data.





Goals

- To take photos by three cameras
 - To get enough data





Overview

Results	
Launched date	2018/8/18
Place	Noshiro
Height	173.98 m

We launched the rocket by ourselves However, the parachute was not released.

We couldn't collect enough data.

And, we get only one camera data.

But we can simulate very similary height 174 m

(Autually our rocket reached 173.98 maybe)







Goals

- To reach 1.1 km
- To get much flight data





Overview

Results	
Launched date	2018/8/21
Place	Noshiro
Height	704 m

We launched the rocket by ourselves.

But its parachute was not released and fell on the sea. However we can get its flight data.



Lifting off

4.Report of CanSat projects

What is CanSat?





4.Report of CanSat project

Project	Goal	Result	Overview
Runback	To reach to a destination	Damage on one side of the tire because of landing shock	
Misson	To walk by its legs To carry objects by two CanSat	Damage on one side of the tire because of landing shock	



Design

- Chemical equilibrium calculation software(NASA-CEA)
- \cdot Structure design(, intensity analysis and thermal design etc.)

Production

 Processing at Innovation plaza, school of engineering, Tohoku University

• To get thrust, pressure, combustion, temperature



5.Report of Engine project

Our theme



- To understand the way to use parameters and numerical formula for design
- To understand how it works

Discussion

- To leverage the combustion experiment
- To calculate stress for construction

Develop our engine

- To be careful for safety
- To avoid getting injured

6.Report of social action works

We held 8 events in this year.

month	event	place
October	Rocket school	kesennnuma
November	Pet bottles rocket school	Tohoku University
November	Science school	Tachimachi
April	Science school	Tachimachi
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Thanks for your listening

2018/12/13

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