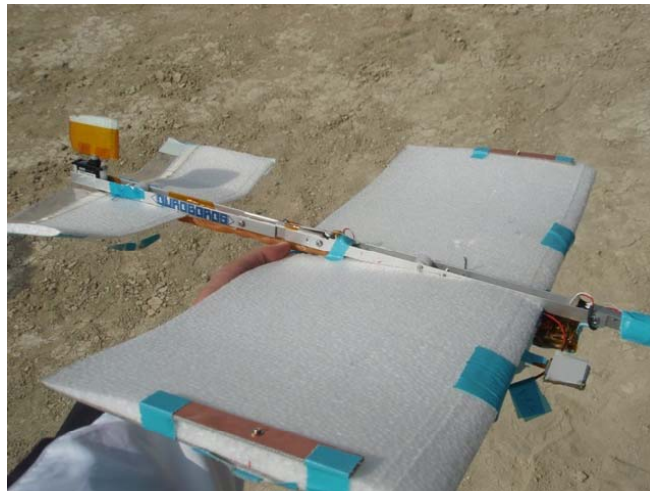

ARLISS2008

Tokyo tech Matunaga Lab A



Inagawa, Kawakubo, Kuga, Miura,
Akiyama, Kisa,(Mizunuma)

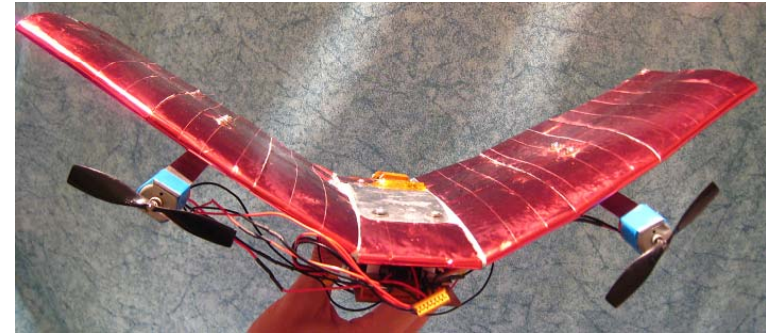
Mission

Mission “Fly-back by fixed-wing”

ARLISS 2007

PHOENIX

Tailless wing plane type
Propeller thrust control



ARLISS 2008

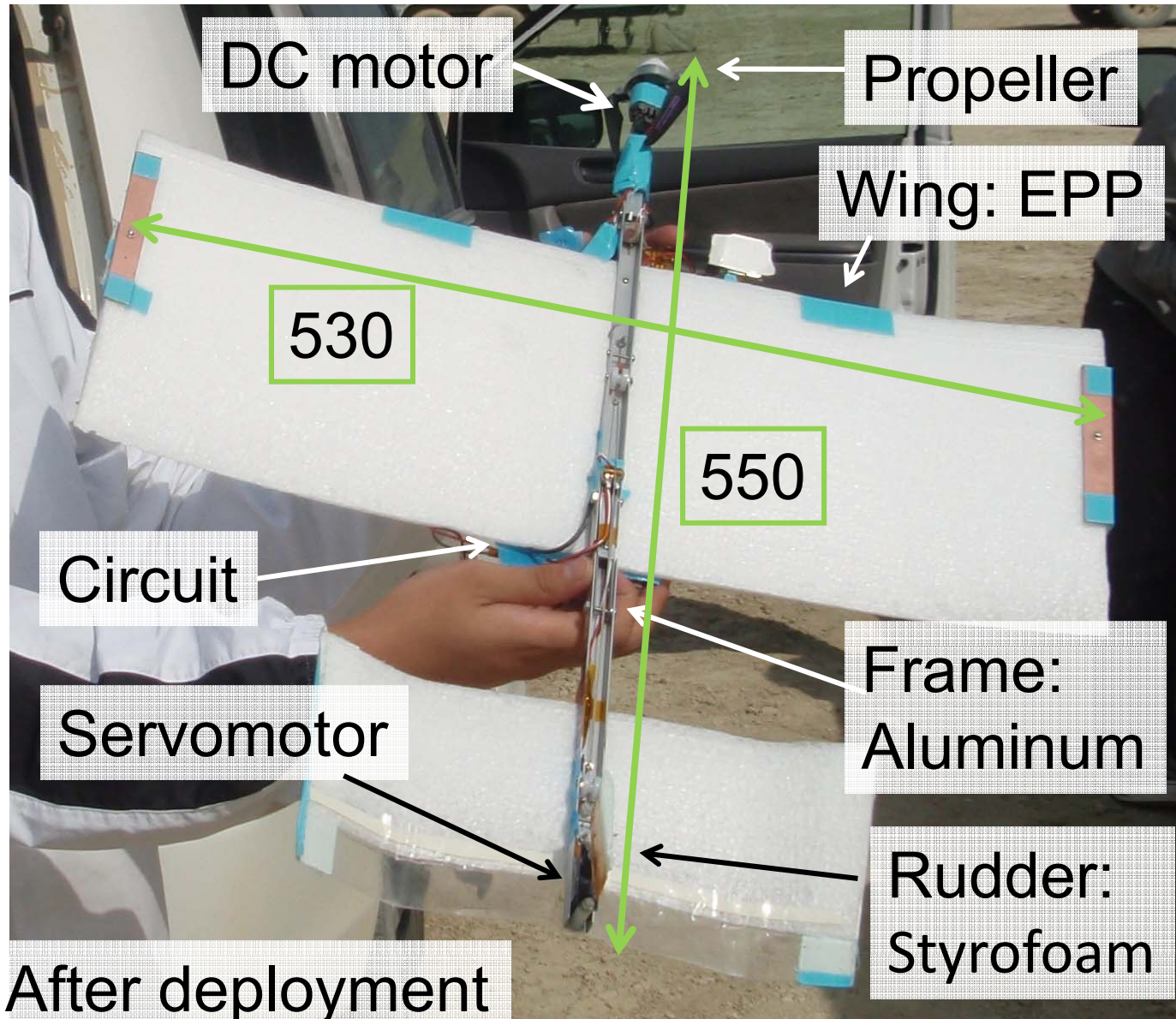
QUAROBOROS

Plane type
Tail wing control
Expanding wing area
Trimming weight (500g→400g)



QUAROBOROS

Structure

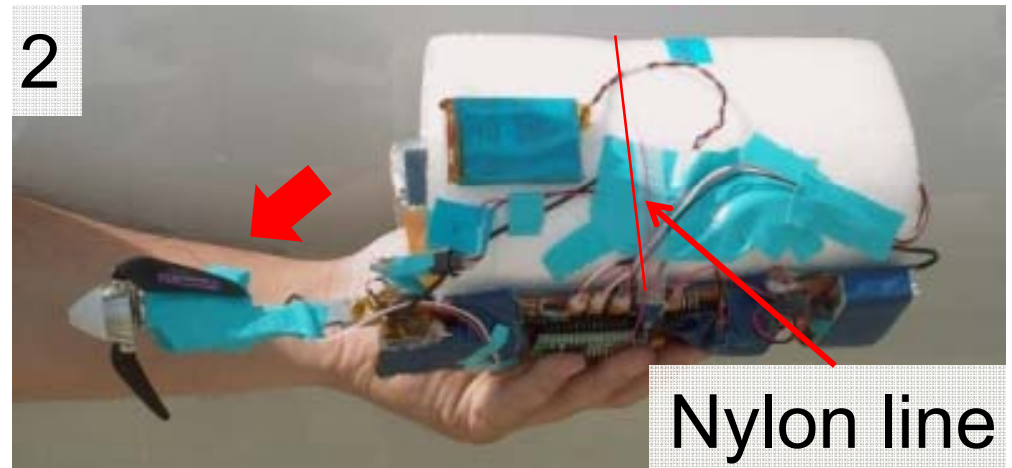
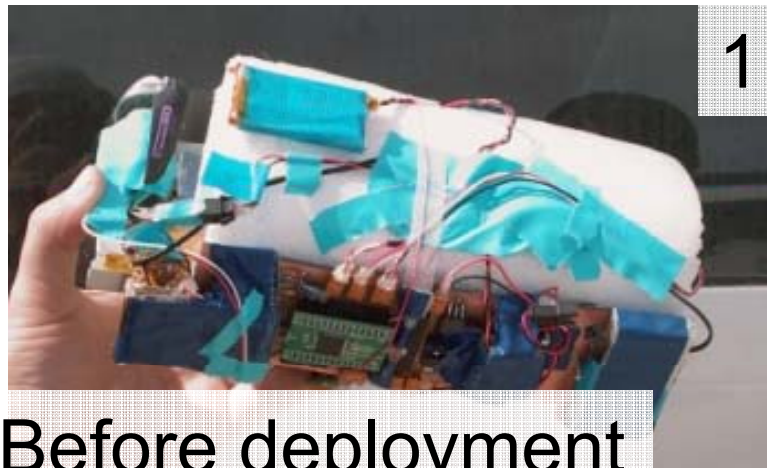


Weight:
400g

DUROBOROS



Deploy method

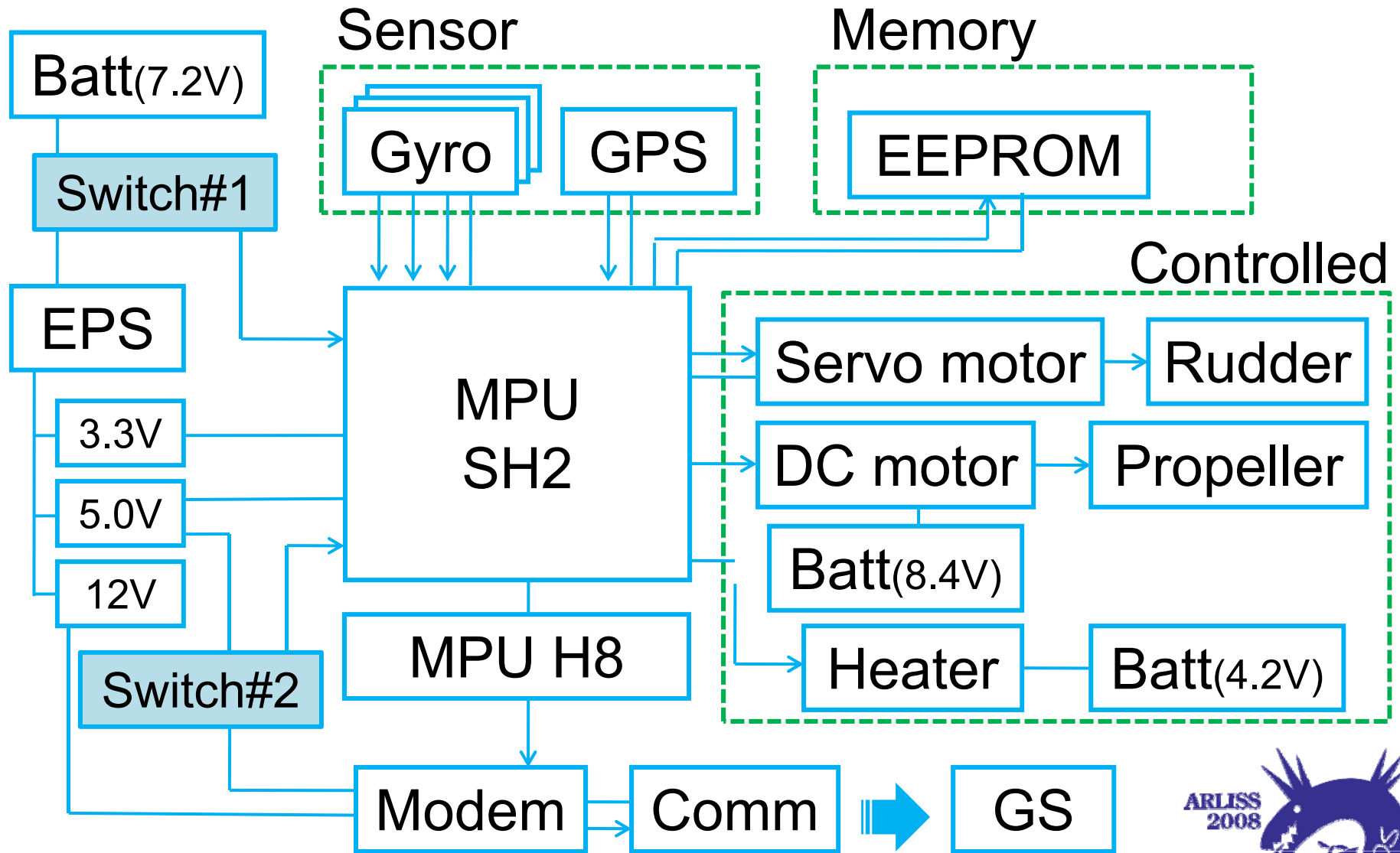


5sec

DUROBOROS



System



QUAROBOROS



1st experiment



Resistance color

Windless
Cloudless
-Best weather

Grant's rocket – Thank you!!!

DUROBOROS

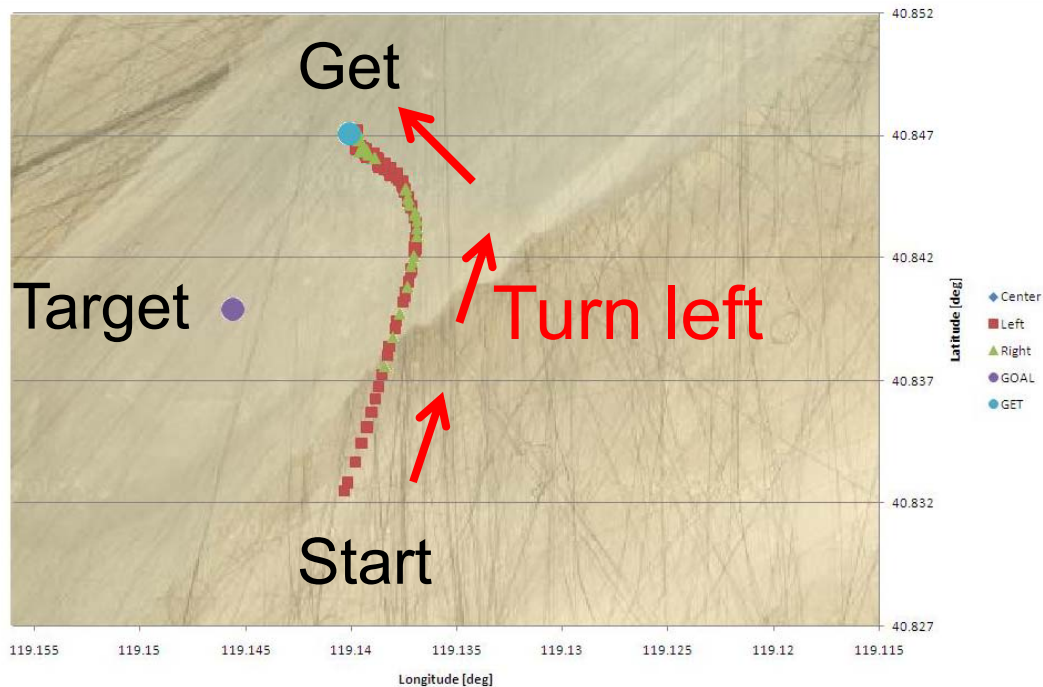


1st experiment result

903m from target point

All system worked well

CanSat turned left according to control system



Found CanSat

Flight Log



2nd experiment



Strong wind!!
-Bad weather

Erik, Thank you!!!



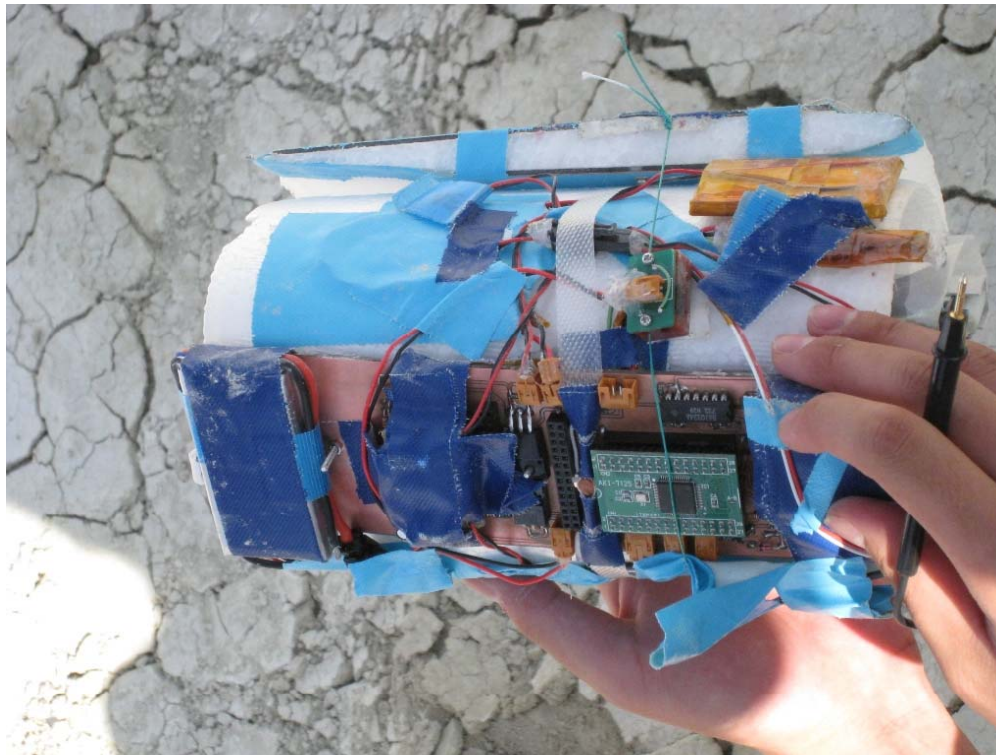
2nd experiment result

Battery harnesses was broken

All system didn't work

CanSat free-fall at 163m from target point

- Erik's rocket is wonderful performance!!



DUROBOROS



Project result

set the aim as follows

Minimum success level

○ **Get the flying data from EEPROM**

- In the 1st experiment, we get flight log

△ Deploy wings and glide

Middle success level

○ **Control tail wing according to GPS data**

× Communication by SRLP protocol

Full success level

× Land within 200m from target point

- In the 2nd experiment,

163m(free-fall)



Thank you !!!

