

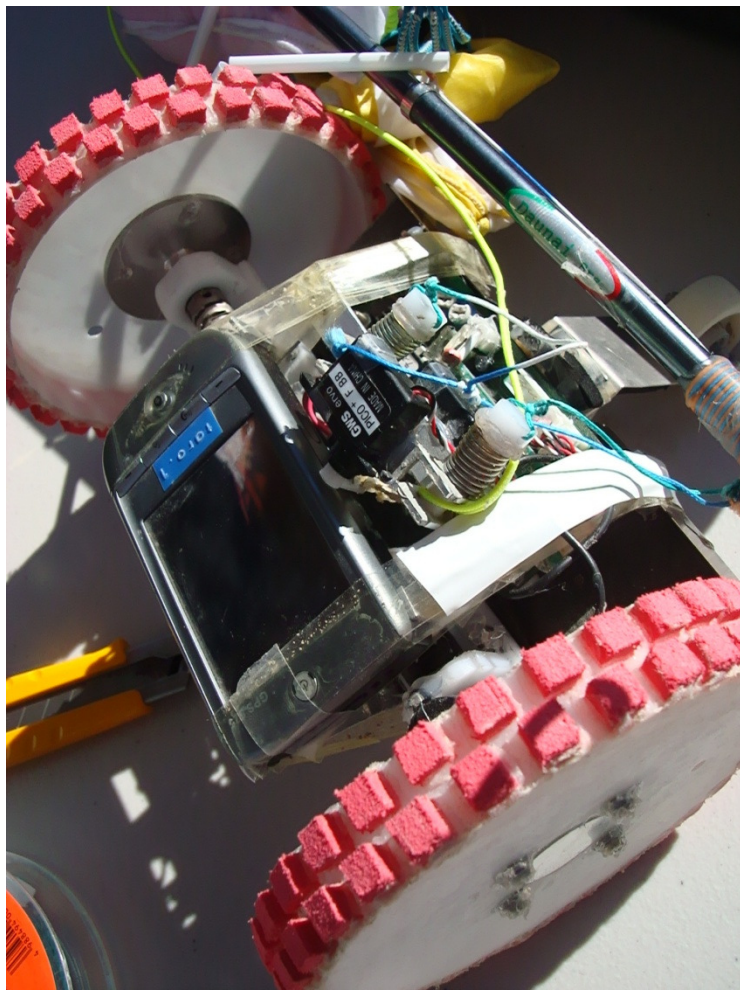
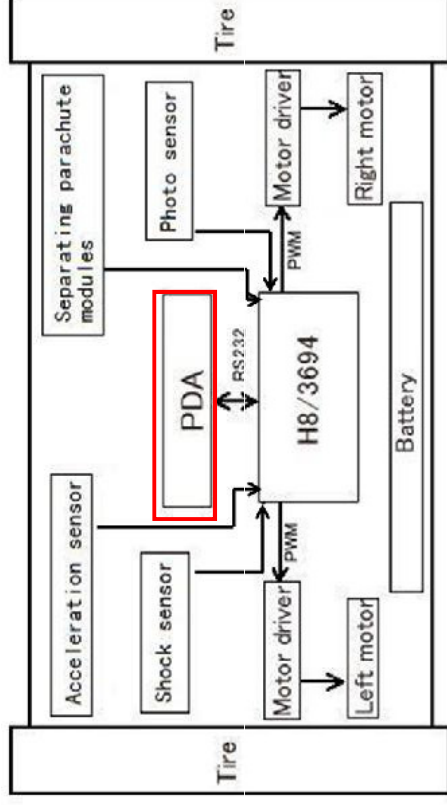
ARLISS2009



Univ. of Electro-Communications
TAKADAMA Lab.

Our rover

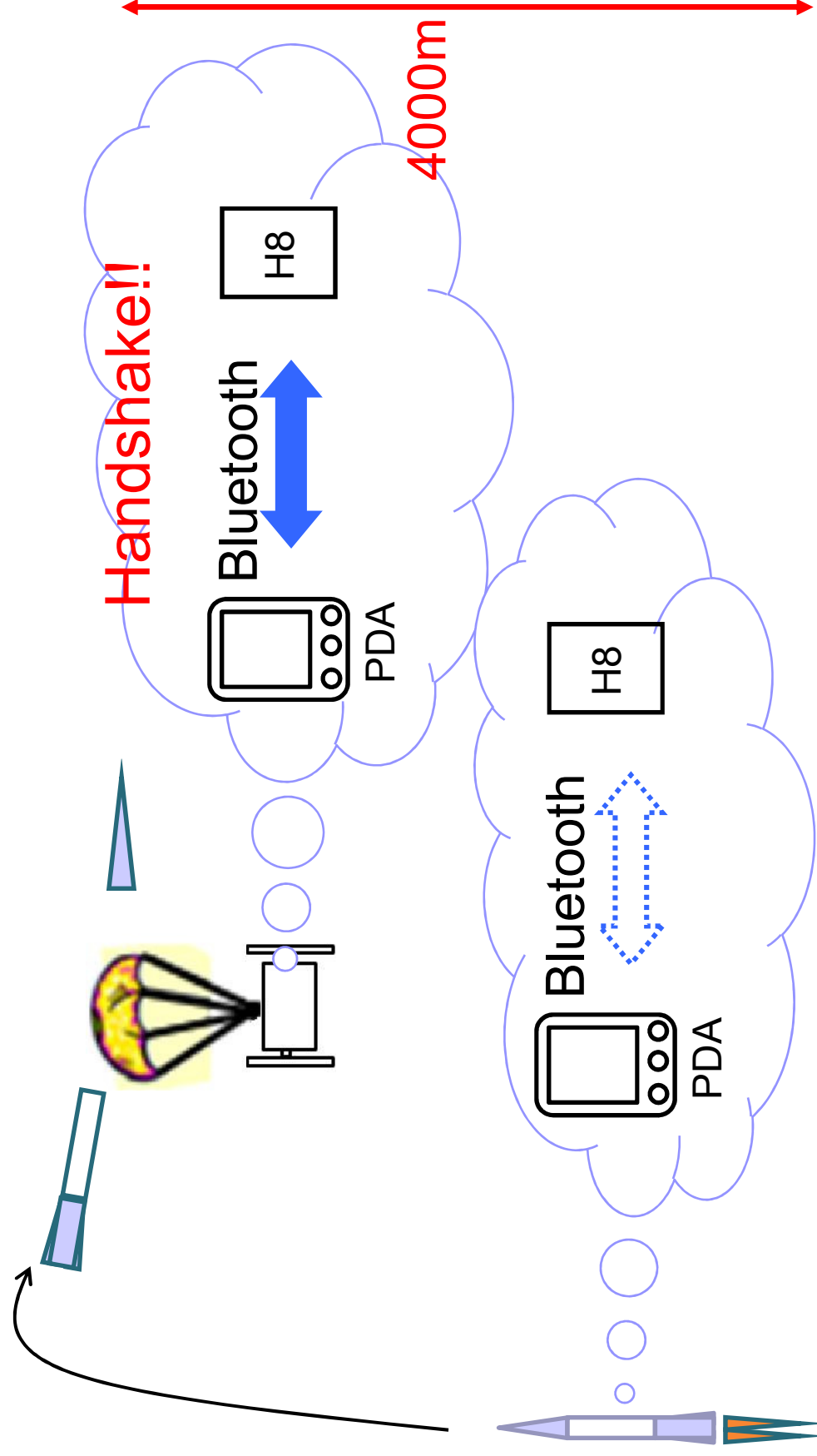
- PDA based rover



Intelligent Control !!

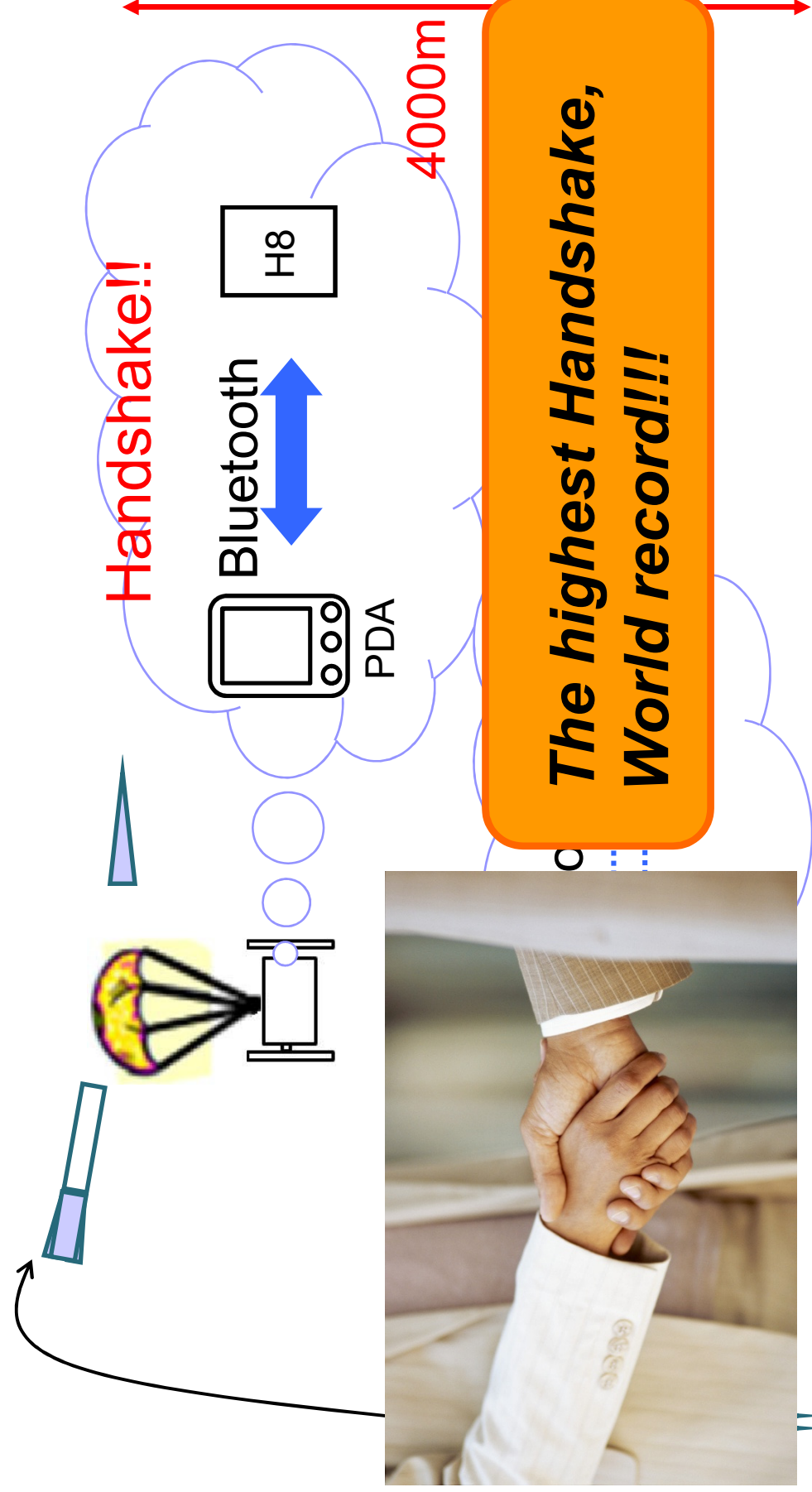
Mission of Our Rover

1. Handshake via Bluetooth Connection



Mission of Our Rover

1. Handshake via Bluetooth Connection



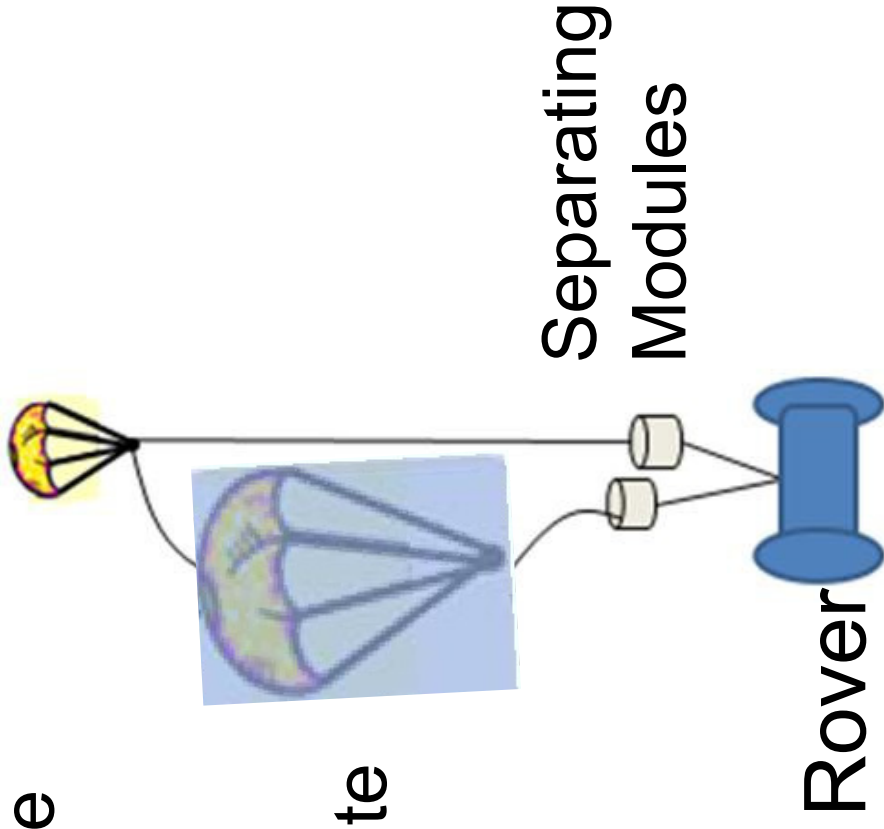
Mission of Our Rover

2. Two stages parachute

- Landing distance control: Toward near goal point

1st: Small parachute
falling speed: 10 m/s

2nd: Main (big) parachute
falling speed: 2.9 m/s



1st Launch

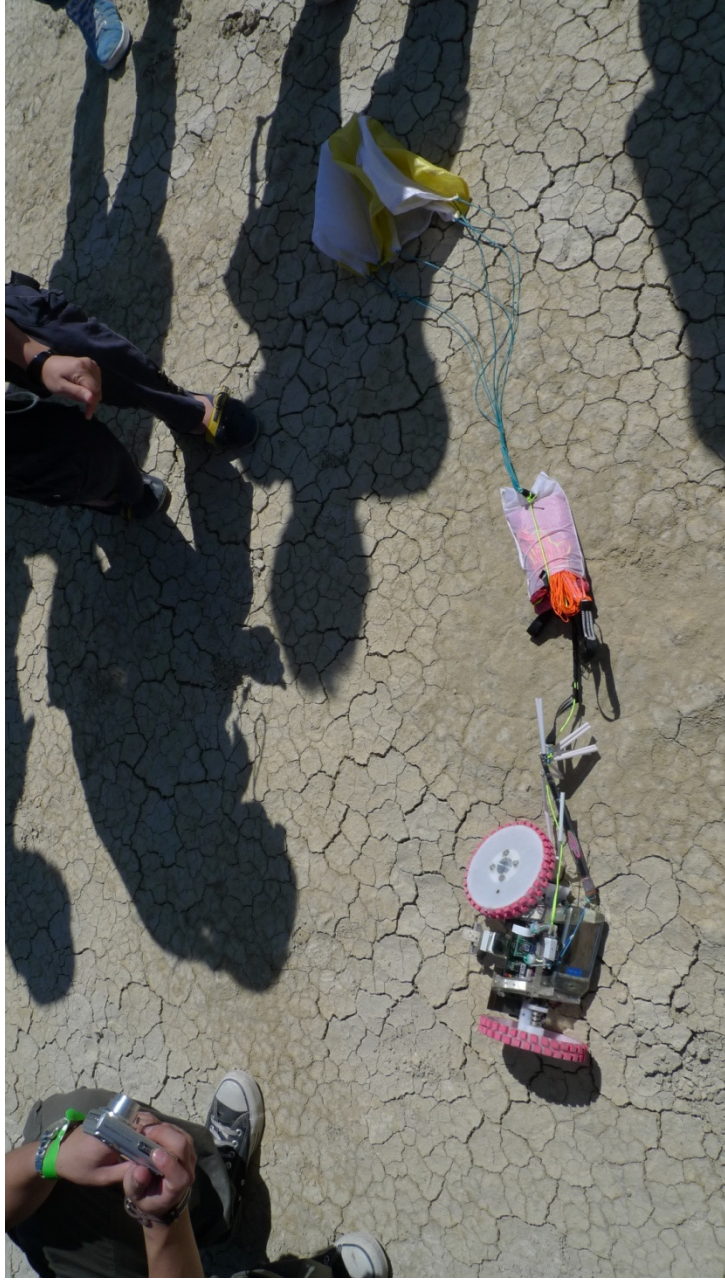
- Jonathan's rocket carried up our rover!

Thank you Jonathan !!!



1st Launch Result

- Communication via Bluetooth: **success**
- Two stages parachute control: **mostly success**
- Sensor external board becomes unconnected



2nd Launch

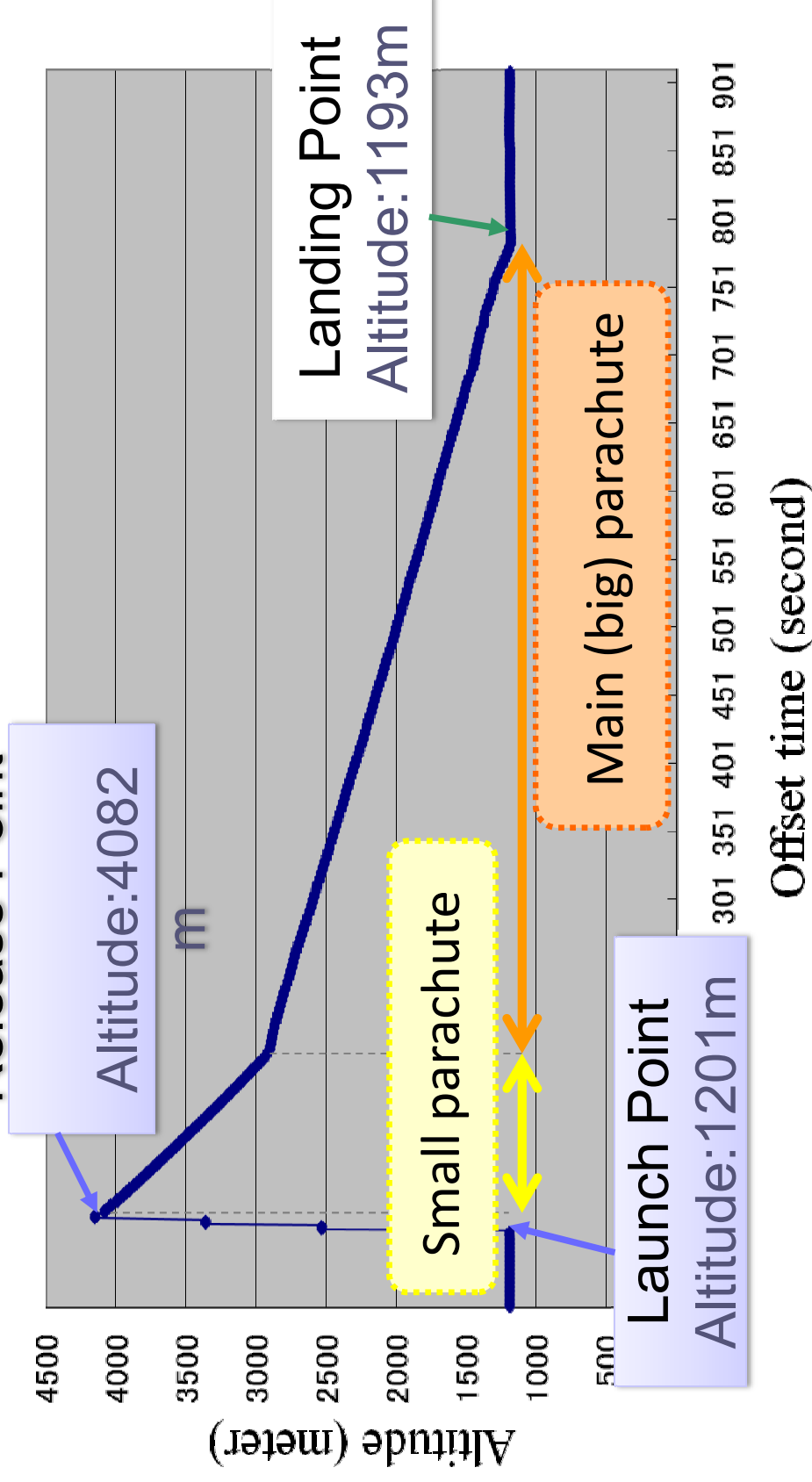
- Charlie's rocket carried up our rover!

Thank you Charlie !!!



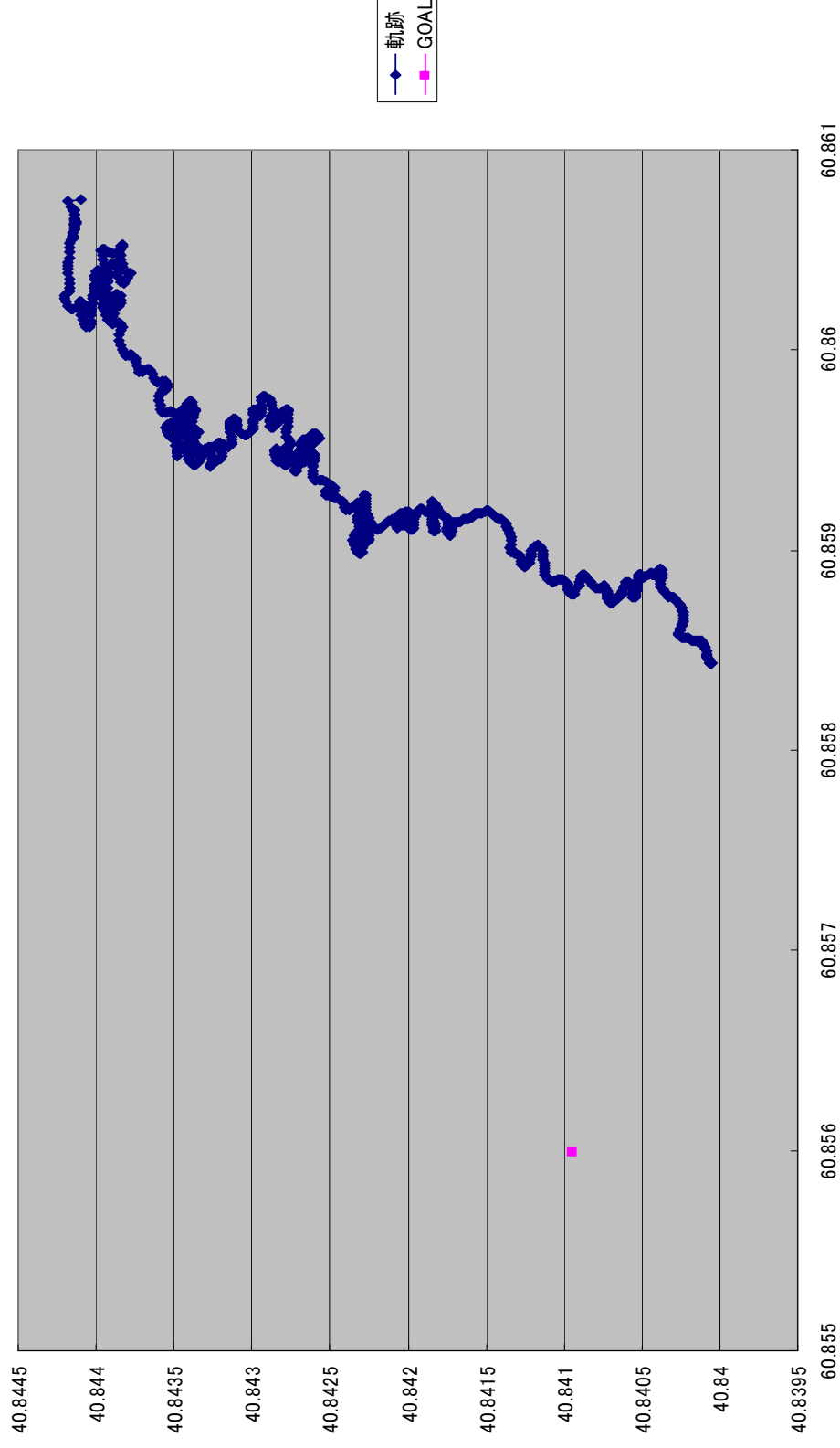
2nd Launch Result

- Communication via Bluetooth: **success**
- Two stages parachute control: **success**



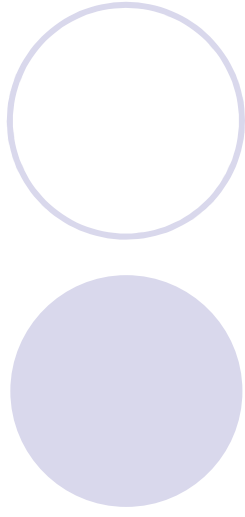
Extra experiment

● Navigation to the goal

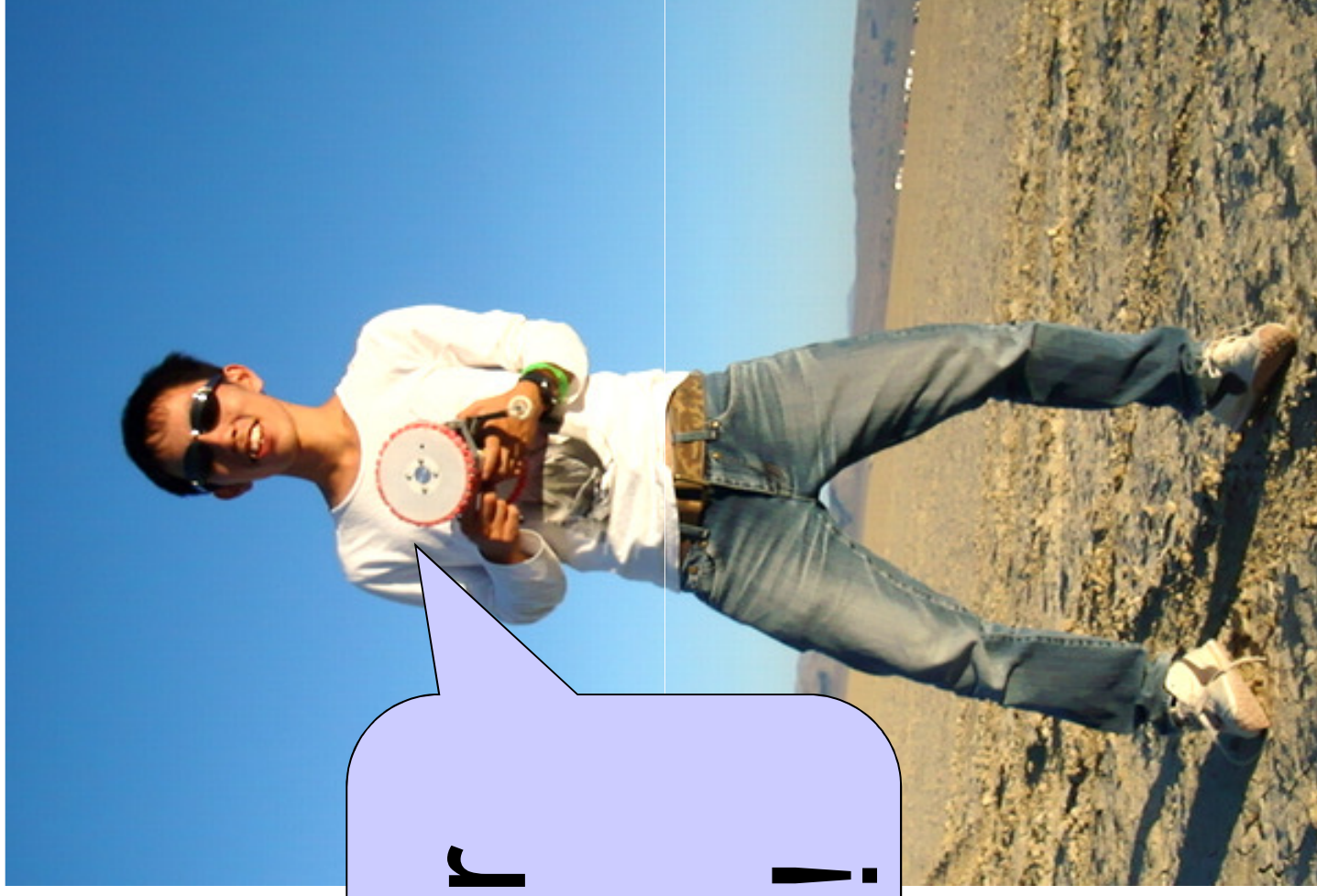


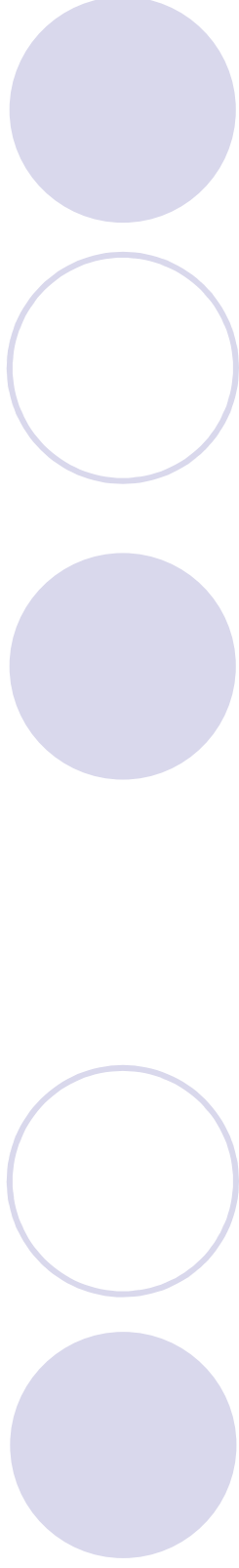
**Thank you for
all ARLISS staffs and Aero-pack members!!**





Thanks for
your kind
attentions!





Appendix

Our rover

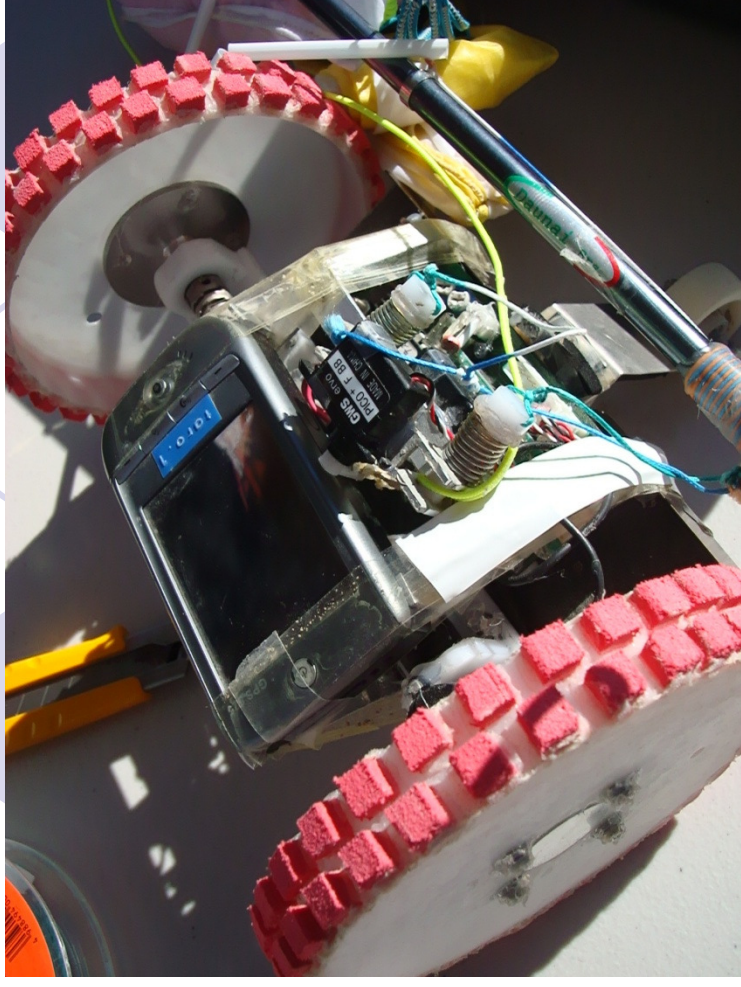
- PDA based rover

- Past results

- 2006: No control

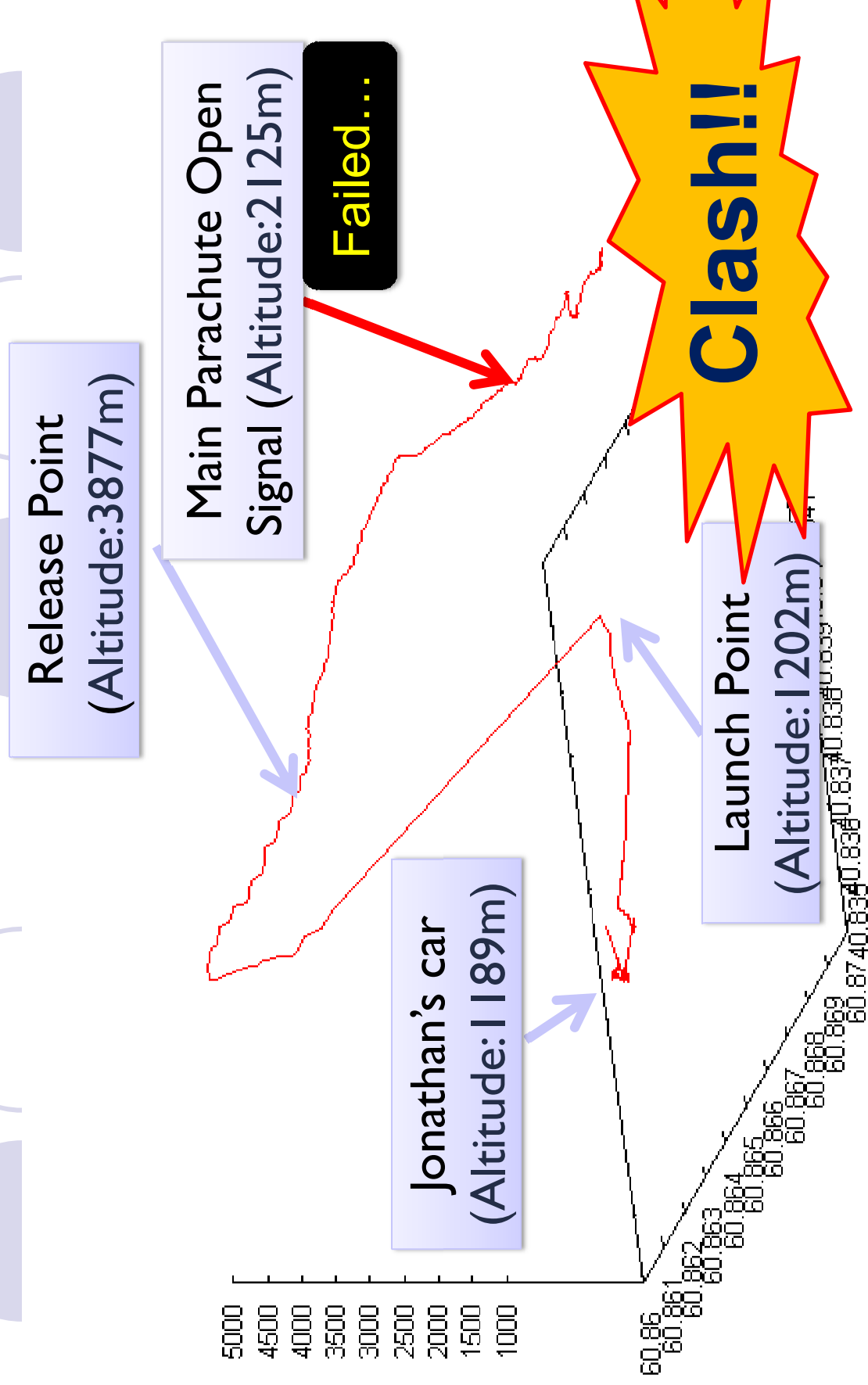
- 2007: No control

- 2008: Stucked after 0.45 mile Navigation



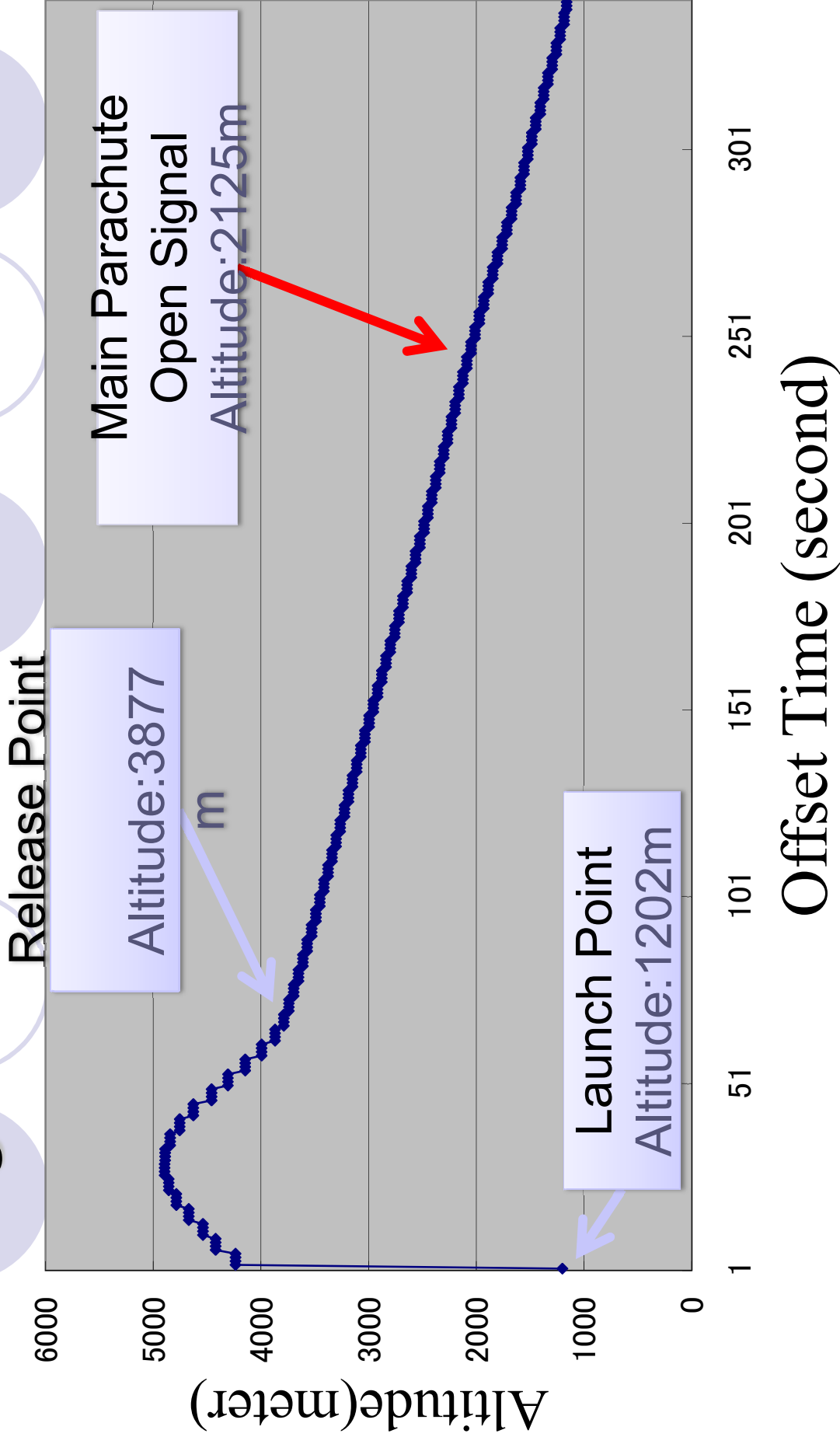
The 4th challenge!!

1st Launch Result

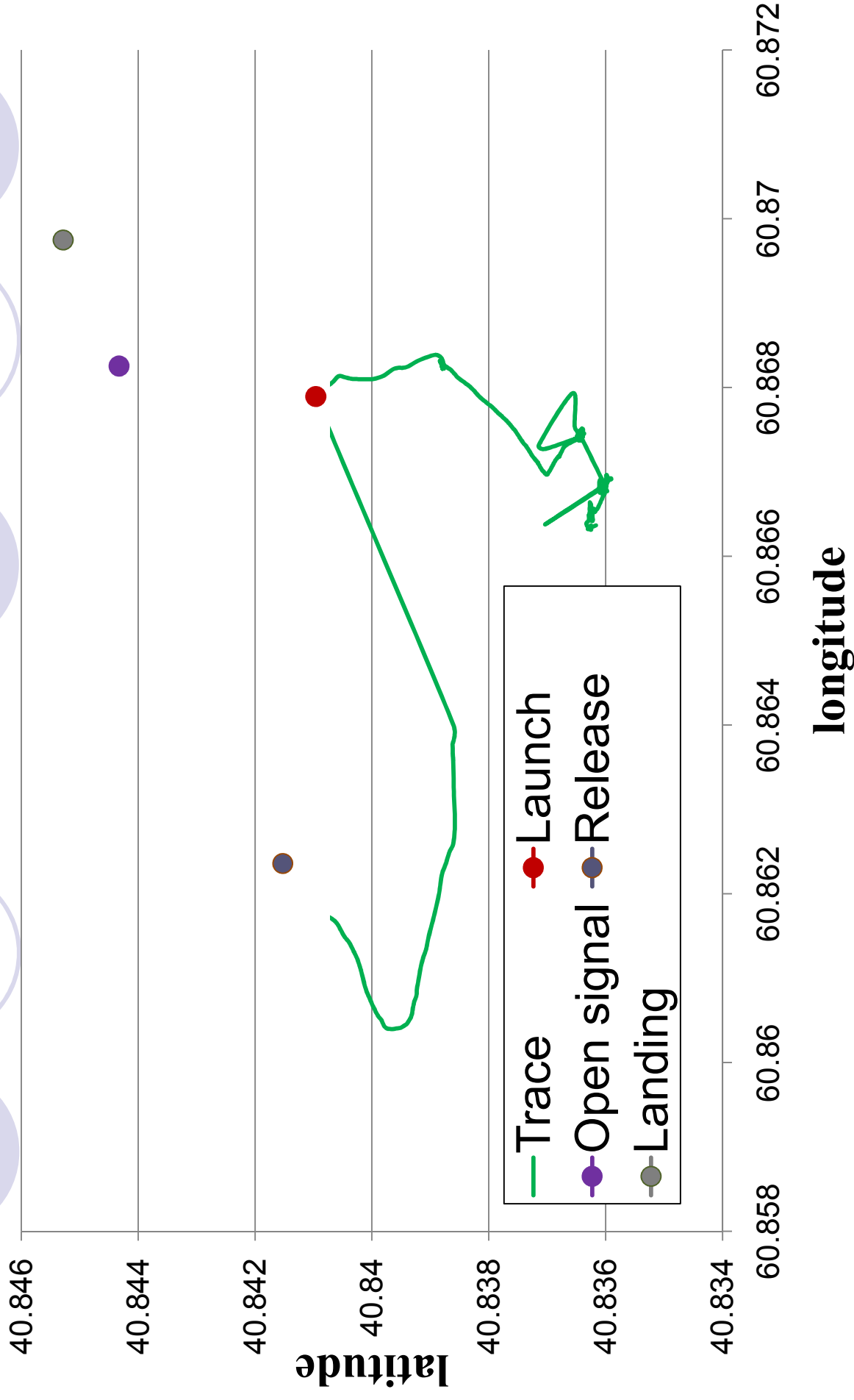


view: 61.0000, 64.0000 scale: 1.00000, 1.00000

1st Flight Result: Altitude



1st Flight Result: Position



Our missions

① Two stages parachute

- Aim at landing near goal point

② Provision for track

- Automatically setting motor ratio parameter
- Detecting tracks by using acceleration sensor

