

CLTP 7

Report

Summary and Final results

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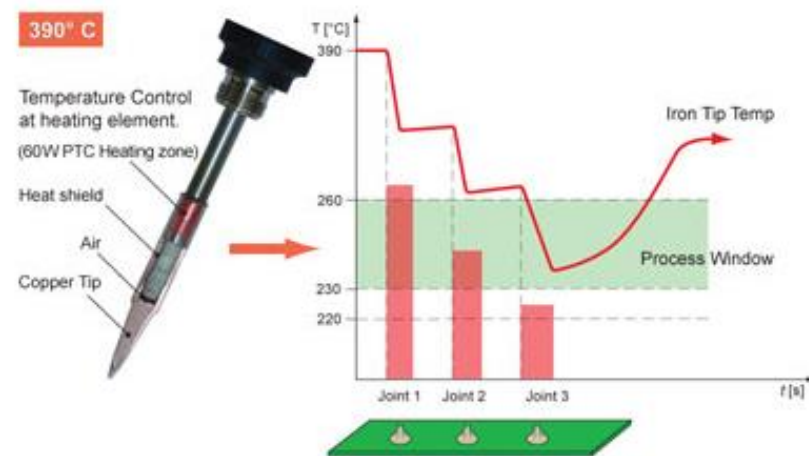
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CLTP 7

Content

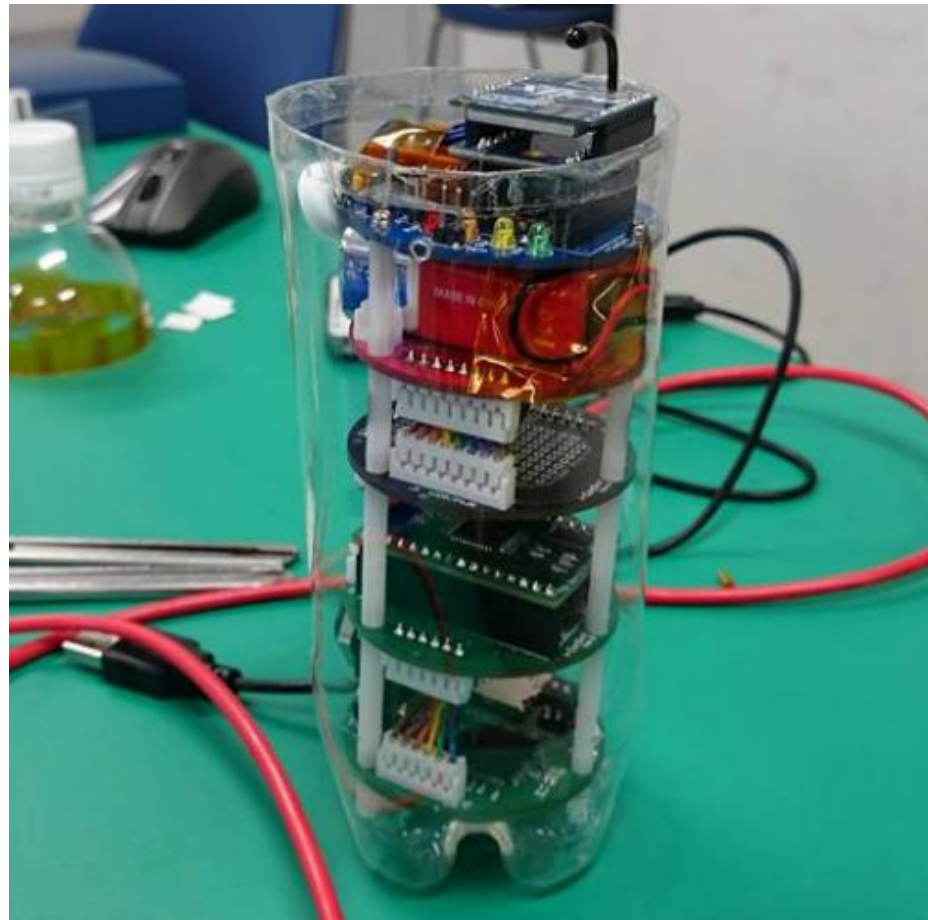
1. Soldering and assembly of the i-cansat kit.
2. Designing the cansat structure
3. Parachute an desinging and deployment test
4. Vibration and thermal tests
5. Programming-software
6. Rocket assembly and launch
7. Telemetry Results
8. Acknowledgments

1. Soldering and assembly of the i-cansat kit.



Every solder joint is colder than the one before.

2. i-Cansat Structure designing.

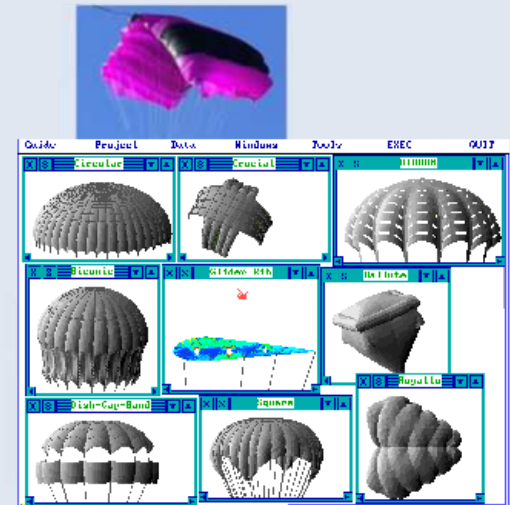
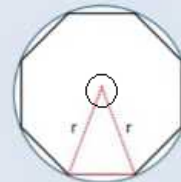


3. Parachute and deployment test and desiging



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- Area of the parachute
- Shape of the parachute
 - hemispherical
 - cross
 - hexagonal
 - plane
- Lowering speed

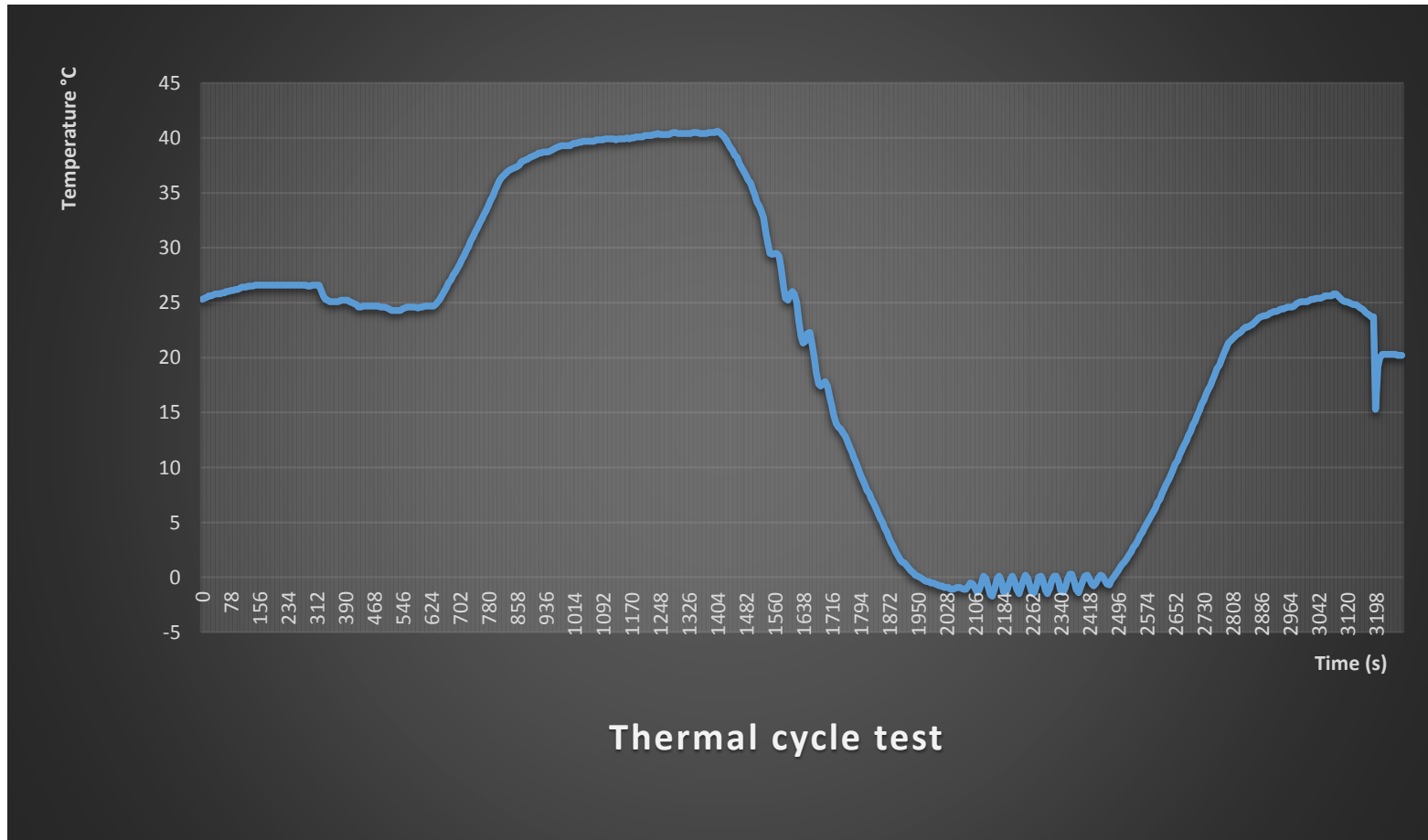




4. Vibration and thermal test



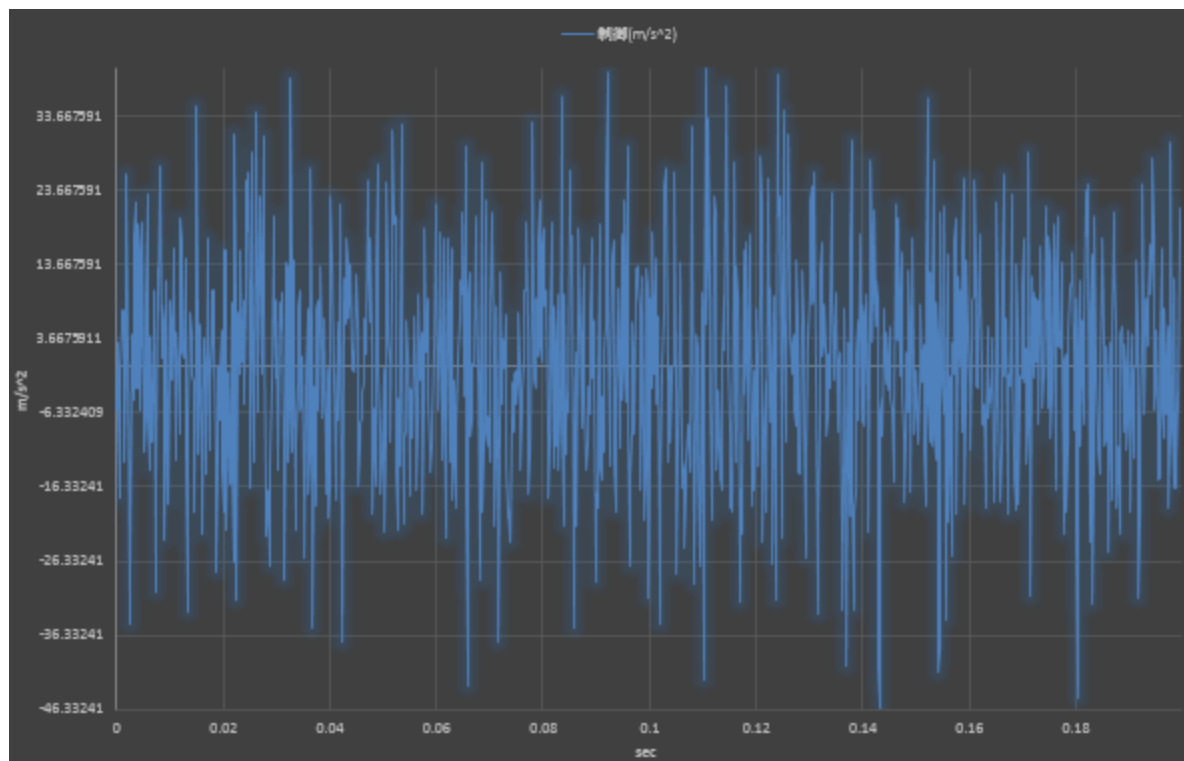
Thermal Test



Vibration Test

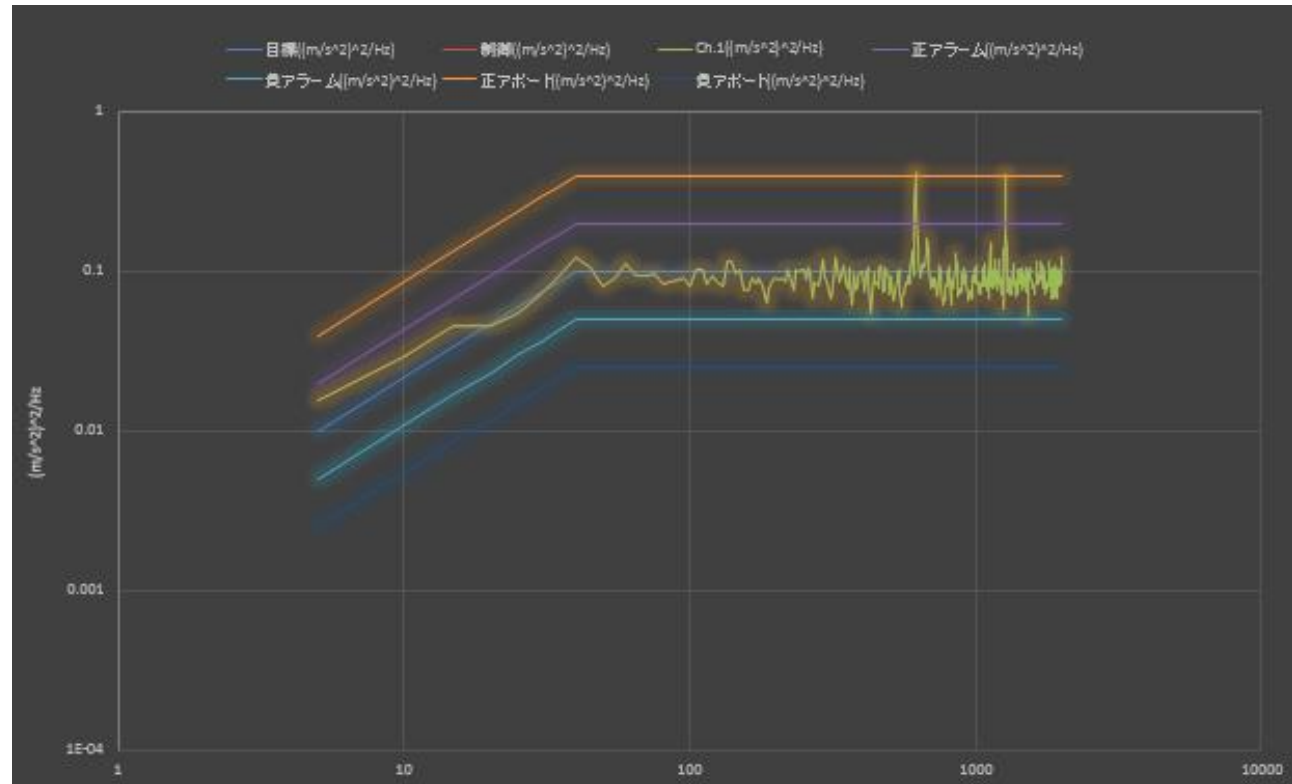
Random oscilation test

Acceleration



PSD

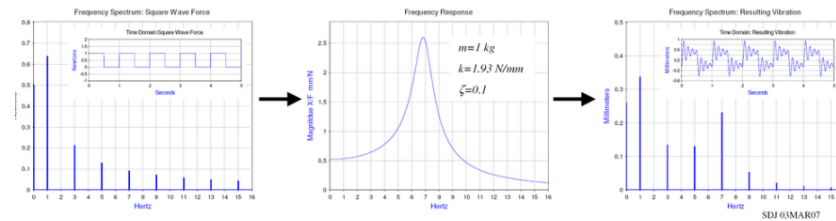
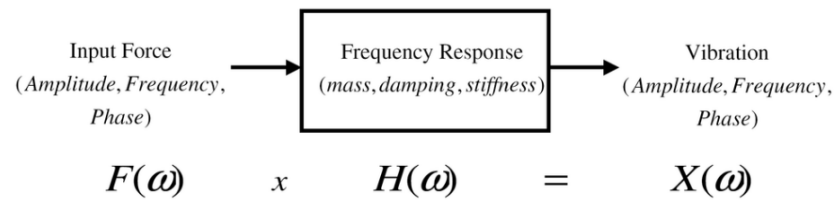
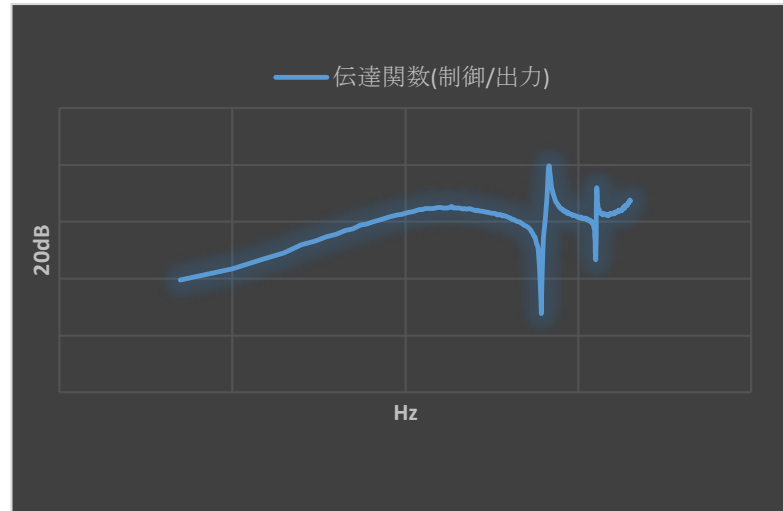
Power spectral densities (PSD) are used to characterize random vibration signals.



Transfer function

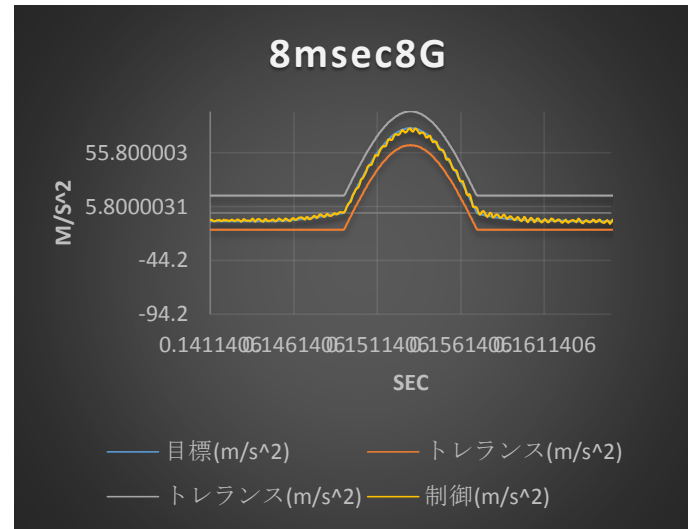
Called the frequency response function.

Force is the input and the output is the vibration.



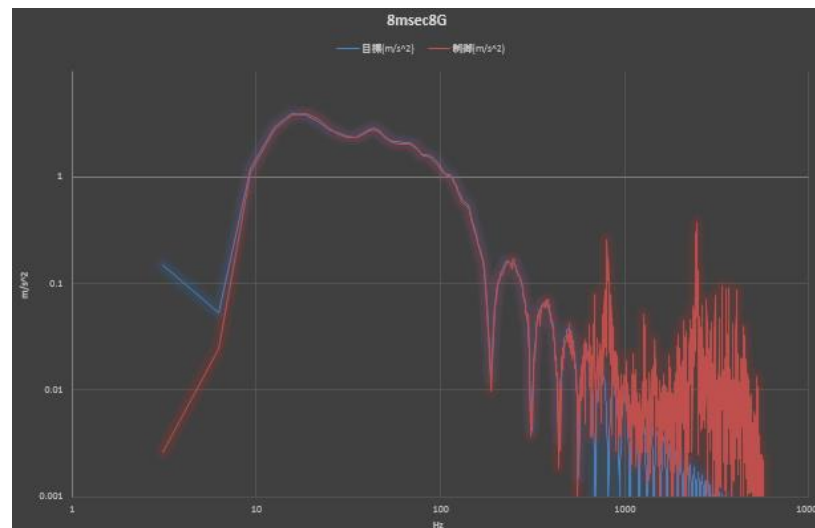
Shock test

Acceleration

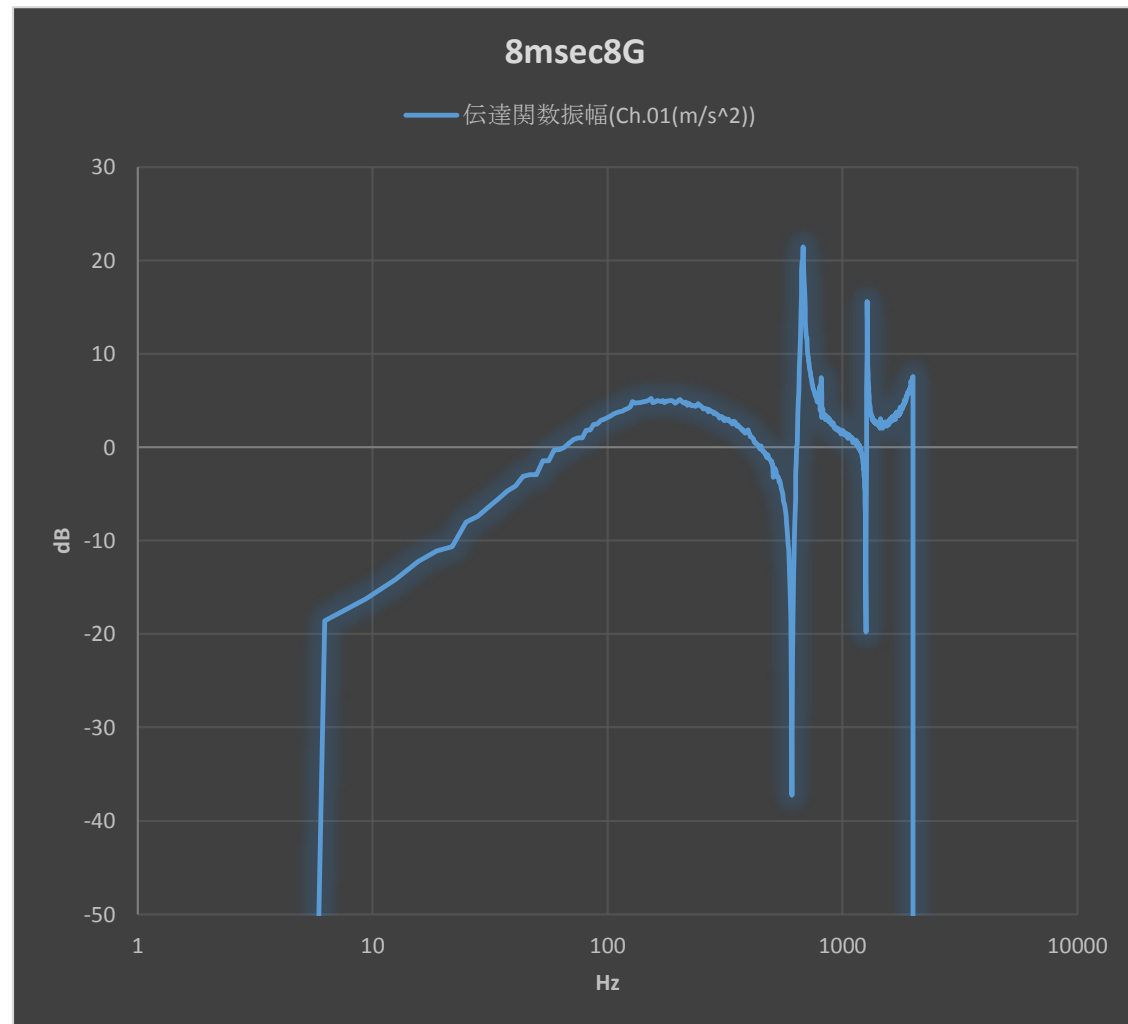


FFT

Is a discrete Fourier transform algorithm which reduces the number of computations needed for N points

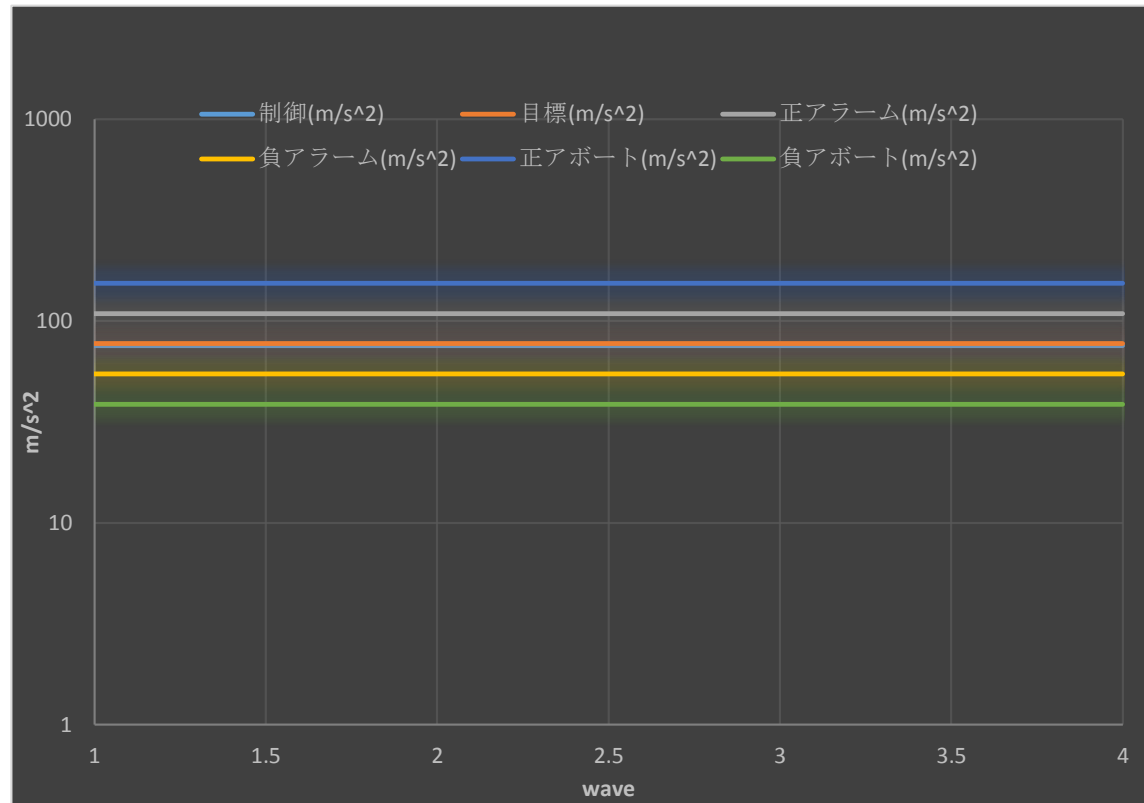


Transfer
function

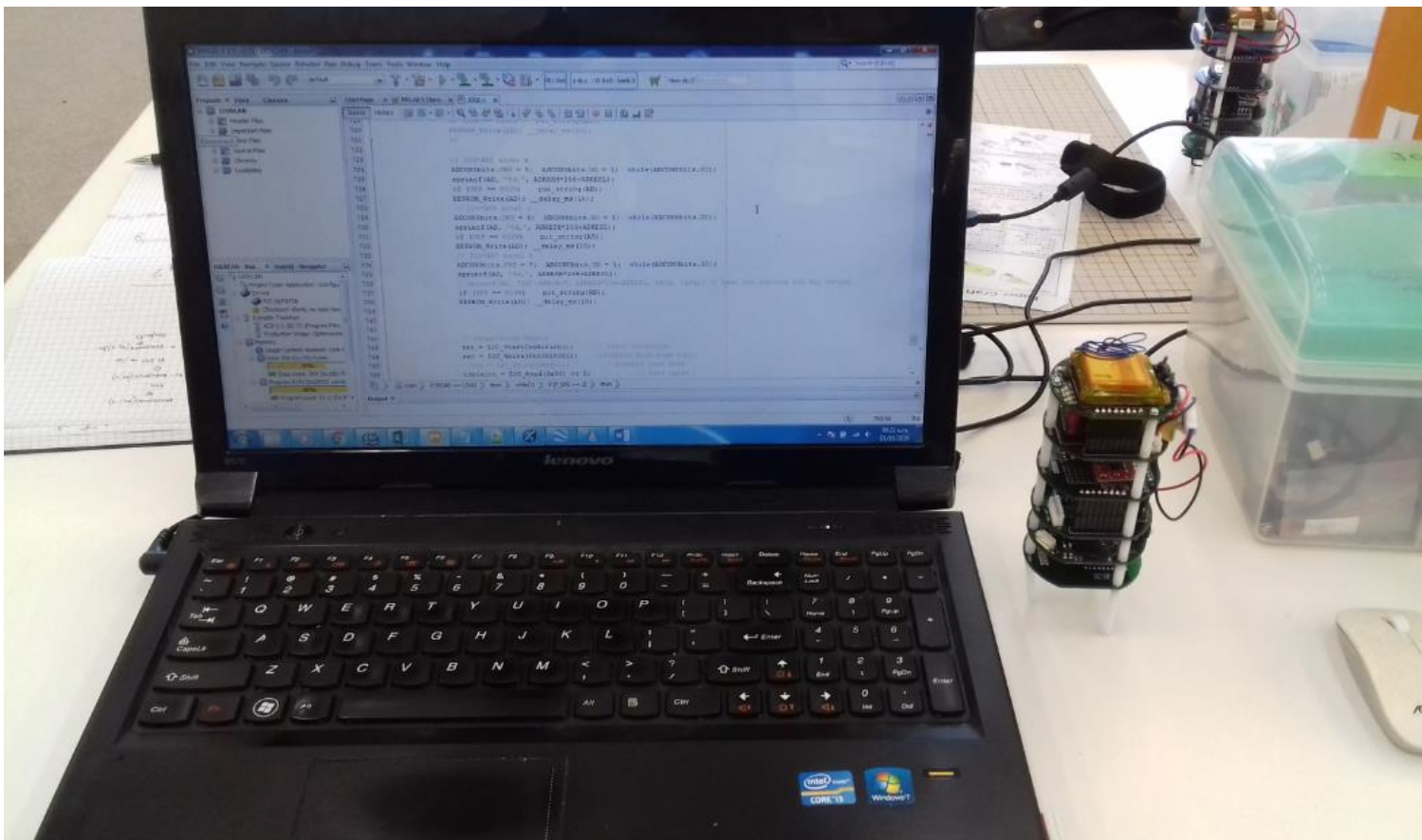


Sine test

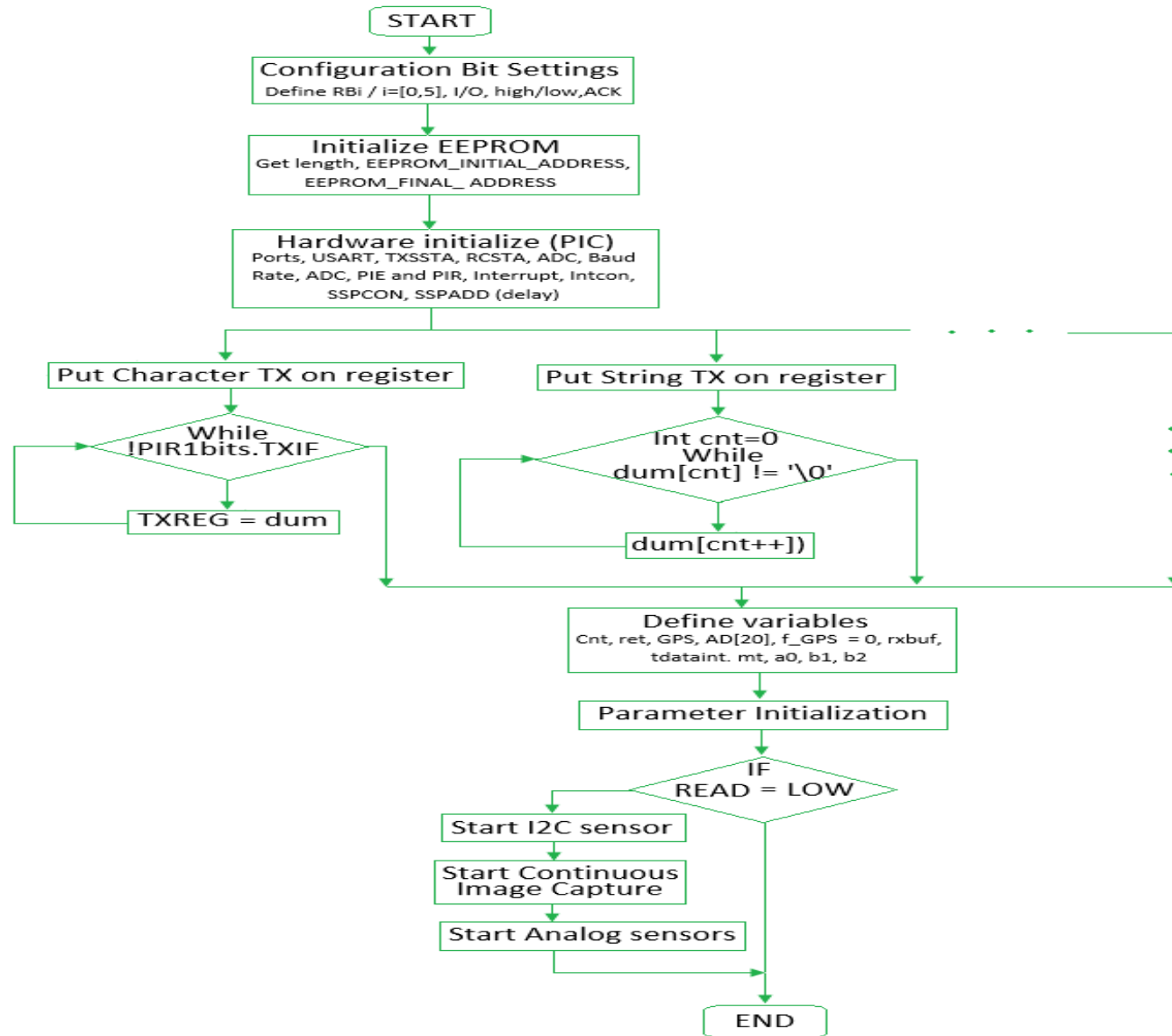
Acceleration



5. Programming i-CanSat



Flow diagram

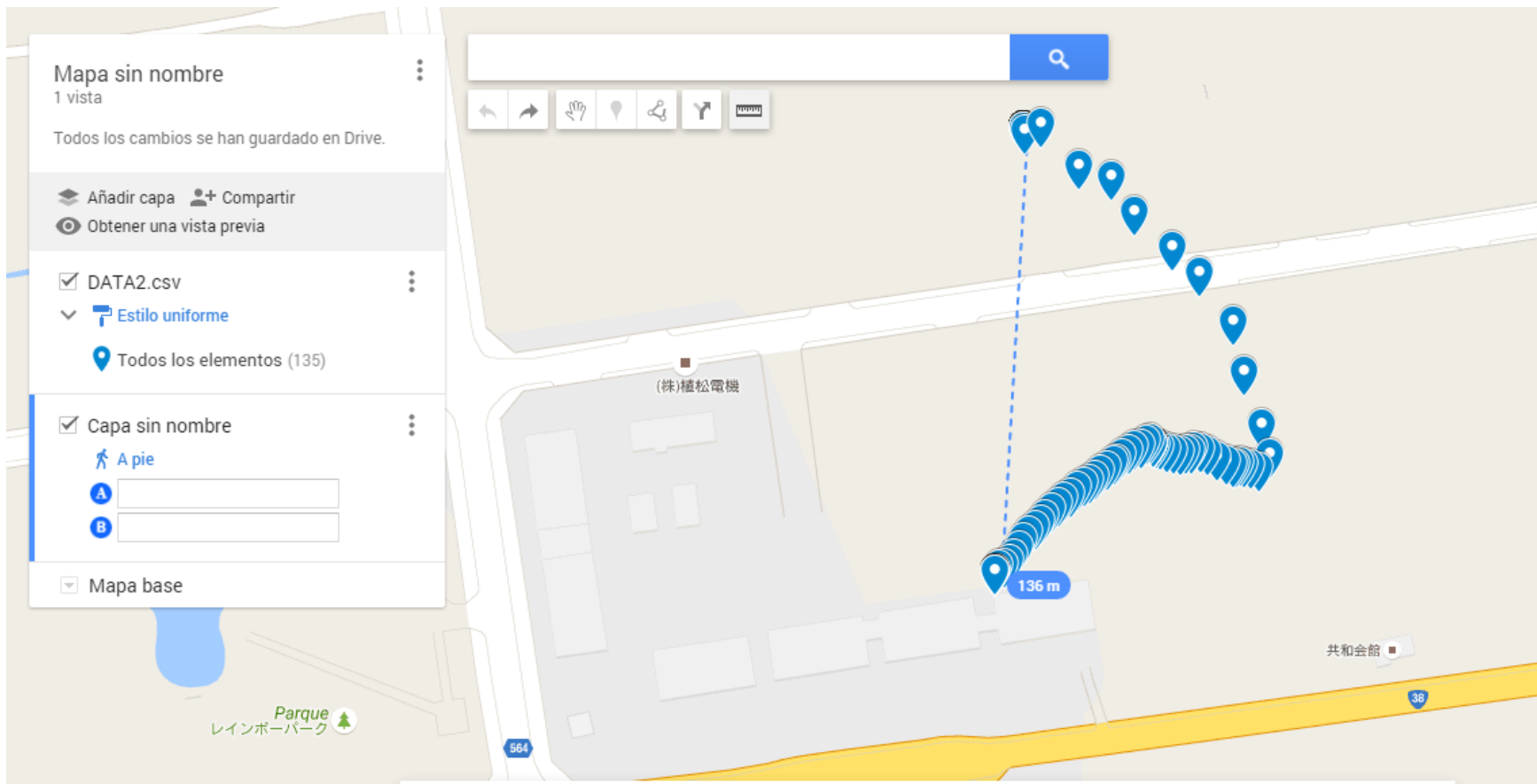


6. Paper rocket assembly and launch

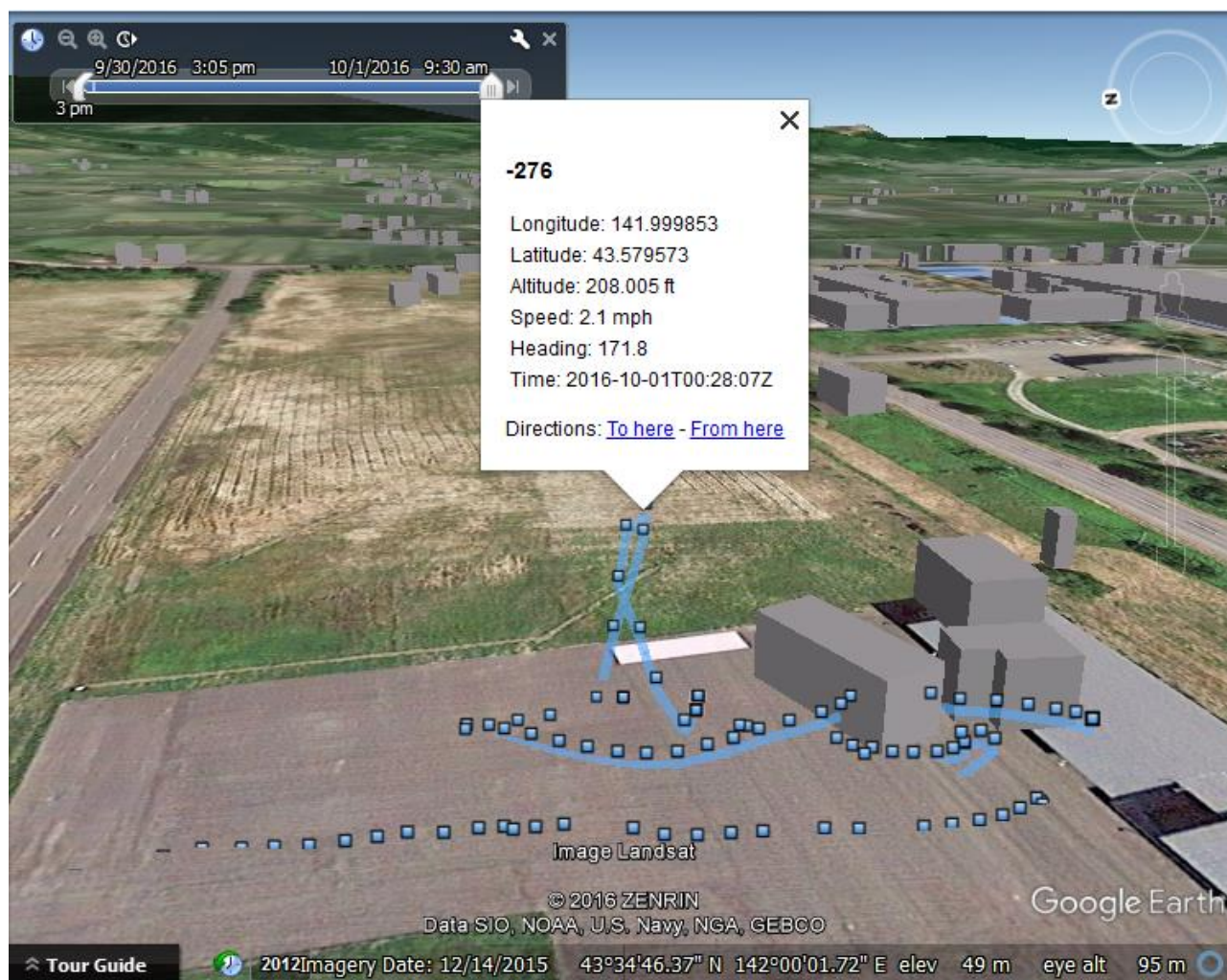


7. Telemetry Results

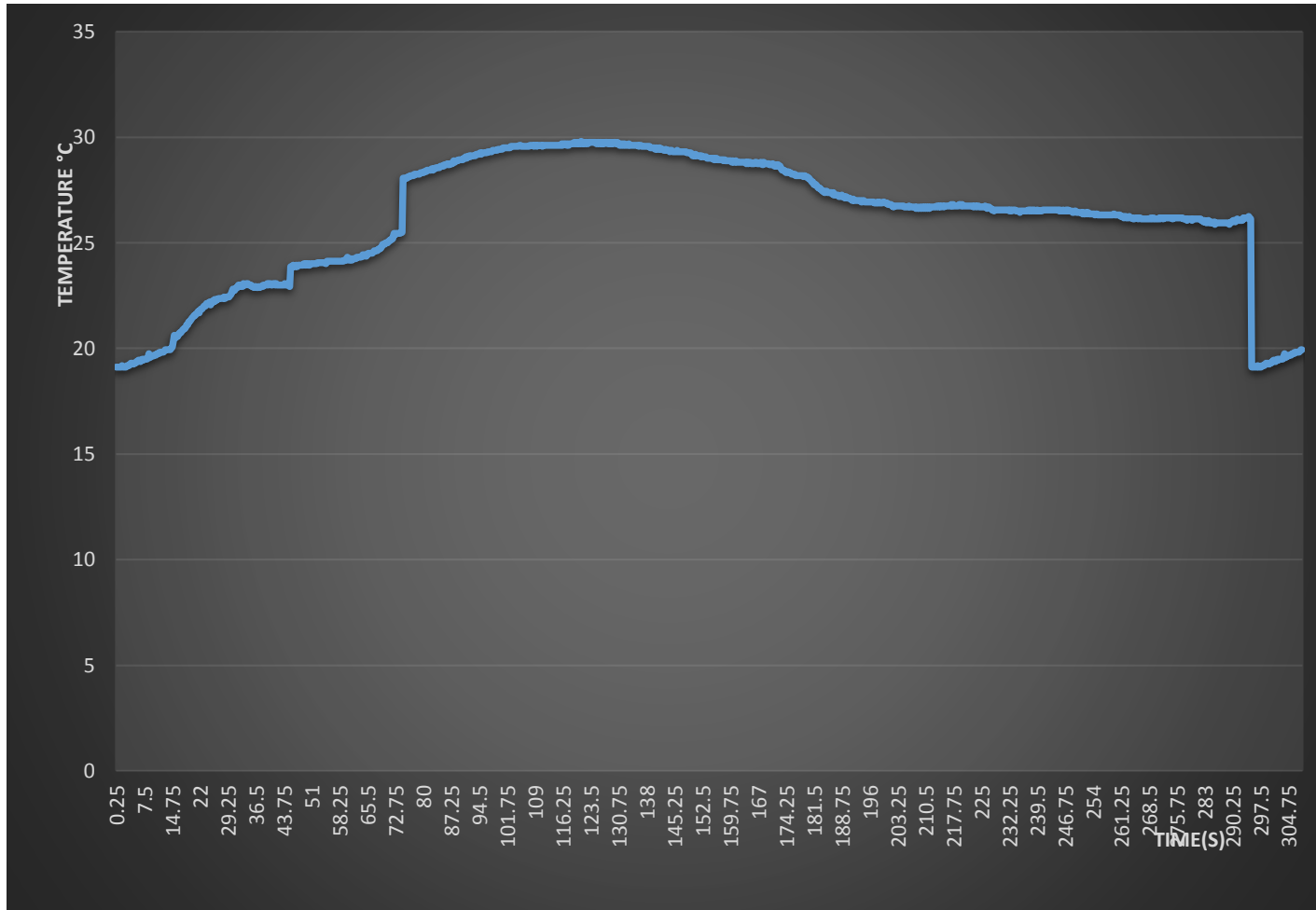
Launching and landing of IcanSat – First launch



Launching and landing of IcanSat – Second Launch



Temperature sensor data



8. Acknowledgments

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