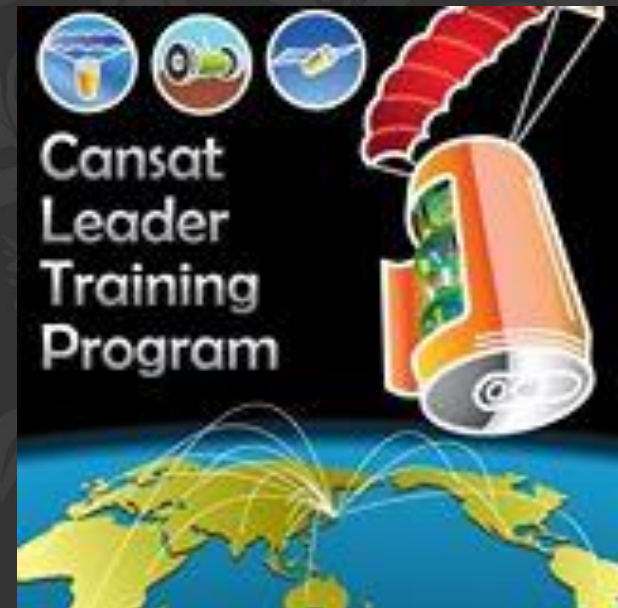


# CLTP6 FINAL PRESENTATION

JIM HEFKEY

AUCKLAND, NEW ZEALAND





# WELCOME TO SAPPORO







# WELCOME TO CLTP 6





# GET TO KNOW EACH OTHER







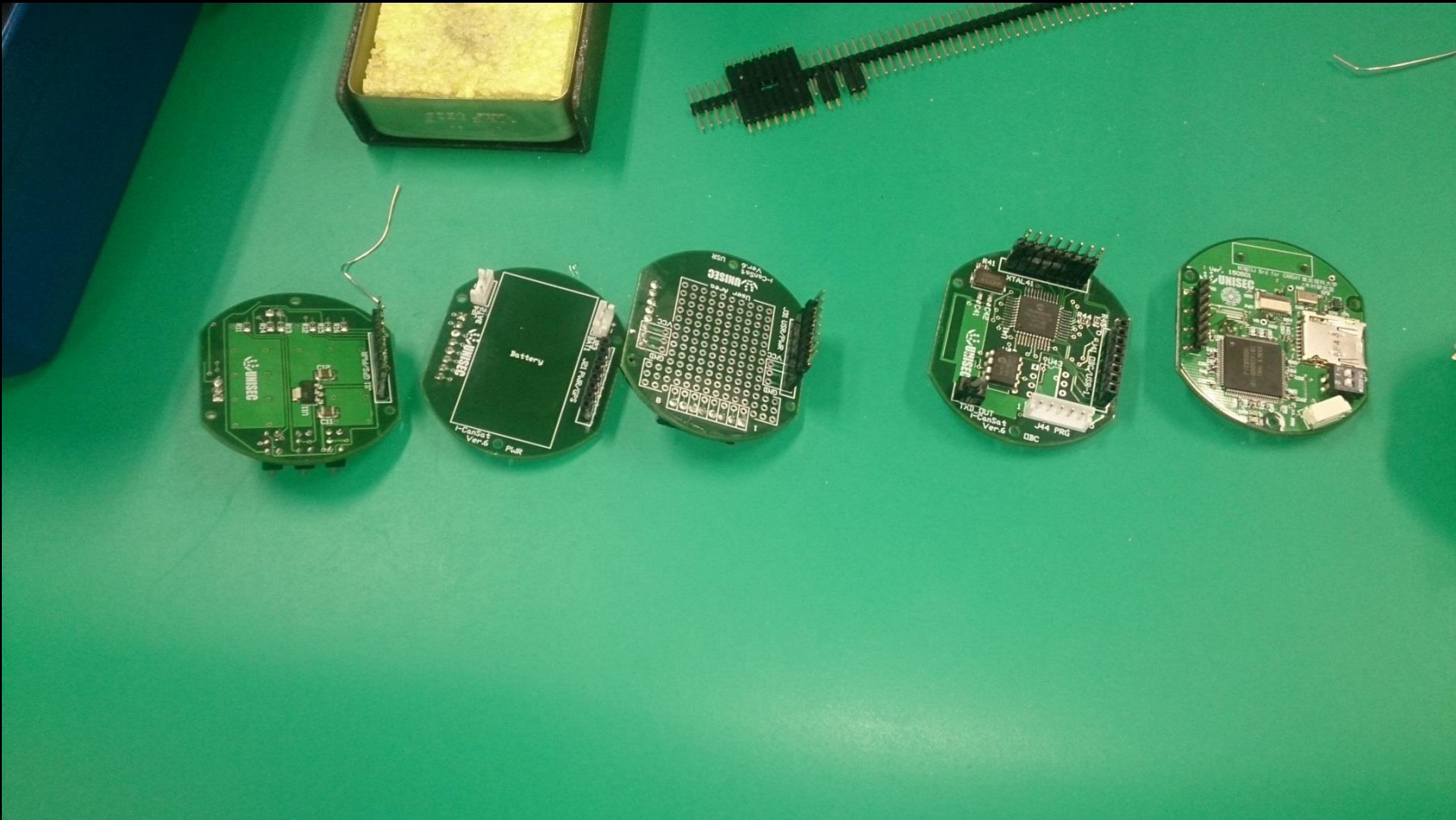
# NOW DOWN TO WORK





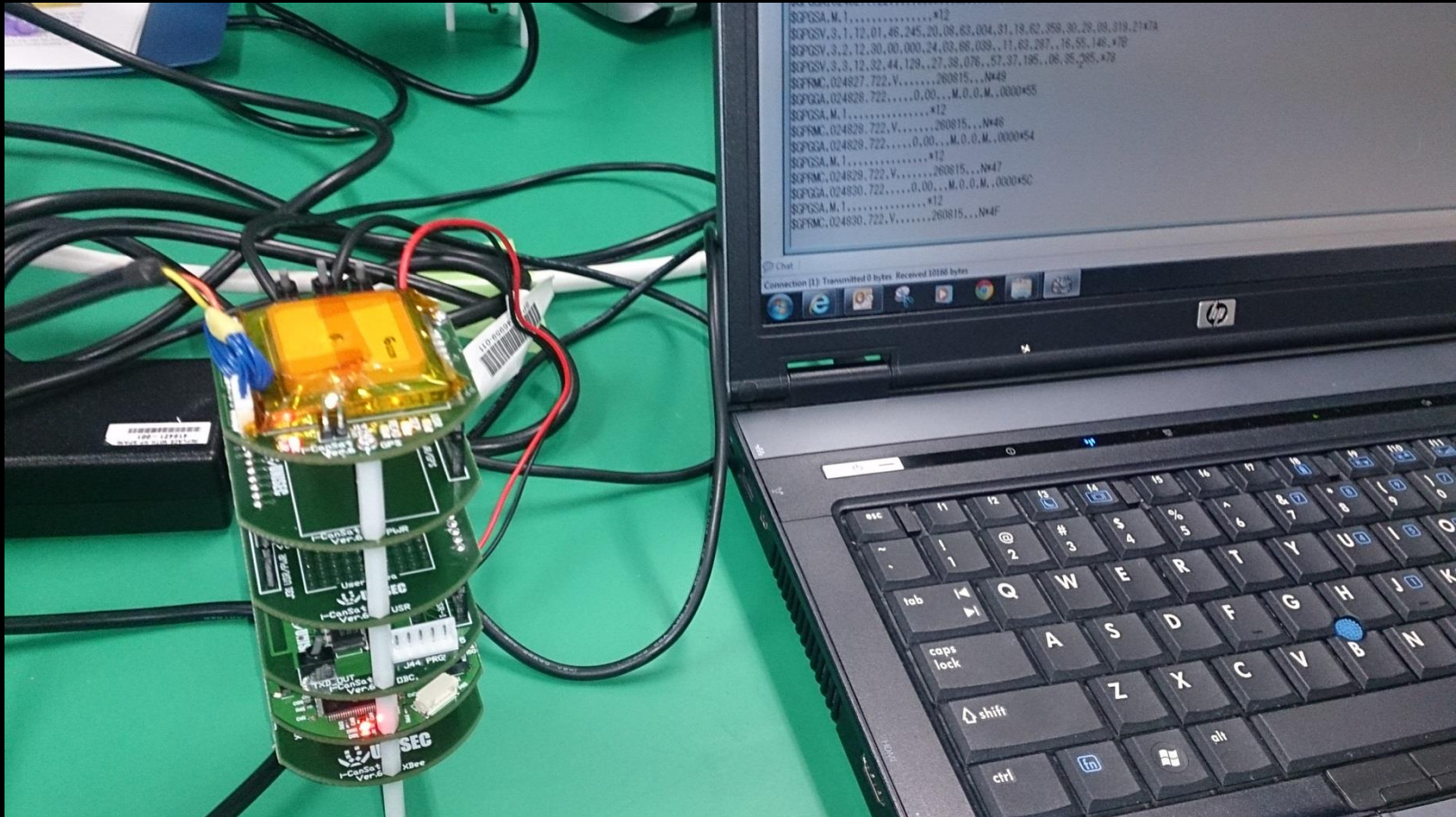


# GETTING THE PIECES TOGETHER





# TESTING THE SOFTWARE







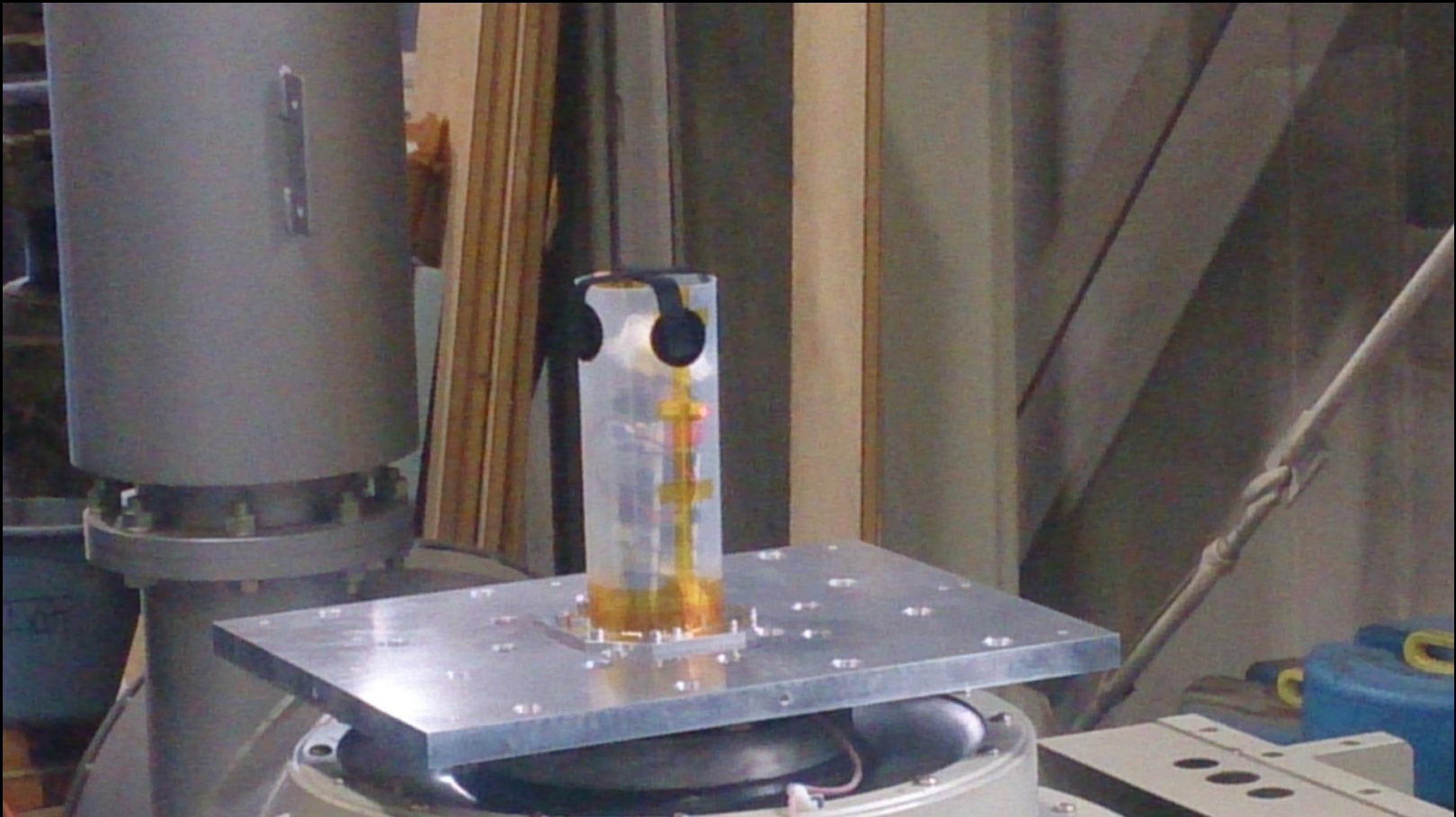
# TESTING THE DESCENT HARDWARE







## TESTING THE CANSAT HARDWARE VIBRATION





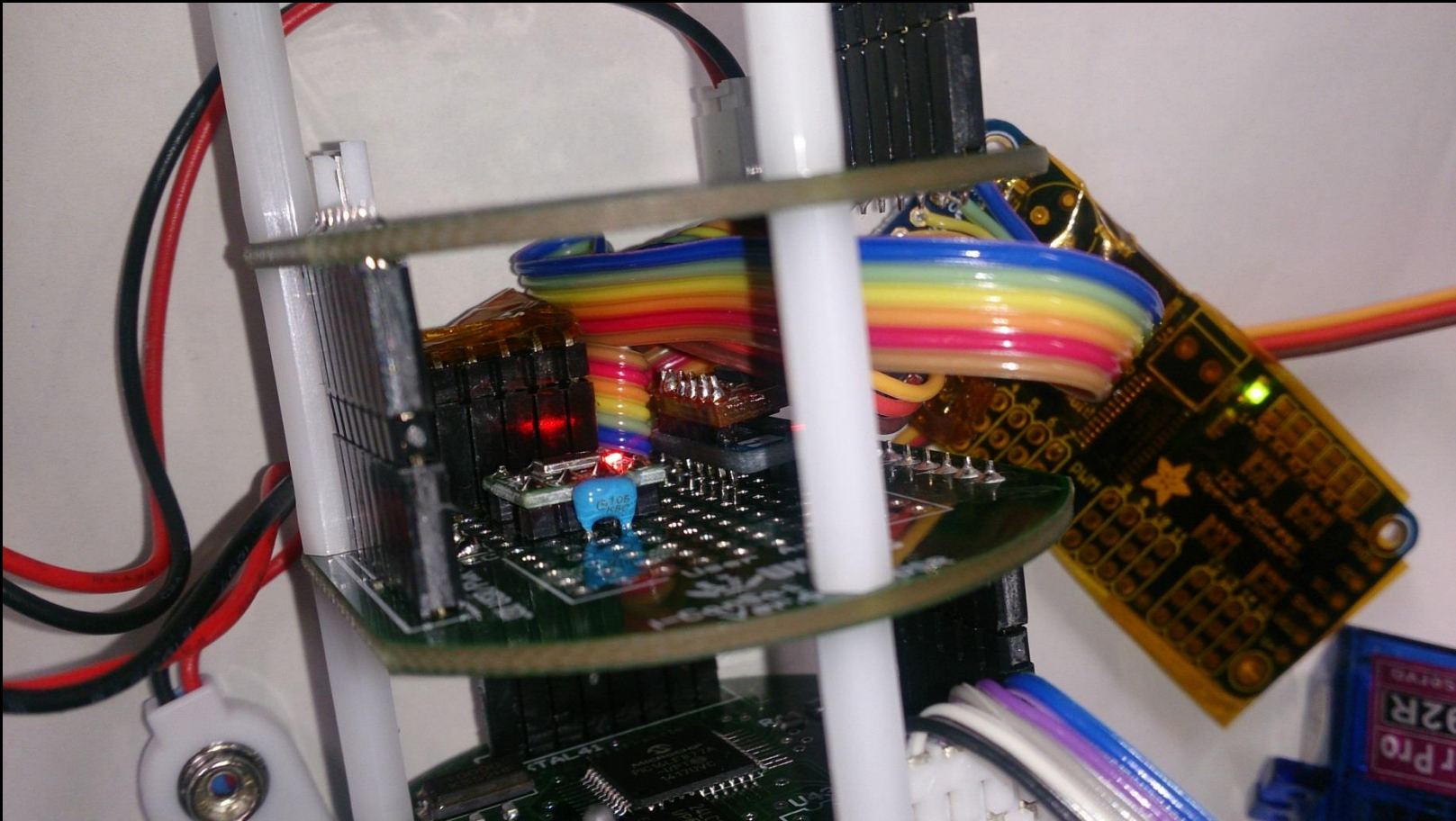
## TESTING THE CANSAT HARDWARE THERMAL







# ADDING SENSORS







## TIME FOR A LITTLE SIGHTSEEING IN SAPPORO







**HIHO, HIHO, OFF TO AKIBIRA WE GO**







# TO BUILD OUR PAPER ROCKET







**SOME INTERESTING SIGHTS  
GREETED US**





**FLIGHT 1 WAS A LITTLE UNSTABLE**







PERHAPS A LOT UNSTABLE





**FLIGHT 1-A WAS MUCH BETTER**





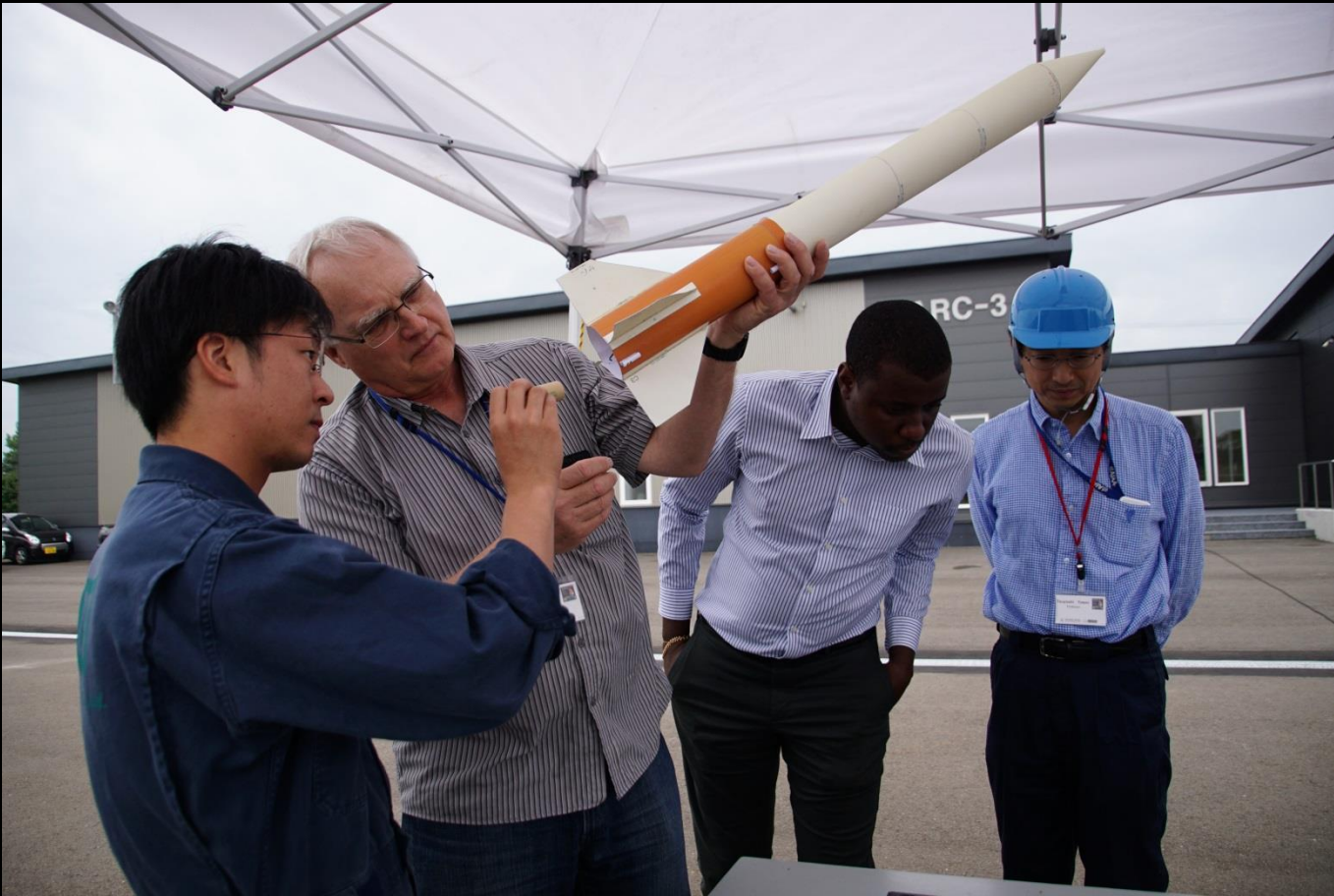


**BUT HAD AN UNUSUAL CANSAT  
DEPLOYMENT**





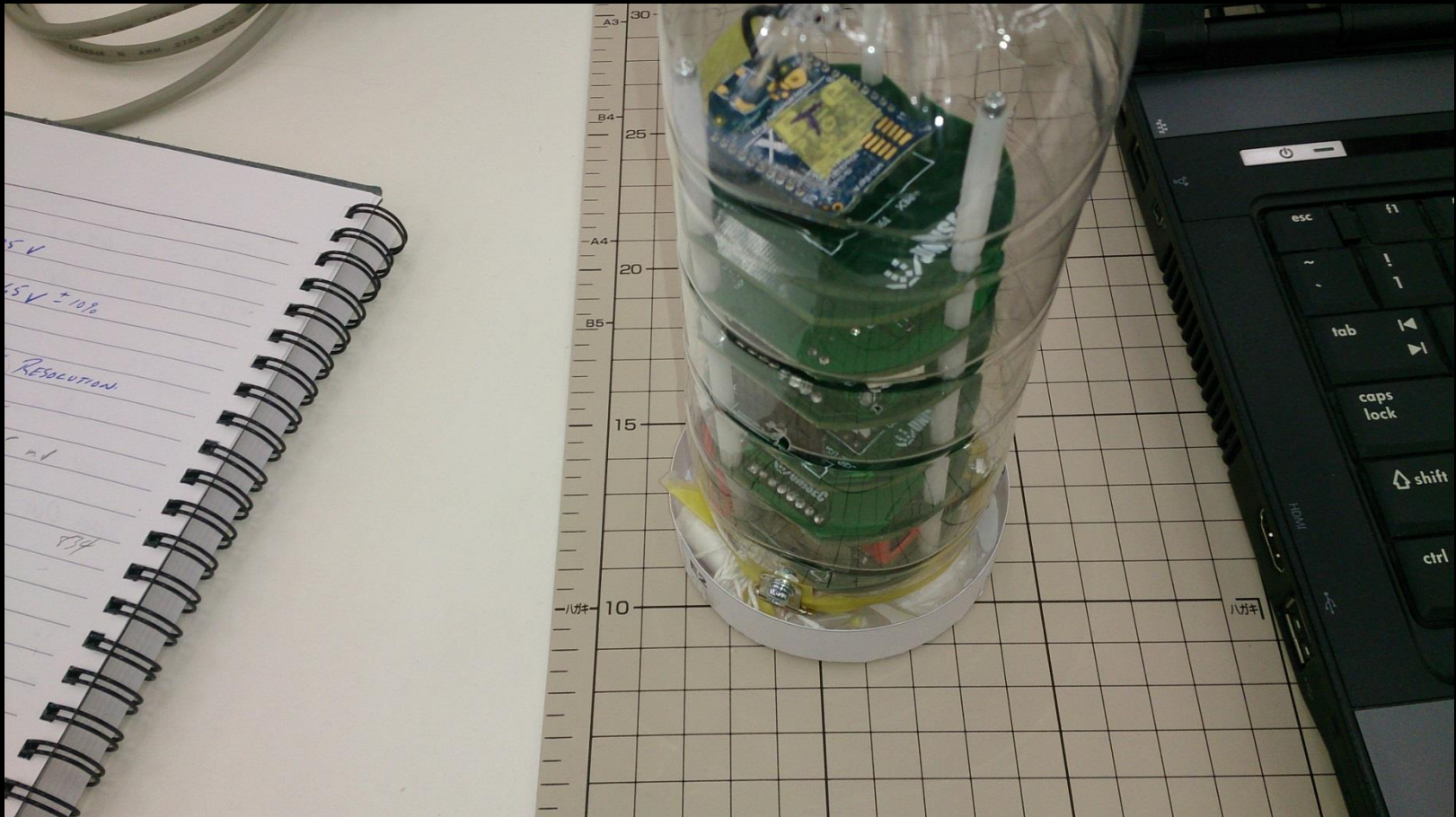
**SO FOR FLIGHT 2 WE TRIED A DEPLOYMENT EXPERIMENT**







**CANSAT WAS INSTALLED IN ROCKET WITH PARACHUTES ON THE BOTTOM**





# WHEN SEPARATION OCCURRED







**THE PARACHUTES DEPLOYED  
IMMEDIATELY**





**AND THE CAMERA STARTED TAKING PICTURES**





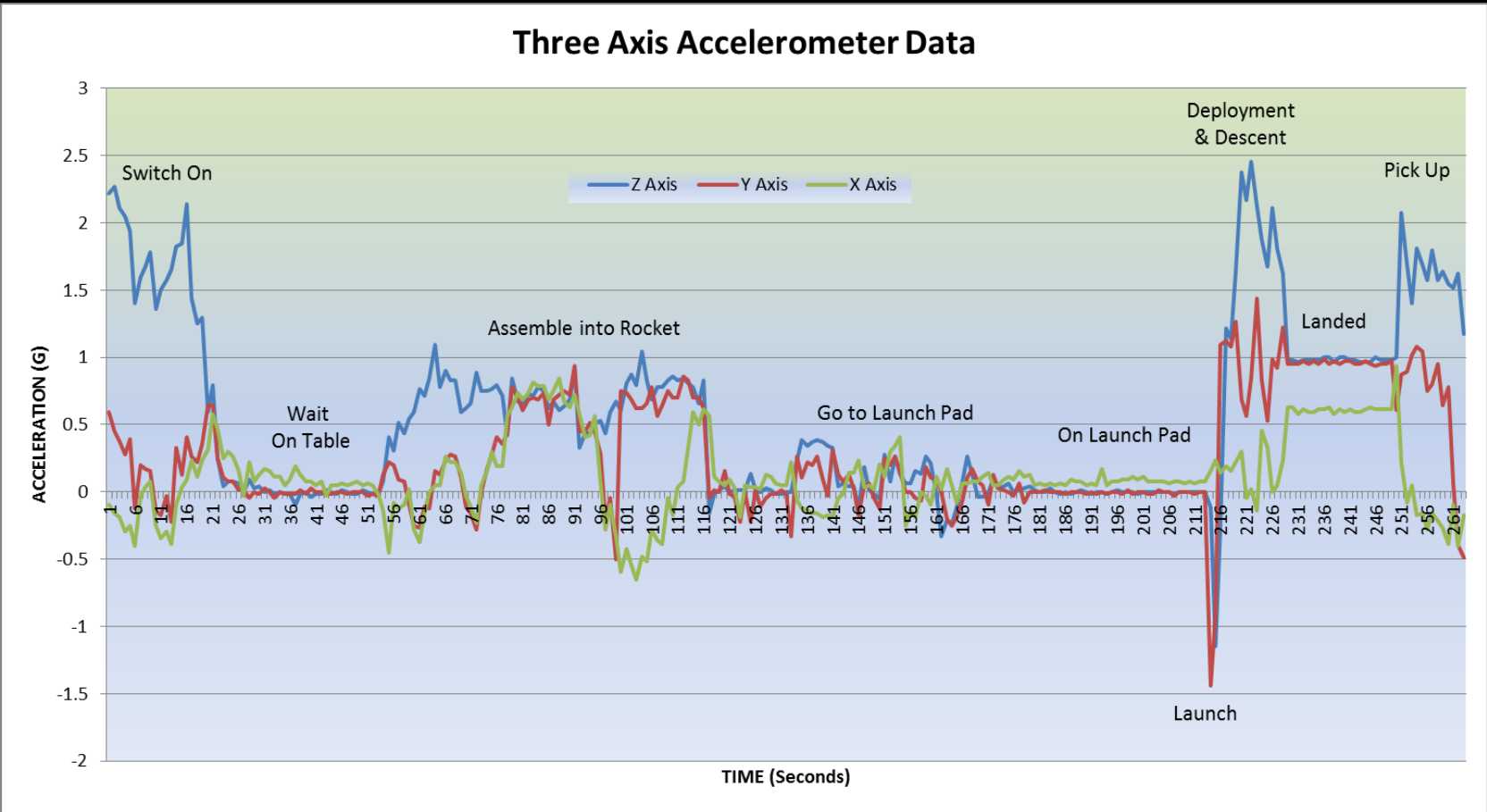


## THE CANSAT TRANSMITTED GPS AND ACCELEROMETER DATA TO THE GROUND STATION

?\$G\$GPGC	22216	N	E	1	9	1.6	47.2 M	31.5 M				0000*64			
\$GPGGA	22216	N	E	1	9	1.6	47.2 M	31.5 M				0000*64			
AD5	559	508	502			1.801465	1.637109	1.617773	0.466465	0.093109	-0.03223		2.264392	0.451987	-0.15644
?\$G\$GPGC	22217	N	E	1	9	1.6	47.2 M	31.5 M				0000*65			
\$GPGGA	22217	N	E	1	9	1.6	47.2 M	31.5 M				0000*65			
AD5	549	503	500			1.769238	1.620996	1.611328	0.434238	0.076996	-0.03867		2.107953	0.373767	-0.18773
?\$G\$GPGC	22218	N	E	1	9	1.6	47.2 M	31.5 M				0000*6A			
\$GPGGA	22218	N	E	1	9	1.6	47.2 M	31.5 M				0000*6A			
AD5	545	497	493			1.756348	1.60166	1.58877	0.421348	0.05766	-0.06123		2.045377	0.279904	-0.29724
?\$G\$GPGC	22219	N	E	1	10	1.1	47.2 M	31.5 M				0000*64			
\$GPGGA	22219	N	E	1	10	1.1	47.2 M	31.5 M				0000*64			
AD5	538	504	496			1.733789	1.624219	1.598438	0.398789	0.080219	-0.05156		1.935869	0.389411	-0.2503
?\$G\$GPGC	22220	N	E	1	10	1.1	47.2 M	31.5 M				0000*6E			
\$GPGGA	22220	N	E	1	10	1.1	47.2 M	31.5 M				0000*6E			
AD5	504	471	486			1.624219	1.517871	1.566211	0.289219	-0.02613	-0.08379		1.403975	-0.12684	-0.40674
?\$G\$GPGC	22221	N	E	1	10	1.1	47.2 M	31.5 M				0000*6F			
\$GPGGA	22221	N	E	1	10	1.1	47.2 M	31.5 M				0000*6F			
AD5	516	492	510			1.662891	1.585547	1.643555	0.327891	0.041547	-0.00645		1.591702	0.201684	-0.03129
?\$G\$GPGC	22222	N	E	1	9	1.6	47.2 M	31.5 M				0000*63			
\$GPGGA	22222	N	E	1	9	1.6	47.2 M	31.5 M				0000*63			
AD5	521	490	514			1.679004	1.579102	1.656445	0.344004	0.035102	0.006445		1.669922	0.170396	0.031288
?\$G\$GPGC	22223	N	E	1	10	1.1	47.2 M	31.5 M				0000*6D			
\$GPGGA	22223	N	E	1	10	1.1	47.2 M	31.5 M				0000*6D			
AD5	528	489	517			1.701563	1.575879	1.666113	0.366563	0.031879	0.016113		1.77943	0.154752	0.07822
?\$G\$GPGC	22224	N	E	1	10	1.1	47.2 M	31.5 M				0000*6A			
\$GPGGA	22224	N	E	1	10	1.1	47.2 M	31.5 M				0000*6A			
AD5	501	470	496			1.614551	1.514648	1.598438	0.279551	-0.02935	-0.05156		1.357043	-0.14248	-0.2503
?\$G\$GPGC	22225	N	E	1	10	1.1	47.2 M	31.5 M				0000*6B			



# AND THE ACCELEROMETER DATA WAS PLOTTED

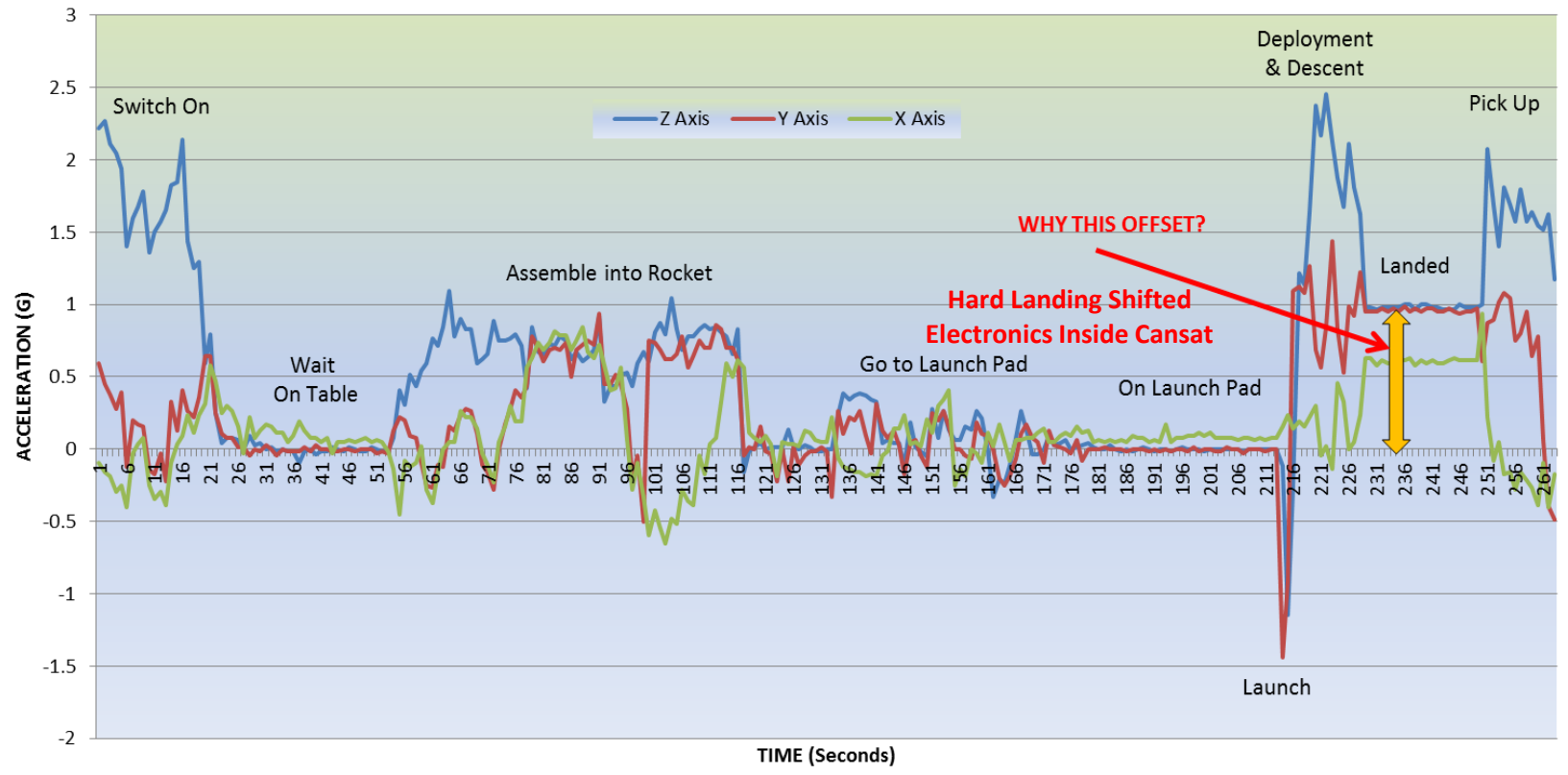






# DATA ANALYSIS

### Three Axis Accelerometer Data





## LEARNING EXPERIENCE

- **WHAT SUCCESS LOOKS LIKE**
- **WHAT FAILURE LOOKS LIKE**
- **REQUIREMENTS FOR THE LEARNING ENVIRONMENT**
- **REQUIREMENTS FOR THE PHYSICAL SKILLS**
- **INSIGHT INTO THE DIFFERENT WAYS THAT DIFFERENT PEOPLE INTERPRET AND RESPOND IN THE LEARNING ENVIRONMENT**





# LEARNING EXPERIENCE





# THE END OF THE BEGINNING

EDUCATION IS OPTIONAL – LEARNING IS COMPULSORY

ANON