

# DNEPR '04 Integration

Cal Poly CubeSat

Integration Coordinator:  
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## Acceptance and Integration of CubeSats for Delivery to Kosmotras

14 CubeSats

11 Developers

5 P-POD Mk. II

1 Launch

# Developers



What the developers need to supply:

- Ready to fly CubeSat
- Ground Support Equipment
- Testing Documentation
- Diagnostic and Charging Procedures  
(Time to Complete)





# Cal Poly CubeSat



What we're doing:

Assembly and Qualification of P-POD Mk. II  
to 150% of DNEPR launch levels

Preparation of facilities

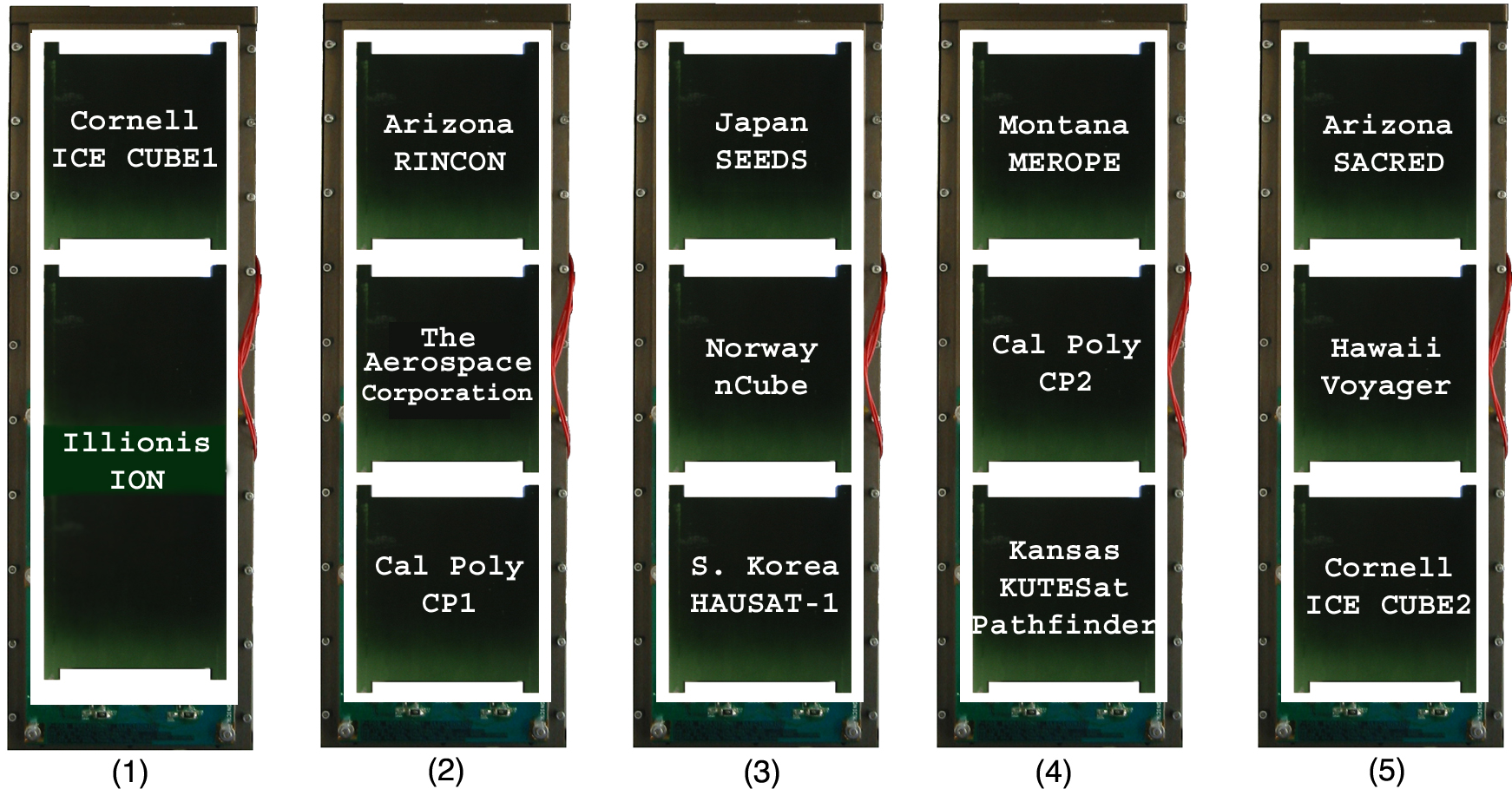
Failing classes



# P-POD Assignment



## DNEPR 2004 P-POD Allocation Deployment Sequence



## What happens in the next three months?

- Early Delivery (Optional)
  - Aug. 12 – Sept. 10
- Documentation Delivery
  - Sept. 1
- Acceptance and Integration
  - Sept. 29 – Oct. 10
- P-POD Delivery
  - Oct. 14



Voluntary early delivery of CubeSats ready for integration.

Allows the developer a more flexible delivery process

Longer diagnostic times

More personnel allowed

# Documentation Delivery



Supporting documentation to be delivered to Cal Poly CubeSat

- Out-gassing documentation
- Vibration testing results
- CubeSat standard conformation,  
CubeSat Acceptance Checklist
- GSE documentation
- Diagnostic and charging procedures  
and time to complete
- Unpacking procedures
- Any other procedures that may be used



# Acceptance and Integration



CubeSats must be ready for flight by  
8am on the day of integration.

Wednesday, September 29, 2004			Thursday, September 30, 2004			Friday, October 01, 2004		
8:00 AM			8			8	Clean Cleanroom	
9:00 AM			9			9	POD3: CAC	
10:00 AM			10			10	POD3: CAC	
11:00 AM			11			11	POD3: Integrate	
12:00 PM			12			12	POD3: Integrate	
1:00 PM			1		POD3: Unpack	1	POD3: Diagnostic	POD4: Unpack
2:00 PM			2		POD3: Unpack	2	POD3: Diagnostic	POD4: Unpack
3:00 PM			3		POD3: Unpack	3	POD3: Diagnostic	POD4: Unpack
4:00 PM			4		POD3: Diagnostic	4	POD3: Diagnostic	POD4: Diagnostic
5:00 PM	POD3: Delivery		5	POD4: Delivery	POD3: Diagnostic	5	POD2: Delivery	POD4: Diagnostic
6:00 PM	POD3: Delivery		6	POD4: Delivery	POD3: Diagnostic	6	POD2: Delivery	POD4: Diagnostic
7:00 PM	POD3: Delivery		7	POD4: Delivery	POD3: Diagnostic	7	POD2: Delivery	POD4: Diagnostic
8:00 PM			8		POD3: Extra Time	8		POD4: Extra Time
9:00 PM			9		POD3: Extra Time	9		POD4: Extra Time
10:00 PM			10		POD3: Extra Time	10		POD4: Extra Time
11:00 PM			11		POD3: Extra Time	11		POD4: Extra Time
12:00 AM			12		POD3: Extra Time	12		POD4: Extra Time
1:00 AM			1		POD3: Extra Time	1		POD4: Extra Time
2:00 AM			2		POD3: Extra Time	2		POD4: Extra Time
3:00 AM			3		POD3: Extra Time	3		POD4: Extra Time
4:00 AM			4		POD3: Extra Time	4		POD4: Extra Time
5:00 AM			5		POD3: Extra Time	5		POD4: Extra Time
6:00 AM			6		POD3: Extra Time	6		POD4: Extra Time
7:00 AM			7		POD3: Extra Time	7		POD4: Extra Time

# Acceptance and Integration



- Developers are limited to three people in the lab
- Lab storage limited to GSE box
- Time to access CubeSats is limited
- Charging must occur within the diagnostic or extra time allotted
- Once integrated access to CubeSats will be through access ports only

# Vibration Acceptance Testing



Testing will occur October 7<sup>th</sup> and 8<sup>th</sup>

Only Cal Poly CubeSat personnel will accompany the P-PODs.

Testing will be to launch levels.

After testing, Developers will have scheduled diagnostic time.  
This will be the last time developers have access to their  
CubeSat through the course of a normal launch.



# Delivery to Kosmotras



- Cal Poly CubeSat is preparing for an earliest delivery date of October 14.
- Actual delivery and launch date will be announced August 31.
- Integration dates will not change based on actual launch date.



# Questions



More information at  
<http://www.cubesat.org>