



Spectral Forest

Hardware Status Update – 100% build

ME 486C Section 01

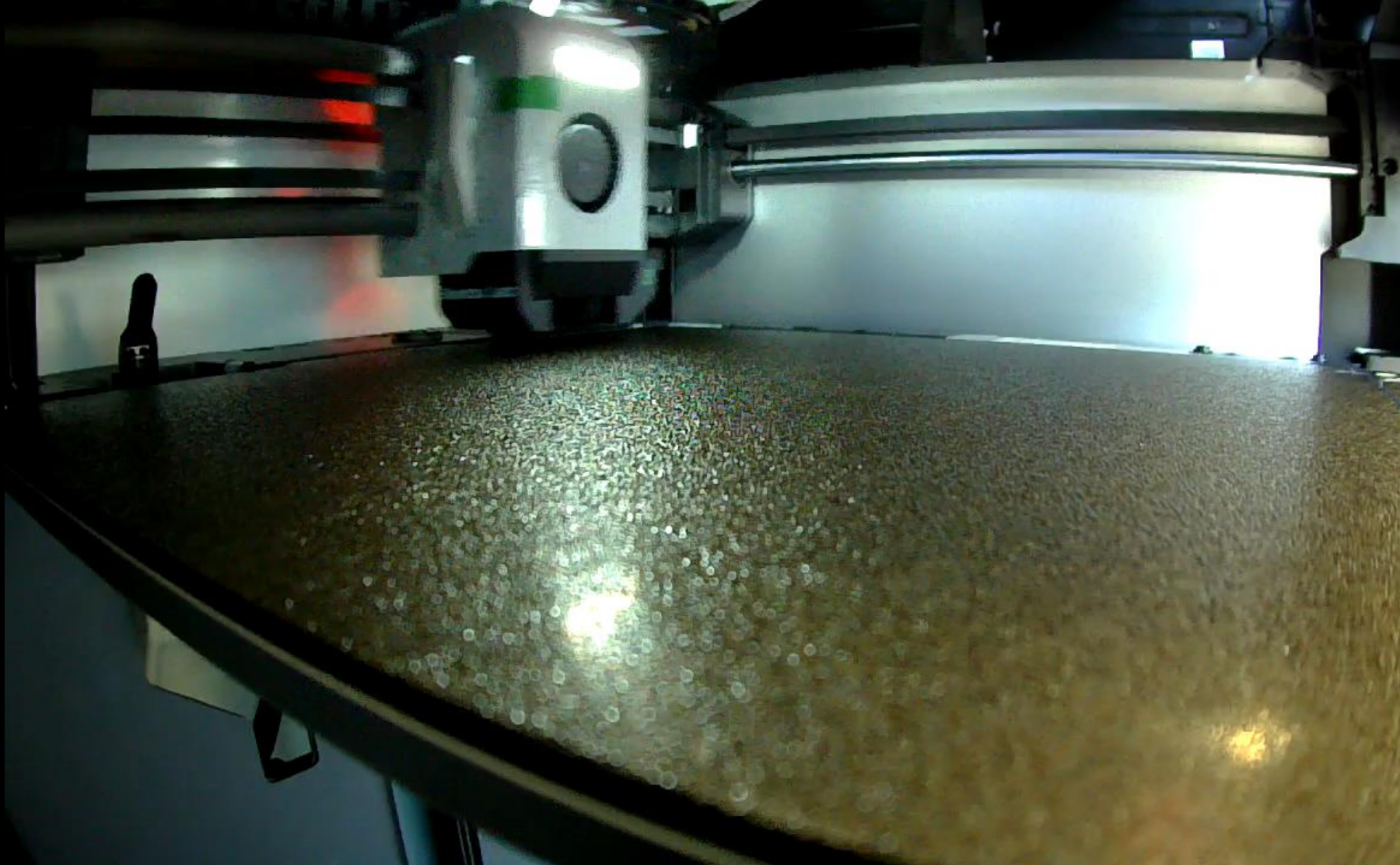
Team: Tyler Lerew, Torrey King, & Derrick Doan

Demo

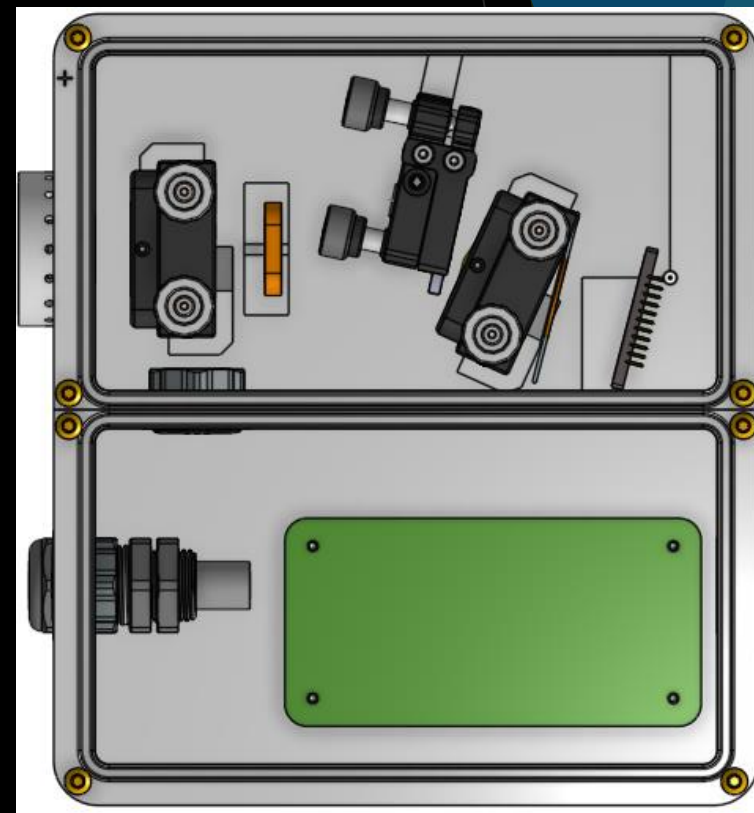
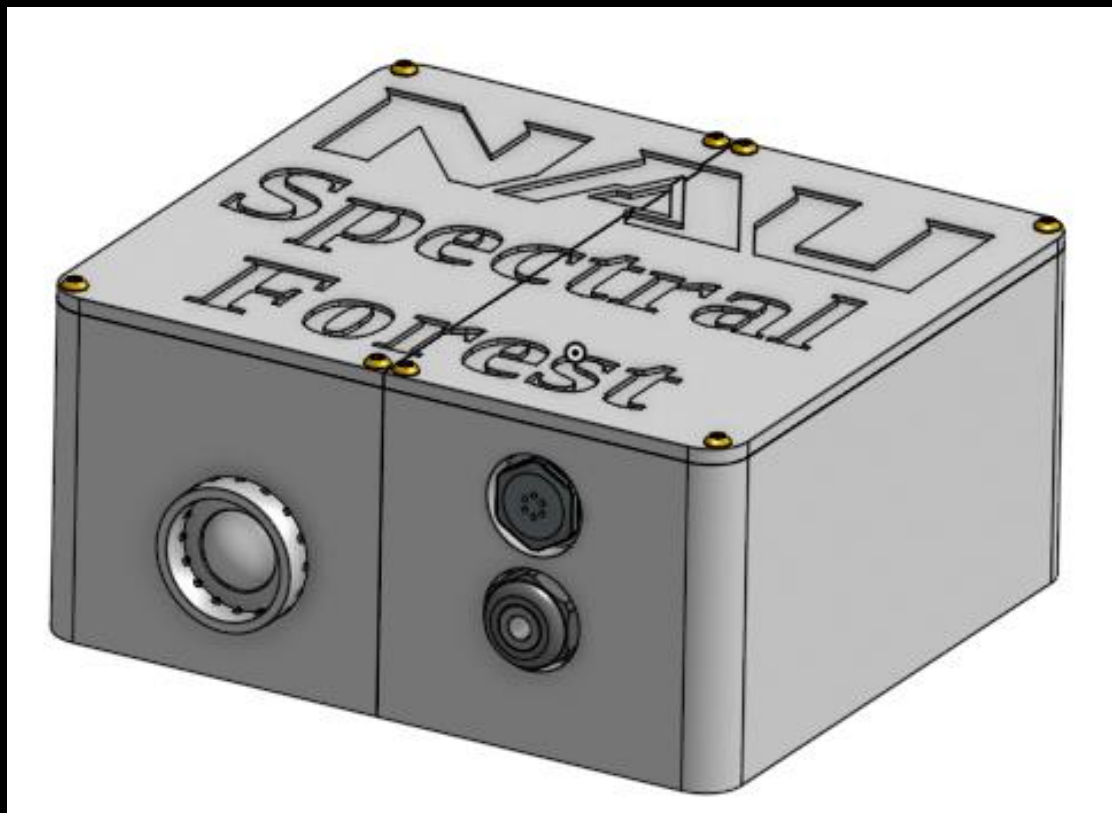
- ▶ Please handle gently
- ▶ To the right: optic chamber
- ▶ Below: Full enclosure



Timelapse of Print



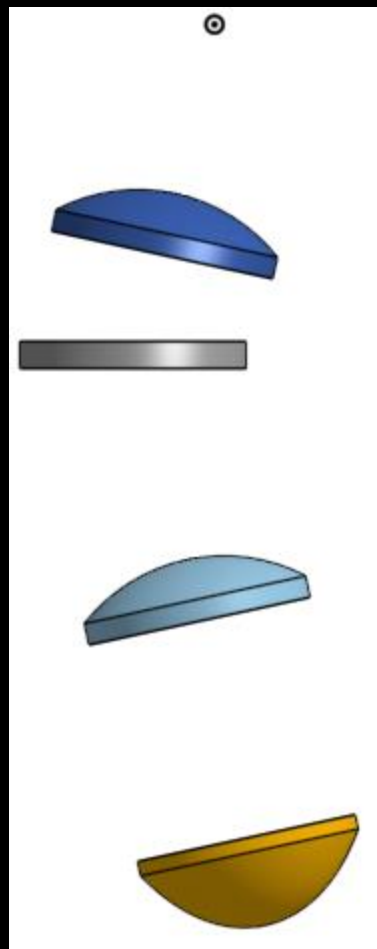
Design Effort



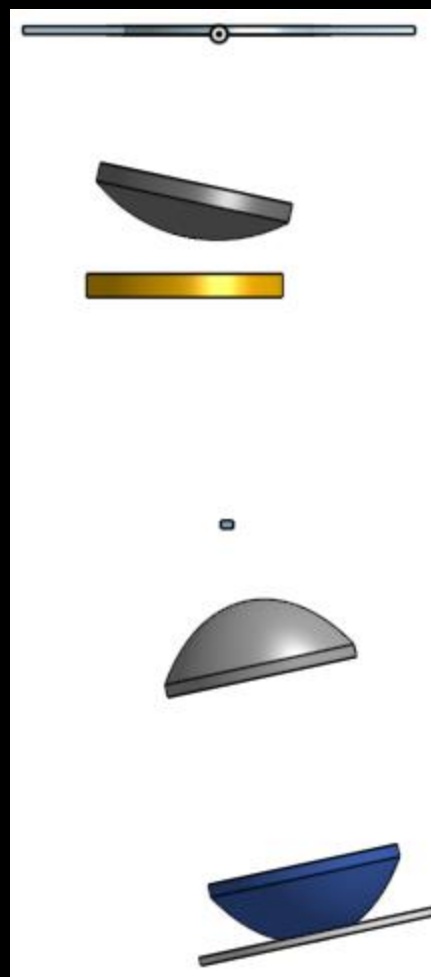
Optics Iterations



1/29/24



2/17/24



3/19/24



3/21/24

Purchasing Plan

- ▶ Everything purchased and on hand
- ▶ Only things to be purchased in the future:
 - ▶ Laser for testing
 - ▶ Spring plunger
 - ▶ Tub for storage

required for build (not testing)

% of recieved by item	100.0%
% of recieved by cost	100.0%



Manufacturing Plan

- ▶ Been manufacturing: first full iteration of enclosure (lids included)
- ▶ Currently manufacturing: second iteration of enclosure and new set of lids
- ▶ Yet to manufacture: light weighting of optic mounts and laser testing jig

Bill of Materials: Manufactured Items

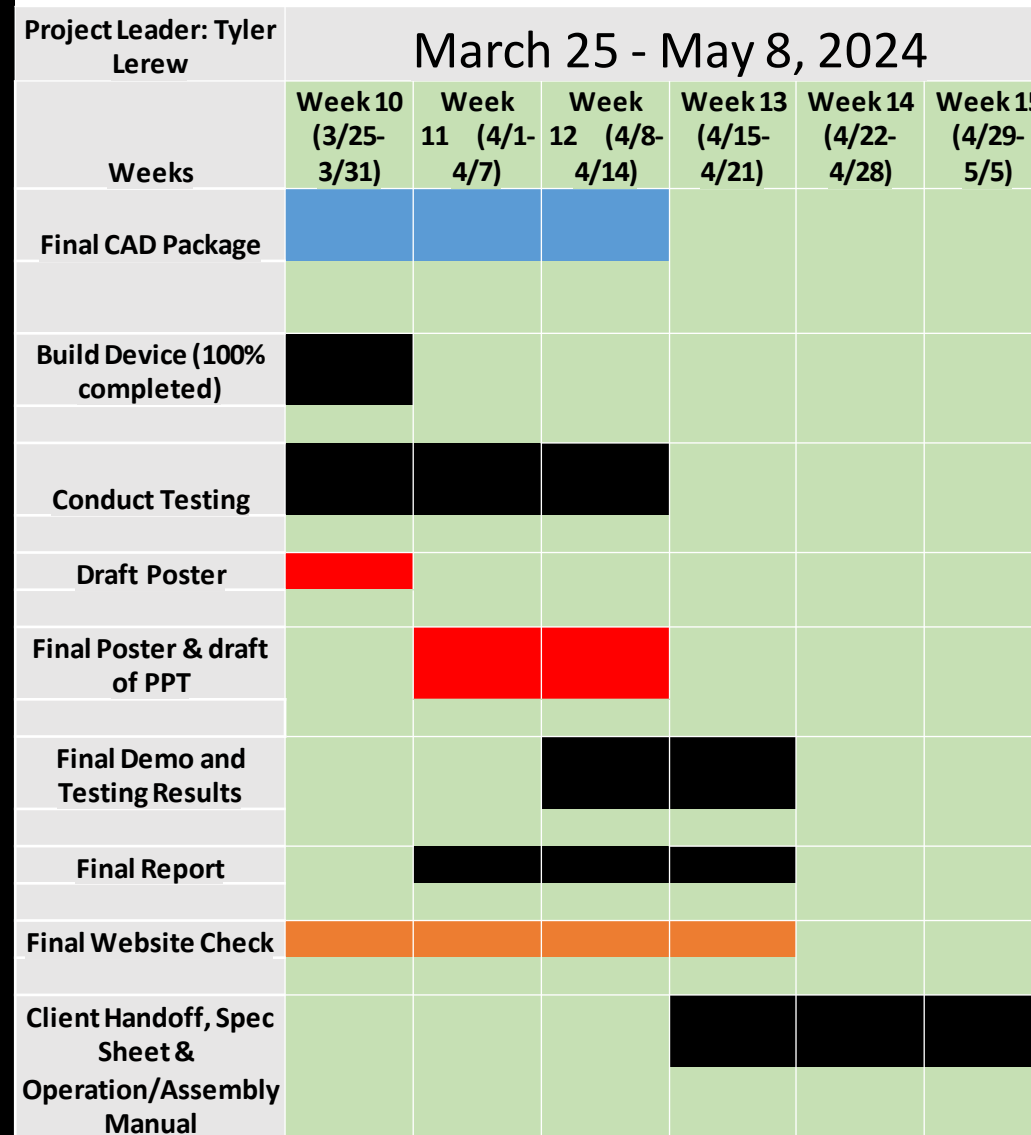
Item #	Item	Item Description	Vendor & Part #	Quantity	Cost \$	Cost Per unit \$
1	Final 3D printed device	Will house all internal components	In house	1	N/A	N/A
2	Prototype device #2	Will be used for testing purposes	In house	1	N/A	N/A
3	Prototype device #3	Will be used for testing purposes	In house	1	N/A	N/A
4	Lightweighting Mounts	To decrease weight	Machine Shop	4	N/A	N/A
5	Testing jigs	To line up light sources or mounts	In house	2 to 4	N/A	N/A

	Not Started
	Completed
	In Progress

Gantt Chart

- ▶ On schedule, beginning testing shortly
- ▶ Major roadblocks: EE team and acquiring/borrowing an effective laser
- ▶ Moving forward: draft poster, compiling final cad package, conduct testing, and prepping future major assignments

Spectral Forest Gantt Chart



Derrick Doan	Yellow
Torrey King	Orange
Tyler Lerew	Blue
Everyone	Black
All UGRAD	Red

Thank you!

Questions?

