WILLIAM E. BOEING DEPARTMENT OF
AERONAUTICS & ASTRONAUTICS
College of Engineering

Atm Impulse Procedure

Version 1.0, <Date 2024-05-20>

SPACE Lab

Date: _____ / _____ / _____
yyyy mm dd

Part Number: _____

Serial Number: _____

Initials: _____, _____, _____, _____

Test Objective

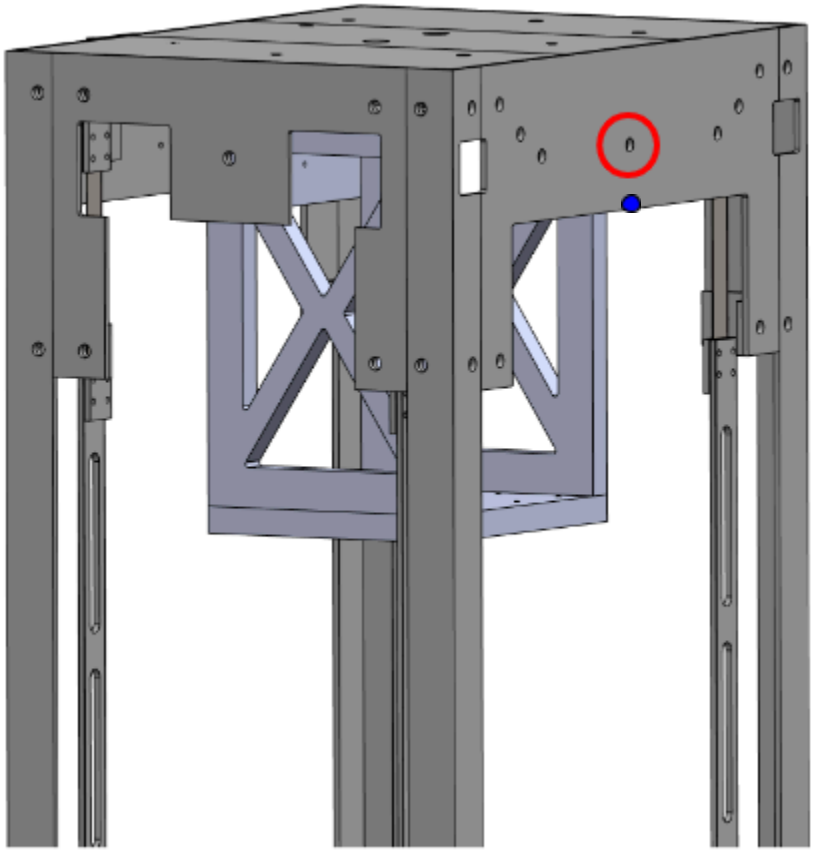
This procedure is to set up the calibration process for the impulse test of the SPACE Lab Capstone pulsed plasma test stand at atmospheric pressure.

Equipment Required

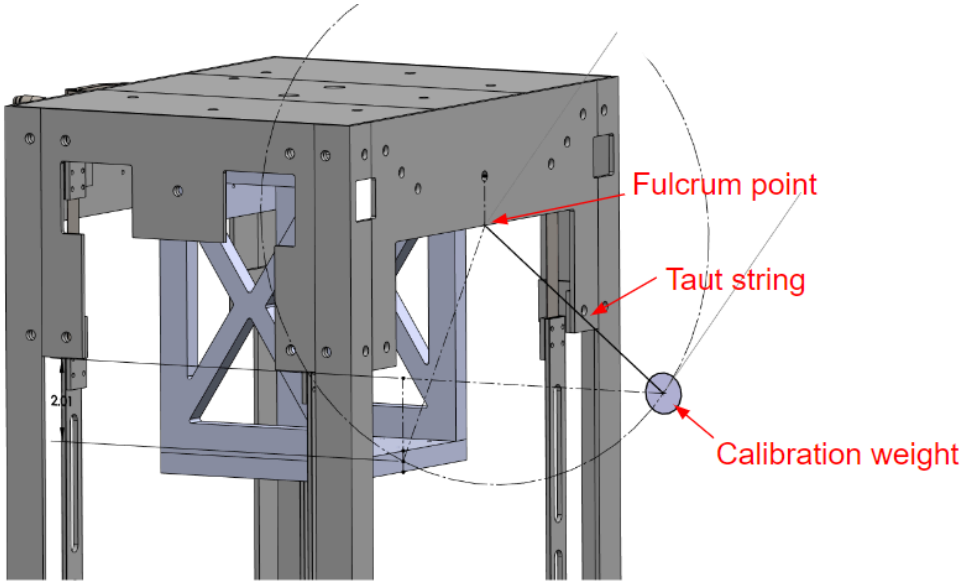
Qty	Description	Specs/Calibration	Check
1	String	1 spool	
1	Calibration weights	Set of calibration weights	
1	Duct tape	Single piece of duct tape	

Atmosphere Impulse Application Procedure (~1 hour)

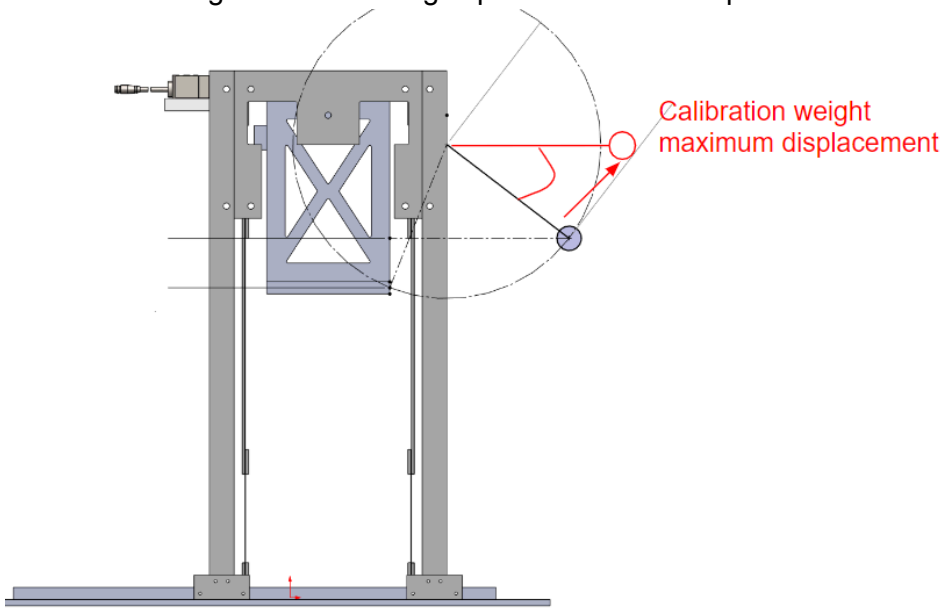
1. At the circled hole on the assembly, screw on a ¼” bolt, leaving ½” of the bolt shaft exposed.



2. Using a string, tie a knot on the exposed bolt threads, leaving an ample length slack.
3. Tape down the length of string to the face of the frame, such that the swinging motion of the string is at the bottom of the face (blue dot).
4. Tie the calibration weight to the other end of the string, making sure to have a sufficient string length between the edge of the frame and weight such that the weight collides with the pendulum.



5. Immediately prior to the impulse test, raise the calibration weight, keeping the string taut.
6. Hold calibration weight until the string is parallel to the floor plane.



Side view

7. Release the weight, and ensure that the scope recorded the resultant oscillation of the test stand pendulum.
8. Save raw voltage data from the scope to a flash drive.
9. Repeat steps 5-8 for all trials.