*LIGO Laboratory / LIGO Scientific Collaboration*

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AOS SLC ITM Elliptical Baffle Fabrication, Installation, and Test Plan

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**Abstract**

This document describes the plan for acceptance testing of the ITM Elliptical Baffle during manufacturing, and for testing the final assembly before installing in the aLIGO chambers.

# Introduction

This document describes the plan for acceptance testing of the ITM Elliptical Baffle during manufacturing, and for testing the final assembly before installing in the aLIGO chambers.

# Tests

## Vendor Tests

The first article ITM Elliptical will be assembled by the vendor and witnessed by LIGO QA personnel.

The vendor shall provide the following reports: 1) Materials certifications, 2) Dimensional and QC inspection reports--this shall include a report showing that parts have been inspected and fall within specified tolerances, and 3) Certificate or statement of compliance with all contract and drawing process restrictions.

## LIGO Tests

### Suspension Blade Balance Test

The ITM Elliptical Baffle suspension blade spring will be tested with dummy weights to determine the balance load for each vertical blade spring.

### Final Assembly Suspension Test

The ITM Elliptical Baffle will be impulse-tested and a ring-down will be performed to confirm that the quality factor of the suspended ITM Elliptical Baffle meets the damping requirements.