

OPTI 421/521 – Introductory Opto-Mechanical Engineering

Homework 11: Mirror mount

1) Mounting for a glass mirror

For the case of a mirror made of Zerodur, 200 mm diameter, and 20 mm thick:

Write a summary for the support of this mirror:

- a) How much does this mirror weigh?
- b) For the case where the mirror is on its back (optical axis vertical), determine the optimal location for three support points on the back and calculate the self-weight induced figure errors.
- c) Re-do b), but for the case of six points
- d) Describe how to make a six-point attachment to the back of the mirror.
- e) For the case where the mirror is on edge (optical axis horizontal) determine the optimal location for two support points at the edge and calculate the self-weight induced figure errors.

Write this up as a brief technical report.

2) Final Exam

Provide one question that you think would provide a good question for the final exam for this class.

3) Rules of Thumb

Provide three rules of thumb using the format provided in HW2.