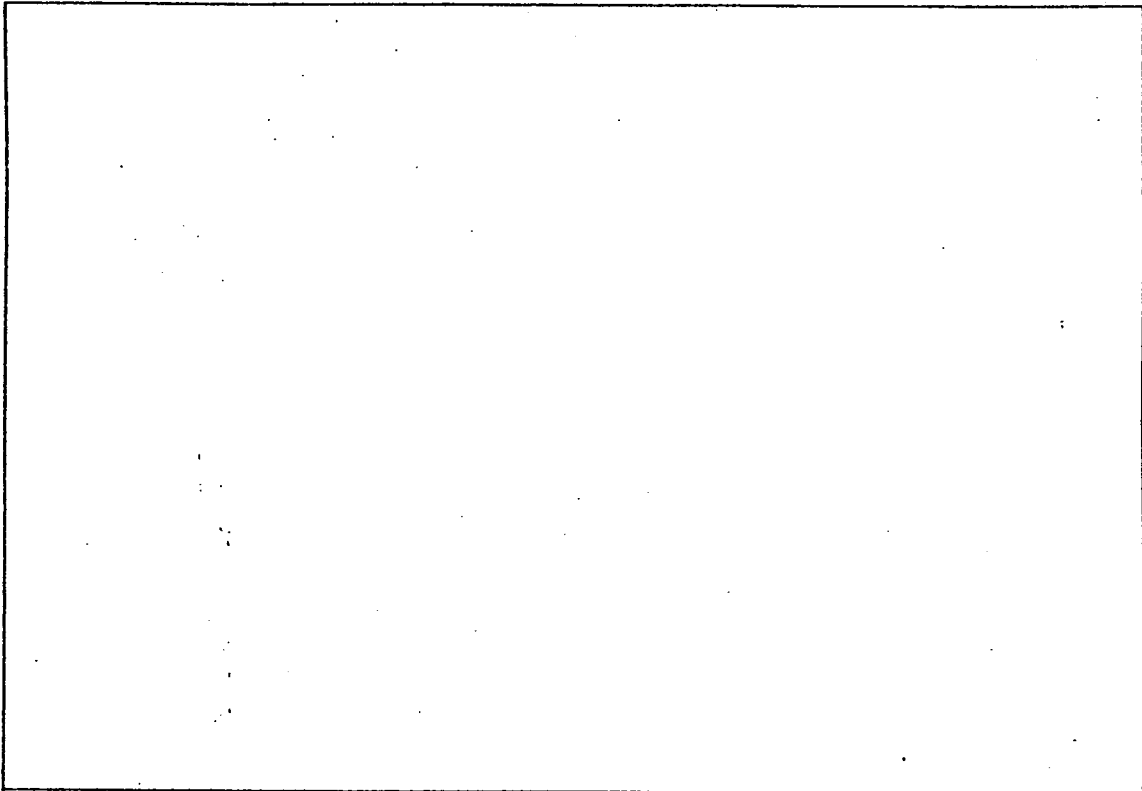


**SINGLE BEAM TRANSMISSION DEEP SCENE HOLOGRAM**  
**(for 8 by 10 inch or Smaller Holograms on the EXPERIMENTAL TABLE)**



**SKETCH THE SET UP IN THE BOX ABOVE**

**PARTS LIST**

- |  |  |
|--|--|
| 1. LASER   | 6. 4 by 5" PLATEHOLDER ASSEMBLY                          |
| 2. SHUTTER   | 7. WELL-FIXTURED, LOW-LYING, DIFFUSELY REFLECTING OBJECT |
| 3. SPATIAL FILTER  | 8. HALF-WAVE PLATE ASSEMBLY                              |
| 4. 8 by 10" MIRROR in GOALPOST CONFIGURATION with TWO MAGNETIC BASES and RIGHT ANGLE CLAMPS  | 9. BAFFLES   |
| 5. 10 by 12" MIRROR in GOALPOST CONFIGURATION with TWO MAGNETIC BASES and RIGHT ANGLE CLAMPS | 10. CLEAN GLASS PLATE                                    |
|  | 11. GNOMON   |
|  | 12. S & M LIGHT METER                                    |
|  | 13. OFFICIAL RULER                                       |

**SET UP STEPS**

Follow Steps 1-4 of the **SINGLE BEAM TRANSMISSION WITH MIRROR MASTER HOLOGRAM SET UP** if this setup evolves out of it or the **SINGLE BEAM REFLECTION HOLOGRAM SET UP**, as then there will be a Spread Beam at the Official Height headed for **MIRROR (5)**.

5. Lay the object down on the tabletop at the end of the table opposite **MIRROR (5)**. Then try to light the object at close to grazing incidence by tilting the mirror and translating the **Magnetic Bases**.
6. Arrange the Holographic Plateholder or Filmholder at the foot of the object, tilting it so that the light that misses the object hits the Holographic Plate directly as a reference beam. It is actually recommended to use the outer, weaker secondary ring of the beam to have a lower beam ratio for higher brightness!
7. From the viewpoint of the Holographic Plateholder, check the object lighting. You may have to move the object and Plateholder nearer to **MIRROR (5)** for a steeper angle of illumination, or tilt the object by propping one end up. (Keep the goddess of stability in mind!)
8. Block **STRAY LIGHT**, especially any that might come from behind the **PLATEHOLDER** that could act as a second **REFERENCE BEAM!**
9. Insert the **HALF-WAVE PLATE ASSEMBLY (9)** after the **LASER (1)** but before the **SHUTTER (2)** if it isn't already in there. Align the **POLARIZATION VECTOR** for minimum reflection and maximum penetration per the Handout, **ALIGNING POLARIZATION VECTORS**. Now is the time to check the tune of the Pinhole of the **SPATIAL FILTER (3)**.
10. Check the **INCIDENT FLUX** at the **PLATEHOLDER** with the Probe of the **S & M MODEL A-3 PHOTOMETER** placed where the center of the **HOLOGRAPHIC PLATE** will be. See the **HANDOUT, S & M MODEL A-3 PHOTOMETER**, for the **EXPOSURE TABLE**. (The secret film number is 450.)
11. Expose, process and evaluate the hologram.