Portable Interferometer Parts and Cost

6/14/2016 Rick Dower

Adapted from LIGO Outreach *The Magnetic Michelson Interferometer*, Ewan Douglas, LIGO T0900393, August 18 2009

**Optics Parts**

Obtained from Thorlabs, Inc., Newton, NJ www.thorlabs.com

Item Number Description Quantity Price Total

EBS1 Economy 50:50 Beamsplitter 1 $31.40 $31.40

SM1S3M 3 mm Optical Spacer for 1 $ 8.00 $ 8.00

beamsplitter in mirror mount

ME1-G01 25.4mm Dia. Round Mirror 2 $13.40 $26.80

LC1975 Dia. 6.0mm, F=-24.0mm 1 $22.10 $22.10

 Plano Concave Lens

KM100 Kinematic Mirror Mount 3 $38.70 $116.10

 (1 necessary, 2 or 3 convenient)

**Other Parts**

Rubber Grommet 3/16”x5/16” to hold lens

(from electronics supply store)

Tongue depressor 11/16” (17 mm) wide with 3/8” hole to hold lens in grommet,

 also used to mix epoxy (from medical supply store)

Magnets Ceramic Block 6 mm x 22 mm x 5 mm (from Home Depot)

Epoxy Glue (from Home Depot)

2 mm (or 5/64”) hex wrench to adjust set screw on mirror mount(s)

Heavy duty steel pizza pan (from Target) or heavier pizza steel

binder clips to hold lens mount, etc. (from Staples)

5 mW red laser pointer (laserpointerpro.com HK-32001662 $15.99 + shipping)

**ALTERNATIVE**: Interferometer Kit from Industrial Fiber Optics

[www.i-fiberoptics.com/laser-kits-projects.php](http://www.i-fiberoptics.com/laser-kits-projects.php) $100 - $129