

**LIGO-T030134-00-W**

MC Notes from 1999 – Faraday Isolator Alignment  
by Stan Whitcomb and Rick Savage  
by Haisheng Rong and David Shoemaker  
by Dave Ottaway

These notes were recorded in the MC Notebook at LHO between Aug and Oct of 1999.

Submitted to the DCC 7/9/03 by Betsy Bland

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Rick S., Stan W.

ALIGNED FARADAY ISOLATOR COMPONENTS:  
FIRST POLARIZER ROTATED TO BE  
PERPENDICULAR TO LOCAL HORIZONTAL  
USING BUBBLE LEVEL TO  $\sim 1$  MRAD

2<sup>ND</sup> POLARIZER ROTATED TO MINIMIZE  
REFLECTED LIGHT (PARALLEL TO  
FIRST POLARIZER)

FARADAY INSERTED,  $\frac{1}{2}$  PLATE INSERTED

$\frac{1}{2}$  PLATE ROTATED TO MINIMIZE  
BACK TRANSMITTED BEAM USING  
RETRO-MIRROR)

NMT2 ALIGNMENT RECHECKED (RECENTLY  
ON MMT3) AFTER CONTROLLER RESET

NMT2 CONTROLLER PARAMS

ALL OUTPUT MATRICES 100

ALL INPUT MATRICES 63

ALL SERVOS BYPASS

POS'N GAIN 18.3

PITCH GAIN 22.0

YAW GAIN 19.5

SIDE GAIN 11.0

BIAS -1.914

BIAS -0.976