



ALIGO ASSEMBLY DRAWING

aLIGO AOS OpLev TRX Pier Assembly (HAM)

AUTHOR(S)	DATE	Document Change Notice, Release or Approval
Eric James	9 Sep, 2012	see LIGO DCC record Status

This document is intended to serve as a description of this assembly until a real assembly drawing can be made.

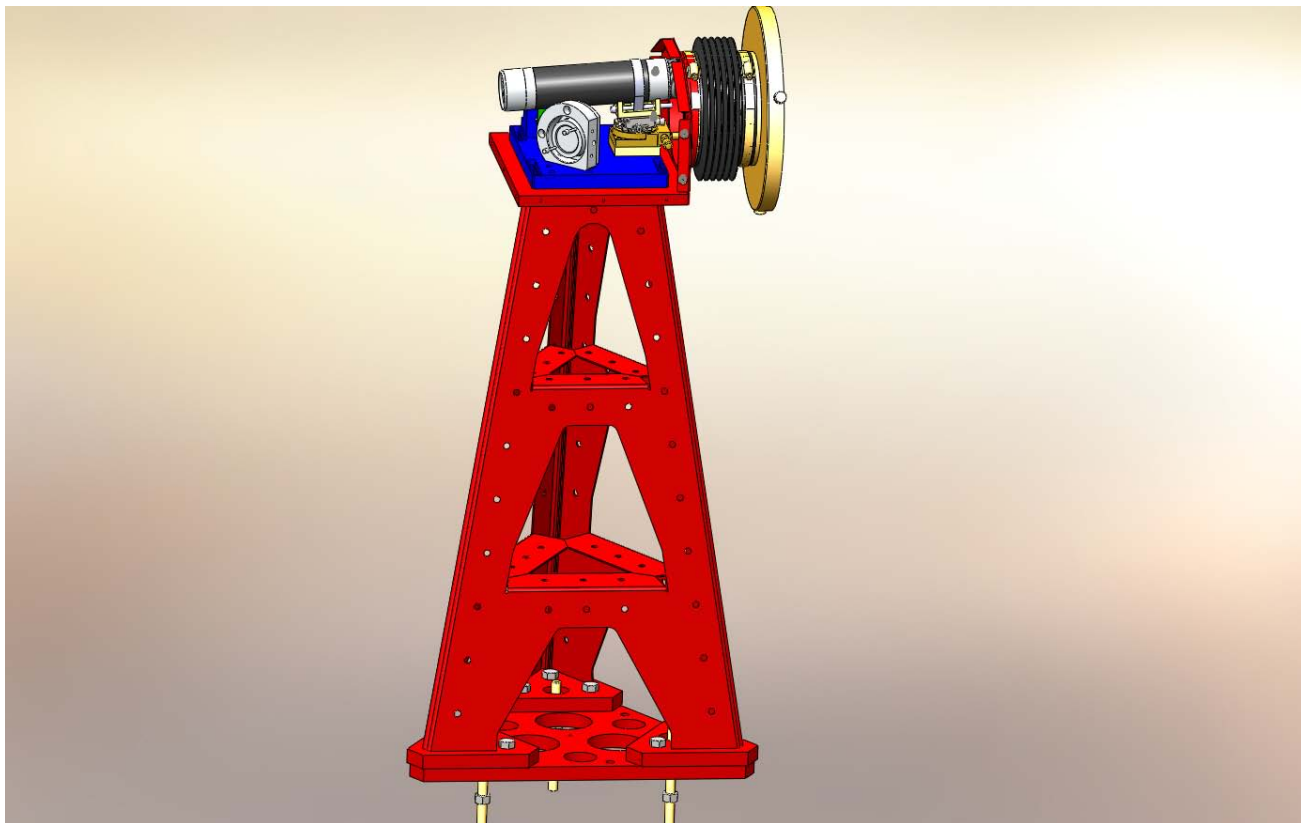


Figure 1: HAM Transceiver Pier Assembly. Shown with cover removed.

Bill of Material

Item	Part number	Description	Quant.
1	D1001854	TRX Pier Weldment	1
2	D1000434	Pier Footing	1
3	D1001627	TRX Mounting Base	1
4	D1001620	QPD Bracket	1
5	D1100290	QPD Board Assembly	1
6		15-pin M-M Cable, Photodiode Board	1
7	KSP-60-C1A-S05	OptoSigma Rotary Stage	1
8	GOHT40A10-MO2 0600-S10	OptoSigma Goniometer	1
9	SL38	Newport Gimbol Mirror Mount	1
10		Pico Motors w/Cables	2



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11	D1102242	Transmitter Telescope Mount	1
12	D0901362-1	Projection Telescope Assembly, Short	1
13	D1200463	Transceiver Enclosure Assembly	1
14	D1200622	6-inch Reducer	1
15	CT-6	Gortiflex 6" Rubber Bellows	1
16		1/2-20 x 1.5" Hex head cap screw	9
17		1/4-20 x 3/4" SHCS	10
18		1/4-20 x 3" SHCS	1
19		#8-32 x 1/2" SHCS	11
20		#8 Flat Washer	11
21		M3 x 10 SHCS	4
22		M3 x 6 SHCS	4
23		#4-40 x 5/8" SHCS	4
24		3" Band Clamp	1
25	45945K37	McMaster -Carr 6" Band Clamp	2
26	92421A540	McMaster -Carr 1/4-20 Brass Thumb Screw	3
27	9600K62	McMaster-Carr Rubber Grommet	1
28	F12 635S	Fermion Laser w/ 10m fiber	1
29	D1200461	Laser Power Board	1
30	D1100013	Whitening Chassis	1
31	D1101248	Anti-aliasing Chassis	1
32		9-pin M-F Cable, Anti-aliasing Chassis	1
33		BNC M-M Cable, Laser	1
34			
35			

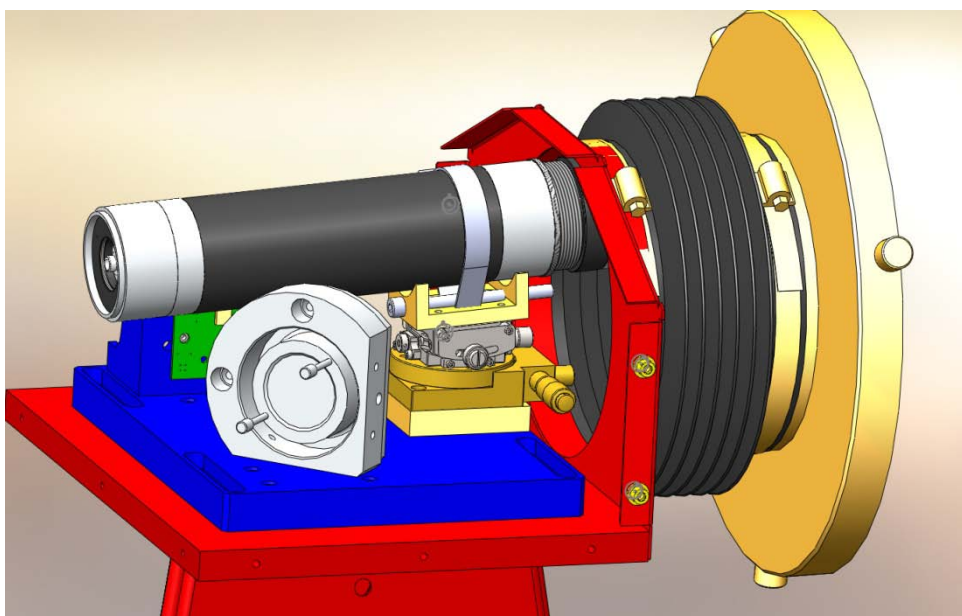


Figure 2: Telescope mounting hardware



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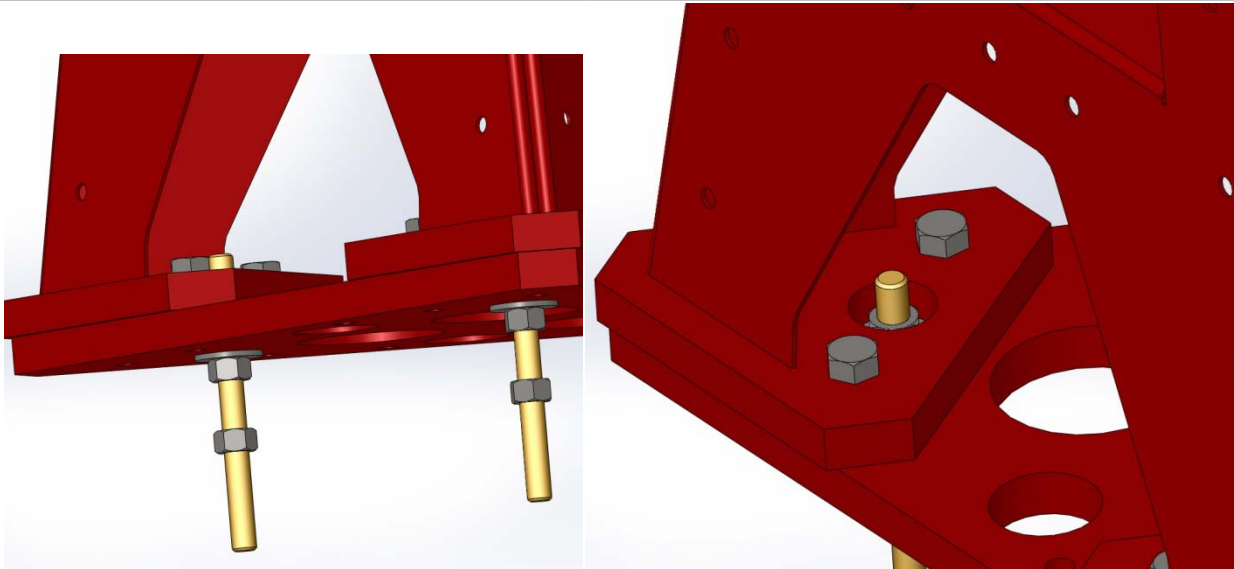


Figure 3: Base plate details

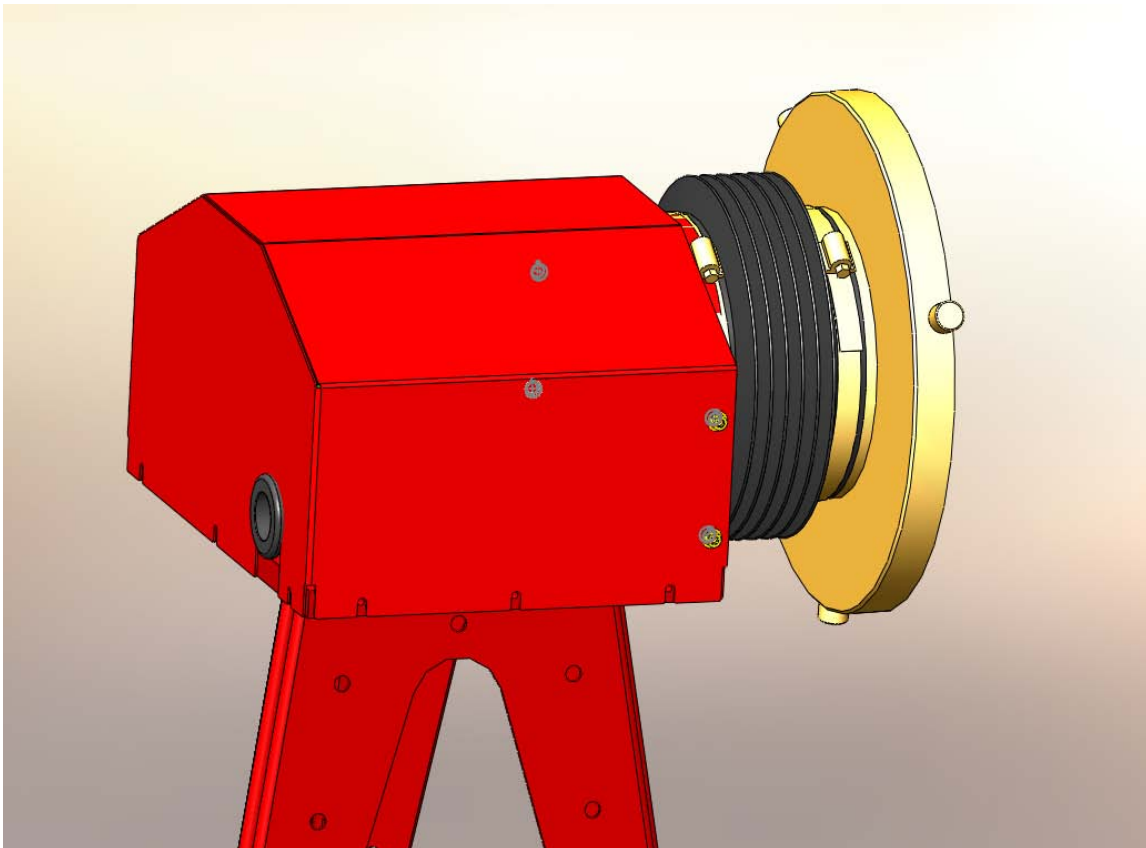


Figure 4: Cover installed

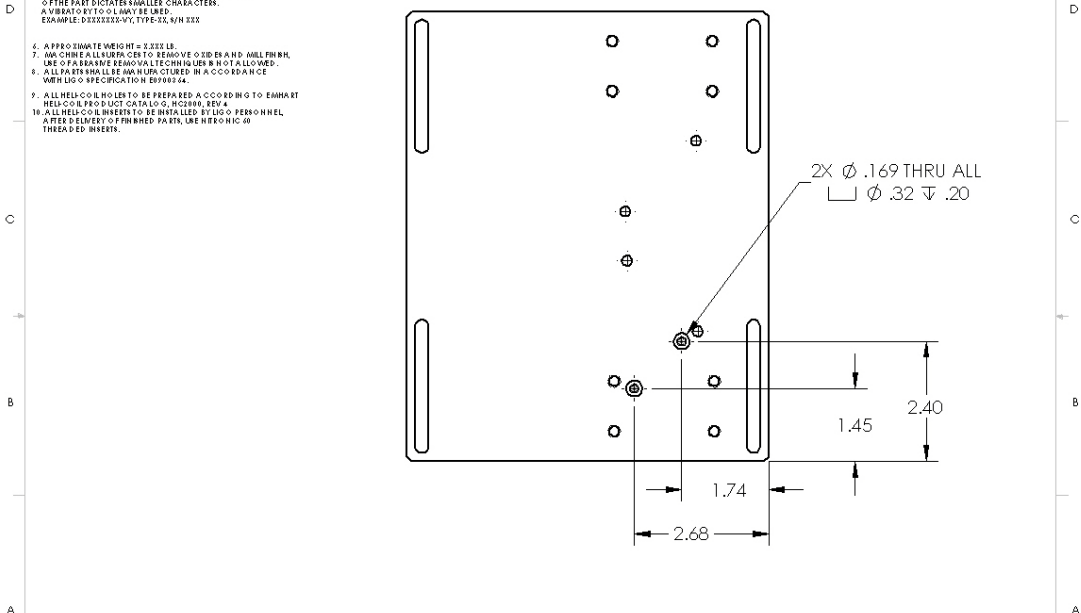
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NOTES CONTINUED:

1. TO BE ENGRAVED OR MECHANICALLY STAMP (NO INK OR DYES) DRAWING PART NUMBER, SECTION (AND VARIANT, IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER (SERIAL NUMBERS START AT 000) FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE NUMERICAL 12-HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. A VIBRATORY TOOLS MAY BE USED.
EXAMPLE: D1001851-V4-001

4. APPROXIMATE WEIGHT = 7.335 LB.
7. MACHINE ALL SURFACES TO REMOVE OXIDE AND MILL FINISH. USE OF PARABRAVE REMOVAL TECHNIQUES IS NOT ALLOWED.
8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION 0090324.
9. ALL MACHINING LISTED TO BE PREPARED ACCORDING TO ENHART HELICOIL PRODUCT CATALOG, HCS288, REV. 4
10. ALL HELICOIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS, USE HELICOIL® THREADED INSERTS.

REV.	DATE	DCN#	DRAWING TREE#
-	-	-	-
-	-	-	-
-	-	-	-



NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

DIMENSIONS ARE IN INCHES
TOLERANCES:
XX .001
XIII .002
ANGULAR ± °

1. INTERPRET DIMENSIONS PER ASME Y14.5-2014.
2. REMOVE ALL SHARP EDGES, R.02 MIN.
3. DO NOT SCALE DIMENSIONS.
4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF FRAKUL, RESIDUE, AND CHLORINE.

MATERIAL: 6061-T6 Al
FINISH: N/A
N/A μinch

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	PART NAME		ALIGO AOS	
	SYSTEM		Oplev Mounting Plate (HAM)	
ADVANCED LIGO	AOS	DESIGNER	C. CONLEY	DATE
NEXT ASSY	D0900423	CHECKER	A	D1001627
		APPROVAL	SCALE: 1:1	PROJECTION: 1st

Oplev Mounting Plate modified, PART PDM REV: X-011, DRAWING PDM REV: