

**3IFO Long-Term Storage
Sub-System Progress List
As of 11 September 2013
Compiled by JLF**

Key to progress codes:

PC=3IFO LTS Team has physical custody of all components/assemblies

ICS=All components/assemblies in Inventory Control System

SCD=Appropriate storage container designed and approved

SCP=Appropriate storage container procured and in use

PSD=Components/assemblies placed in LTS location, sealed and bar-coded, and ICS documentation (storage load, pix) is complete

Green=Complete

Yellow=Active discussion/consultation in progress

Red=Blocker or "Show Stopper" that needs to be cleared

Sub-Systems	Sub-Sub-Systems	Designee	Progress
Auxiliary Optics Systems-AOS		Calum Torrie	
	Initial Alignment-IAS	Doug Cook	PC-ICS-SCD-SCP-PSD
JLF-11 Sep 2013			
We are sending a few things to India. I have let Doug know that I am ready and willing to take custody and provide storage materials/space as needed.			
	Optical Levers-OpLev	Eric Black	PC-ICS-SCD-SCP-PSD
No change since last report. JLF-11 Sep 2013 Last report below. JLF-15 May 2013			
All OpLev pylons are believed to be at LHO. There is some question WRT Periscope Assemblies. Email has been sent to Eric Black asking confirmation. ICS appears to be complete but that could change depending on the answer WRT the Periscope Assemblies. The shortie and giraffe piers are in their original shipping crates and placed at X Mid. The crates have been sealed with tamper-evident tape, paperwork has been attached to the crates, pix have been taken of the crates and pix attached to individual ICS records. Leaners are not in crates but are unlikely to come to harm or be disturbed since they are behind the beamtube at X Mid. ICS documentation is complete but a copy of paperwork is NOT attached to the pylons. Storage loads have been created: 6038 for shorties, 6040 for giraffes and leaners.			
	Photon Calibration-PCal	Rick Savage	PC-ICS-SCD-SCP-PSD
No change since last report. JLF-11Sep 2013			
Assembly continues: nothing ready for storage yet. JLF-15 May 2013			
All parts are believed to be in physical custody with initial ICS entry complete. Storage crates have been designed and built: they are awaiting			

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assembled structures. PSD will be completed when assembled structures are ready for storage at Y Mid.			
Stray Light Control-SLC	Lisa Austin	PC-ICS-SCD-SCP-PSD	
JLF-11 Sep 2013			
<p>3IFO baffles are being assembled. Parts were removed from locked storage for assembly. Lisa A. and I discussed where to store the baffle suspensions until the SEI Storage Containers are available. We will look at the situation in the Meat Locker to see if it is acceptable. No change. Previous report below. JLF-15 May 2013</p> <p>Baffle parts are temporarily stored in the West Bay, Shelving Unit 2. Two pallets are on the floor: left side=ACB (Storage Load 6006) and right side=Elliptical baffles and small parts (Storage Load 6031). Parts too large for pallets are on the lowest shelf, wrapped in plastic and strapped in tamper-evident tape (Storage Load 6007). ICS is complete for these items until they are placed into an already reserved HAM ISI Storage container. Sam Barnum is working with Lisa to ensure fit and safety of baffle-related items in the storage container.</p>			
Thermal Compensation-TCS	Mindy Jacobson	PC-ICS-SCD-SCP-PSD	
JLF-11 Sep 2013			
<p>I have not actually seen TCS parts in the SEI drawings of HAM ISI Storage Containers so this may be a problem.</p> <p>Last report below. JLF-15 May 2013</p> <p>In-vacuum components (ring heater, Hartmann Wavefront Sensor parts, cameras, CO2 laser, ZnSe window) and selected in-air parts will be stored under N2 purge. A portion of a HAM ISI Storage container is set aside for TCS.</p>			
Transmission Monitor Suspension-TMS	Lisa Austin	PC-ICS-SCD-SCP-PSD	
JLF-11 Sep 2013			
<p>Storage for the upper structures (aka Top Mass-Suspension) and telescopes will be provided in two HAM ISI Storage Containers shared with SUS. See D1300146 for details. Last report below. JLF-15 May 2013</p> <p>Two weldments for TMS Upper Structure are in physical custody and initial ICS work is complete. These structures are in the process of going through Clean and Bake, prior to assembly. The original shipping crates were saved.</p>			
Viewports-VP	Lisa Austin	PC-ICS-SCD-SCP-PSD	
No change. JLF-11 Sep 2013			
Last report below. JLF-15 May 2013			
92 viewports to be stored. Viewports will be binned for protection. They may be binned according to chamber to facilitate later install.			
Control and Data Systems-CDS	Richard McCarthy	PC-ICS-SCD-SCP-PSD	
No change. JLF-11 Sep 2013			
Discussion continues WRT whether it is wise to store electronics-related computers to avoid known start-up issues. Chassis, cables, and power distribution items are in ICS but there are a number of items not yet accounted for in ICS. All required jumbo plastic bags have been purchased			

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and are on-site. JLF-15 May 2013			
Core Optics Components-COC		Garilynn Billingsley	PC-ICS-SCD-SCP-PSD
<p>No change. JLF-11 Sep 2013 Last report below. JLF-15 May 2013</p> <p>GB has suggested (and I concur) that the best place to store COC maybe at CIT given the fact that lockable shelving suitable for large optics already exists at CIT, people with the expertise to exam the optics prior to shipment are at CIT, and storage at CIT will save us from at least a couple of rounds of shipping-related risk. Per GB email, 15 April 2013.</p>			
Data Acquisition-DAQ		Dave Barker	PC-ICS-SCD-SCP-PSD
<p>JLF-11 Sep 2013</p> <p>Racks have been populated, provided with desiccant and wrapped in plastic. Humidity indicator cards are visible for each rack and each rack has a BOM attached showing rack configuration and component serial numbers. LTS will take custody ASAP Last report below. JLF-15 May 2013</p> <p>Cards, cables and chassis will be stored. (Computers will not be stored. Note: this item under further discussion.) All of these items are out-of-vacuum and need to be stored in conditions suitable for electronics. Cards and cables will be binned and chassis will be racked. Racks will be plastic wrapped and wrap will contain desiccant. Bins and racks will be stored in the H2 electronics building. Theoretically, 3IFO LTS has physical custody and all items are in ICS. Storage bins are off-the shelf. Storage bags and desiccant will be procured along with storage supplies for other electronics items. JB and CR will complete an inventory shortly to make sure that all items are actually at LHO. Per interview with Dave Barker-16 April 2013.</p>			
Input Optics-IO		Guido Mueller and Dave Tanner	PC-ICS-SCD-SCP-PSD
	HAM Aux Suspensions and Optics-HAS	Keita Kawabe or Jeff Bartlett	PC-ICS-SCD-SCP-PSD
	?????		
	IO Mode Cleaner and Faraday Isolator	Keita Kawabe or Cheryl Vorvick	PC-ICS-SCD-SCP-PSD
	?????		
	IO Table-IOT	Joe Gleason	PC-ICS-SCD-SCP-PSD
<p>No change. JLF-11 Sep 2013 Last report below.</p> <p>IOT2R table and stand were delivered to LHO. They will remain in their boxes and go to X mid for storage. JLF-15 May 2013</p>			
	PSL IO Table Components	Rick Savage	PC-ICS-SCD-SCP-PSD
Installation-INS		John Worden or Jodi Fauver	PC-ICS-SCD-SCP-PSD
No change. JLF-11 Sep 2013			

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<p>Last report below. JLF-15 May 2013</p> <p>All components are believed to be in physical custody and initial ICS work has been completed. Many items have designated storage containers. In general, these items will not be put into 3IFO LTS until H1 install is complete.</p>			
I/O Sensing and Control-ISC			
	OMC Optical Table		PC-ICS-SCD-SCP-PSD
	TMS Optical Table	Corey Gray	PC-ICS-SCD-SCP-PSD
Pre-stabilized Laser-PSL			
	Outer Stabilization Loop	Peter King	PC-ICS-SCD-SCP-PSD
<p>Peter was at LHO in August and worked at consolidating parts to the crates at X Mid. I have not seen a report from him yet but expect one soon.</p> <p style="text-align: center;">Last report below. JLF-15 May 2013</p> <p>All components of the Outer Stabilization Loop are believed to be in physical custody. Some items (cables, photo diodes) appear to have initial ICS work complete.</p>			
	Pre-stabilized Laser	Rick Savage	PC-ICS-SCD-SCP-PSD
<p>PSL visitors were at LHO in August. 3IFO storage was worked on. One chiller was returned to a crate at X Mid. I am awaiting a more specific report on this activity. JLF-11Sep 2013</p> <p style="text-align: center;">Last report below. JLF-15 May 2013</p> <p>Benno pointed me toward some very useful documents and I was able to establish what I think is a reasonable list of PSL table components. After consulting with Betsy, I pulled DCC drawing numbers for the individual sub-assemblies put together prior to arrival at LIGO and for other components assembled in-situ. I uploaded drawings to the DCC and then worked on an ICS upload sheet for all the PSL components (LLO, LHO, 3IFO). I sent the documentation package to Dwayne (he had one suggestion WRT to part names, which I implemented) and Benno. I asked Benno to vet the ICS list to make sure I hadn't left out any significant parts. He will look at the info ASAP and get back to me. Once I have an OK, I will upload the parts to ICS.</p>			
Project Management-PM			
	Facilities Preparation and Storage Management-FMP	Jodi Fauver	PC-ICS-SCD-SCP-PSD
<p style="text-align: center;">No change. Last report below. JLF-15 May 2013</p> <p>All items are believed to be in physical custody but these items are not in ICS. Dwayne and I are consulting on a path forward. In most cases, no storage container will be required. LTS locations have been specified.</p>			
	Inventory Control System-ICS	Dwayne Giardina	

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<p>No change. JLF-11 Sep 2013 Last report below. JLF-15 May 2013</p> <p>Money has been requested to fix a number of known bugs and to make a few changes that will facilitate use of ICS for use with 3IFO LTS. Research has started to integrate a bar coding system into ICS using the Property Tag field. CIT already has a bar coding system complete with scanner in place and we will try to piggy-back on the extant technology.</p>			
Storage Design and Procurement-SDP		Jeff Lewis	
Seismic Isolation-SEI		Ken Mason	
BSC/HAM Internal Seismic Isolation-ISI		Hugh Radkins	PC-ICS-SCD-SCP-PSD
<p>No change. JLF-11 Sep 2013 Last report below. JLF-15 May 2013</p> <p>With the exception of large plates, all ISI parts are in physical custody. ICS work is in excellent shape. Storage and shipping containers have been designed and procured. As assembly of 3IFO ISIs is completed, storage containers will be transported to the LVEA. Work continues to provide a piped and monitored N2 flow from the LN2 boil-off. There will eventually be 5 BSC ISIs (in BSC ISI Storage containers), 1 HAM iLIGO Passive Stack (in a BSC ISI Storage container) and 5 HAM ISIs (in HAM Storage containers). There are 3 additional HAM ISI Storage containers: 1 will be used for HXTS, 1 will be used OMC/OFI and pods and 1 will be used for baffles and TCS.</p>			
Hydraulic External Pre-Isolator-HEPI		Hugh Radkins	
Hydraulic External Pre-Isolator-HEPI		PC-ICS-SCD-SCP-PSD	
<p>No change. JLF-11 Sep 2013 Last report below. JLF-15 May 2013</p> <p>All HEPI components are in physical custody and assembled into 44 units. The initial ICS work is complete. 5 HAM shipping containers are available to store HEPI: 9 units will fit into each container. Desiccant will be placed in each container and the containers will be stored in the VPW for the duration. Per Ken Mason email-16 April 2013</p>			
Suspension Systems-SUS		Norna Robertson	
Beam Splitter Suspension-BS		Betsy Weaver	
Beam Splitter Suspension-BS		PC-ICS-SCD-SCP-PSD	
<p>No change. JLF-11 Sep 2013 Last report below. JLF-15 May 2013</p> <p>1 BS stored in LVEA-West Bay-west end of shelving unit.</p>			
Bonding		Gerardo Moreno	
Bonding		PC-ICS-SCD-SCP-PSD	
NA?????			
Fiber Pulling and Welding		Doug Cook	
Fiber Pulling and Welding		PC-ICS-SCD-SCP-PSD	
NA?????			

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	HAM/OMC Suspensions-HXTS	Jeff Bartlett	PC-ICS-SCD-SCP-PSD
	<p>An additional HSTS (SRM) has been completed and moved to the Meat Locker. Sam has completed the design for housing these suspensions in available HAM ISI Storage Containers. See D1300146 for details. The base plates have been ordered and will be sent to me. iLIGO dog clamps will be used so will no need to be procured. We will look at hardware needs ASAP. JLF-11 Sep 2013</p> <p style="text-align: center;">Last report below.</p> <p>All parts are believed to be in physical custody and initial ICS work is complete. 2 HLTS (PR3-SR3) and 4 HSTS (MC1-MC2-MC3-PRM) are in LVEA-North Bay Meat Locker for temporary storage. These HXTS units will eventually be stored in a HAM ISI Storage container not needed by SEI. Sam Barnum is working on modifications to the container base so that it is possible to dog clamp the SUS appropriately. A second HAM ISI Storage container has been reserved for other SUS structures including OMC and OFI. The base plates, dog clamps and fasteners will need to be procured. JLF-15 May 2013</p>		
	Quadruple Suspensions-Quad	Betsy Weaver	PC-ICS-SCD-SCP-PSD
Not yet in assembly phase. JLF-11 Sep 2013			