

SUMMARY OF SUSPENSION FINAL DESIGN REVIEWS	
Norna A Robertson	9th April 2014
T1200463-v14	

Background information on these comments can be found in T1200492.

Mechanical								
Review #	Type of Suspension	Name of Review	Date	Document ref. (e.g. final design doc)	web page(s)	Report ref.	Comments	Review #
1	ETM/ITM	Final Design Review for the Mechanical Elements	2008	T1000286-v9, T1000404	https://awiki.ligo-wa.caltech.edu/aLIGO/Quad_Suspensions/FDR , http://www.eng-external.rl.ac.uk/advlgo/Reviews/Quad%20suspension%20FRR.htm		Formal report not completed. Authorisation to proceed was given. See item 7 for further review on this topic which supercedes this review.	1
2	ETM/ITM	Final Design Review (FDR) and Fabrication Readiness Review (FRR) for the Structural Weldments	April 2008	T1000286-v9, T1000410	https://awiki.ligo-wa.caltech.edu/aLIGO/Quad_Suspensions/FDR	L080026	Actions completed.	2
3	ETM/ITM	Monolithic Stage Final Design Review	Sept 2010	G1000785-v1 T1000337-v4		L1000357-v3	Essentially complete. Some documentation being completed with estimated date of Thanksgiving	3
4	ETM/ITM	Ear Fabrication Readiness Review	Jan 2010	T0900447		L1000003-v3	Actions completed	4
5	ETM/ITM	Quad Monolithic Damage Mitigation Review	Nov 2011 onwards	E1101098, T1100563		E1101098	E1101098 now updated to v8 and all actions closed, 9th April 2014.	5
6	ITM	Gas Damping Technical Review Board	Feb 2010 onwards	T1000667-v5, M1000030-v1		T1000175-v2	Redesigned thin CP has been implemented. Further gas damping mitigation is on liens list under FMP.	6
7	BSC Suspensions (ETM/ITM Quad & BS/FM)	Assembly Review	May-Sept 2011	T1100254-v11	https://awiki.ligo-wa.caltech.edu/aLIGO/BSC%20Suspensions%20%28quad%2C%20BS/FM%29%20Assembly%20Review	T1100254-v13	T1100254-v13 now uploaded (25 Feb 2014). All items are closed with exception of item B4 about modeling cross-coupling and its effect on control. This is ongoing work which will continue as part of interferometer controls work.	7
8	BSC Suspensions (ETM/ITM Quad & BS/FM)	Technical Review Board: Decision on Elimination of Eddy Current Dampers on Top Masses of Suspensions	June 2011	T1100342-v1		T1100342-v1	Actions completed	8
9	BS/FM	Final Design and Fabrication Readiness Review	Sept 2008	T080218-v2	https://awiki.ligo-wa.caltech.edu/aLIGO/BS_Suspension , http://www.eng-external.rl.ac.uk/advlgo/Reviews/bs_review.htm		Formal report not completed. Authorisation to proceed was given. See item 7 for further review on this topic which supercedes this review.	9
10	BS/FM	Review of Design and Procedure for Use of BS/FM Prism Jig	Feb 2012	E1000753-v4	https://awiki.ligo-wa.caltech.edu/aLIGO/Prism_jig_review	T1200105-v2	Actions completed	10
11	HLTS	Final Design Review	April 2010	T1000012-v1	https://awiki.ligo-wa.caltech.edu/aLIGO/HLTS_Design_Reviews#FDR	M1000126-v3	Software review was requested. Will be covered in acceptance review.	11
12	HSTS	Final Design Review	Oct 2009 - Jan 2010	T0900435-v3	https://awiki.ligo-wa.caltech.edu/aLIGO/IMC_Design_Reviews#FDR	M0900321	Actions done from T0900435.	12
13	OMC-SUS	Final Design Review	April 2009	T0900060-v1	https://awiki.ligo-wa.caltech.edu/aLIGO/OMC_Suspension/Final_Design_Review	L0900064-v5	Actions completed.	13
14	HLTS and HSTS	HLTS and HSTS Assembly Review	Nov 2011- Feb 2012	T1100593-v10		T1100593-v10	Actions completed	14
Electronics								
15	BOSEMs	Final Design Review and Fabrication Readiness Review	Feb-March 2008	T050111-v4	https://awiki.ligo-wa.caltech.edu/aLIGO/BOSEM_FRD_and_FRR	L080022-00	Actions completed.	15
16	AOSEMs	Final Design Review and Fabrication Readiness Review	June 2009	T0900286-v2	https://awiki.ligo-wa.caltech.edu/aLIGO/OSEMs	L0900116-v6	Documentation updated as captured in DCN E1300492. actions completed.	16
17	UK SUS Electronics Subsystems: Satellite Amplifier and OSEM Interface	Fabrication readiness review	July 2009	T0900261-v1		L0900141-v3	Actions completed.	17
18	Top Mass Stage (TOP) Driver Electronics (quad and triple): UK	Readiness for Fabrication Review	June 2009	T0900170-v1		L0900098-v4	Actions completed.	18
19	Triple Acquisition-Mode Driver Electronics: UK	Recommendation for Fabrication Review	Oct 2009	T0900315-v1		L0900209-v3	Actions completed.	19
20	Delivery of Electrostatic Drivers from UK	RODA	Nov 2009	M0900293-v1		M0900293-v1	Items delivered as per RODA.	20
21	ESD Cabling, Bonding, Soldering	Design review	July 2011	T1100349, T1100320, L1100158-v1	https://awiki.ligo-wa.caltech.edu/aLIGO/ElectroStaticDrive		Actions completed. T1100349 updated to v3. T1100320 updated to v4.	21
22	HAM Suspensions Electronics	Final Design Review	April 2010	T1000061-v6	https://awiki.ligo-wa.caltech.edu/aLIGO/HLTS_Design_Reviews#FDR	M1000126-v3	This item is covered under item 11 above (reviews were combined)	22
23	Output Mode Cleaner (OMC) Driver Electronics	Fabrication readiness review	Jan 2010			L1000020-v2	Actions completed.	23
24	TransMon Driver Electronics	Fabrication readiness review	Jan 2010			L1000021-v1	Actions completed.	24
25	PUM Driver Electronics	Fabrication readiness review	Sept 2009			L0900169-v4	Actions completed.	25
26	Coil Driver and Monitor Electronics: Upper Intermediate Mass Stage (UIM)	Fabrication readiness review	May 2009			L0900093-v3	Actions completed.	26