aLOG LLO

detchar meeting 2015/04/07



Link @

Violin mode frequencies redux

(In an e-mail Angus pointed out a typo in the table in this entry and clarified that I should cite only the December 2013 EY in-air measurements, which supersede those of November 2013, but I was too slow to make the fixes and exceeded the 24-hour editing window. So below is the revised table.)

https://alog.ligo-la.caltech.edu/aLOG/index.php?callRep=17509

LLO already reported about the Violin mode frequency (Aug. 2014) (just commented same study was done in LHO at 2nd Apr.)

DARM split

In-air freq	l est mass	Fiber	DARM freq(s)	0.0709 Hz	
499.2 Hz	EY	BL	499.6002 Hz, 499.6711 Hz		
502.7 Hz	EY	BR	503.1044 Hz, ?		
508.75 Hz	IX	FL	508.9755 Hz, 509.0648 Hz	0.0893 Hz	
508.9 Hz	IY	BL	508.4244 Hz, 508.5167 Hz	0.0923 Hz	
509.6 Hz	IY	BR	509.4556 Hz, 509.5409 Hz	0.0853 Hz	
510.5 Hz	IX	BL	510.2139 Hz, 510.2878 Hz	0.0739 Hz	
511.6 Hz	IY	FL/FR	510.9467 Hz, 511.0208 Hz	0.0741 Hz	
511.6 Hz	IY	FL/FR	511.5171 Hz, 511.5669 Hz (?)	0.0398 Hz (?)	
513 Hz	EX	BL/FL	513.1267 Hz, 513.2194 Hz (?)	0.0927 Hz (?)	
513 Hz	EX	BL/FL	513.2300 Hz, 513.3278 Hz (?)	0.0978 Hz (?)	
514.8 Hz	EY	FL/FR	515.3431 Hz, 515.4184 Hz (?)	0.0771 Hz (?)	
514.8 Hz	EY	FL/FR	515.3695 Hz, 515.4373 Hz (?)	0.0678 Hz (?)	
515 Hz	EX	BR	515.5439 Hz, 515.6205 Hz (?)	0.0766 Hz (?)	
515.5 Hz	IX	BR/FR	515.8611 Hz, ?		
515.5 Hz	IX	BR/FR	515.9453 Hz ?		
517 Hz	EX	FR	516.9044 Hz, 516.9739 Hz	0.0695 Hz	

Frequency	Average	Alternative 1	Atternative 2	DARM split	Alternative DARM split 1	Alternative DARM split 2	Test mass	Fiber	In-air Freq
500,054	500.133			0.08			ITMX	BR	501.3
500.212									
501.092	501,150	501.173		0.06	0.08		ITMX	FR	502.8
501.208									
501.254	501.352	501.329		0.10	0.12		ITMX	DL.	501.5
501.450									
502.621	502.683			0.06			ITMX	FL	504.2
502.744									
503.007	503.063			0.06			ITMY	FR	500.8
503.119									
504.803	504.837			0.03			ITMY	FL	502.2
504.872									
501.606	501,678	501.644		0.07	0.04		ITMY	BR	499.9
501.749									
501.682	501.747	501.780		0.06	0.03		ITMY	BL.	501.2
501.811									
507.992	508.069	508.001		0.08	0.01		ETMY	FR	507.6
508.146									
508.010	508.108	508.176	508.217	0.10	0.03	0.07	ETMY	FL	507.9
508.206									
508.220	508.254		508.213	0.03		0.01	ETMY	BL	508.0
508.289								122	
508.585	508.623			0.04			ETMY	BR	508.1
508.661									
505.587	505.647			0.06			ETMX	BL or F	R 505.0
505.707									
505.710	505.758			0.05			ETMX	BL or F	R 505.0
505.805									
506.922	507.041	507.058		0.12	0.14		ETMX	BR or I	L 506.5
507.159									
507.194	507.293	507.275		0.10	0.12		ETMX	BR or I	L 506.5
507.391									