GWADW Controls Workshop										
NOTE: EAG	CH TIME	SLOT	MUST INCL	LUDE TIME FOR DISCUSSION						
Session	Day	Start	End D	turation Session Title	Topic/Talk	Person	Confirmed time slot is ok?	Related Documents and information		
	Mon	11:55	12:20	0:25 Controls Workshop Goals	General Introduction	Dennis Coyne/Fabrice Matichard	Y	G1500454 Controls Workshop at the GWADW 2015		
A	Tues	9:00	10:30	1:30 System identification and modern Control	Coordinating/Leading discussion	Dennis Coyne/Fabrice Matichard/Brett Shapiro	Y			
		9:00	9:15	0:15	Overview of System ID techniques & setting the session goals	Dennis Coyne	Y			
		9:15	9:35	0:20	System ID for Suspensions & Seismic Isolation Systems	Brett Shapiro	Y			
		9:35	9:55	0:20	System ID at VIRGO	Bas Swinkels				
		9:55	10:15	0:20	Cross couplings in suspensions and seismic platforms	Anamaria Effler	Y			
		10:15	10:30	0:15	Sys ID for Modern Control	Combined effort of Brett, Jo, Giancarlo and Sebastien				
В	Tues	11:00	12:30	1:30 Optimal feedback	Coordinating/Leading discussion	Dennis Coyne/Fabrice Matichard	Y			
		11:00	11:20	0:20	Introduction talk (review of modern control tools, state space methods, their pros and cons)	Den Martynov	Y			
		11:20	11:40	0:20	Discussion and comparison of classical and modern control techniques	Christophe Collette	Y			
		11:40	11:55	0:15	Summary of the Caltech Workshop	Gabriele	Y			
		11:55	12:15	0:20	Kalman filtering for vibration isolation	Jo van den Brand				
		12:15	12:30	0:15	Suspension Controls, including thoughts on applicability of modern controls	Brett Shapiro	Y			
С	Tues	4:00	6:00	2:00 Noise feedforward and subtraction	Coordinating/Leading discussion	Gabriele Vajente	Y			
		4:00	4:10	0:10	Introduction and setting the stage	Gabriele Vajente	Y			
		4:55	5:15	0:20	Sensor correction in seismic and suspensions	Fabrice	Y			
		4:10	4:35	0:25	Feed forward of auxilairy degrees of freedom	Bas Swinkels				
		5:15	5:30	0:15	Wiener filtering, environmental noises	Keita Kawabe?				
		4:35	4:55	0:20	Feedforward at LLO and 40m, adaptive feed forward	Denis Martynov	Y			
		5:30	6:00	0:30	Data mining tools: hot to find channels that can be used for subtraction; how to tackle non stationary noises and couplings?	Gabriele Vajente	Y			
D	Wed	9:00	10:30	1:30 Control approaches to optimize lock acquisition	Coordinating/Leading discussion	TBD				
		9:00	9:05	0:05	Set the goals	Dennis Coyne/Fabrice Matichard	Y			
		9:05	9:15	0:10	Noise modeling for interferometer control	Chris Wipf				
		9:15	9:30	0:15	Mode hoping in low finess cavities	Paul Faulda				
		9:30	9:50	0:20	Overview of lock acquisition problems and potential approaches	Sheila Dwyer				
		9:50	10:10	0:20	Simulation in support of controls design	TBD				
		10:10	10:30	0:20	Bayesian approach (Kalman filtering) to the locking problem for high finesse suspended optical cavities	Manuel Marchiò and Giancarlo Cella				
E	Wed	4:00	5:30	1:30 Interferometer stability (Keeping the IFO Lock)	Coordinating/Leading discussion	Sheila Dwyer	Y			
		4:00	4:05	0:05	Set the goals	Dennis Coyne/Fabrice Matichard				
		4:05	4:30	0:25	Overview of lock loss events/causes (LHO/LLO/Virgo)	TBD				
		4:30	4:50	0:20	Mitigation of disturbances caused by wind on the detectors	Krishna	Y			
		4:50	5:10	0:20	TCS controls approaches to prevent lock loss, or mitigate the effects of lock loss	Alastair Heptonstall				

		5:10	5:30	0:20	LIGO/Virgo earthquake studies and controls configuration	Sebastien, in collaboration with Michael Coughlin, Paolo Ruggi	Y	
F	Wed	6:00	7:00	1:00 Next Generation Control System Architecture	Coordinating/Leading discussion	Jamie Rollins	Y	
		6:00	6:05	0:05	Short Introduction, goals, ~5 min	Dennis	Y	
		6:05	6:30	0:25	Requirements and features of a next generation control system, ~15 min	Jamie Rollins	Y	
		6:30	7:00	0:30	Pros and Cons of the LIGO control system, ~15 min	Rolf Bork		
-	Thu	11:00	12:00	1:00 Controls Workshop Summary		Fabrice Matichard & Dennis Coyne		
				Controls related Posters				
					Wavefront Sensing Using Digital Interferometry	Tarquin Ralph		
					iKAGRA Input Optics	Masayuki Nakano		
					Numerical simulation of modern controls (combining conventional PID with Kalman state estimation and a neural-network based reinforcement learning agent)	Lorenzo Cerboni, Jan Harms		