

PROGRAM 5/5

Sunday PM May 10 6PM - 9 PM **Evening Registration**

Monday AM
May 11
8 AM - 10 AM

Registration and Continental Breakfast

Setting the Stage

Chair: B. Sathyaprakash

9:00 S. Rowan (Glasgow) Report From Roadmap Committee

9:25 Discussion

9:30 S. Whitcomb (Caltech) Narrowing The Field

9:55 Discussion

Science Goals for Advanced Detectors

Chair: D. Tanner

10:00 B. Sathyaprakash (Cardiff) What Science Would Be Interesting With Third Generation Detectors?

10:25 Discussion

10:30 C. Ott (Caltech) The ~0.1 - 1.5 Khz Window: Studying The Physics And Dynamics Of Matter At Extreme Densities And Energies With Gravitational Waves

10:55 Discussion

11:00 C. Miller (Maryland) Astrophysics With Few-Hz Gravitational Waves

11:25 Discussion

11:30 A. Kusenko (UCLA) Gravitational Waves From Supersymmetry In The Early Universe

11:55 Discussion

12:00 R. Raghavan (Virginia Tech) Gravitational Wave Astronomy Via Hypersharp Neutrino Resonances

12:25 Discussion

12:30 Adjourn

Monday PM **Lessons Learned While Commissioning Advanced Detectors**

Chair: H. Lueck

3:00 M. Zucker (MIT) Enhanced LIGO

3:50 Discussion

4:00 E. Campagna (INFN Firenze) Virgo+: Review Of Commissioning Work Of Past Year

4:25 Discussion

4:30 Break

5:00 P. Pappo (INFN Roma) Virgo+: Monolithic Suspensions For The Interferometer Virgo

5:25 Discussion

5:30 K. Kuroda CLIO

5:55 Discussion

6:00 Adjourn

7:00 **Reception**

PROGRAM 5/5

Tuesday AM	Trades for Advanced Detector Technologies	
May 12:	Chair: S. Whitcomb	
8:30	R. Adhikari (Caltech)	Upgrades Of The Advanced LIGO Detectors
9:00	Discussion	
9:30	Break	
10:00	H. Lueck (AEI Hannover)	Third Generation Techniques For The Einstein Telescope
10:30	Discussion	
11:00	S. Hild (Birmingham)	Design Choices For The Core Optics Of Advanced Detectors
11:30	Discussion	
12:00	Adjourn	
Tuesday PM	Optical Configurations and Techniques	
	Chair: A. Freise	
3:10	S. Gossler (AEI)	The AEI 10m Prototype Interferometer
3:35	Discussion	
3:40	F. Kawazoe (AEI)	Experimental Plans For The AEI 10m Prototype
3:55	Discussion	
4:00	K. Somiya (Caltech)	Conceptual Design Of The Hannover 10m Interferometer For Sub SQL Measurement
4:25	Discussion	
4:30	Break	
5:00	H. Mueller-Ebhard (Hannover)	Review Of Quantum Non-Demolition Schemes For The 3rd Generation GW Detectors
5:25	Discussion	
5:30	C. Wipf (MIT)	Experimental Progress With The Quantum Noise Limit
5:55	Discussion	
6:00	K. Yamamoto (AEI Hannover)	Radiation Pressure Noise Experiments In Hannover
6:25	Discussion	
6:30	Adjourn	
Wednesday AM	Newtonian Noise	
May 13	Chair: R. DeSalvo	
8:30	J. Harms (Minnesota)	Underground Measurements
8:55	Discussion	
9:00	Jo Van der Brand (NIKHEF)	Simulations And Site Requirements
9:25	D. Rabeling (NIKHEF)	Finite Element Analysis Of GGN
9:30	Discussion	
9:35	Break	
10:00	R. DeSalvo (Caltech)	Noisy Metals
10:25	Discussion	
10:30	S. Hild (Birmingham)	Xylophones And Suspensions
	R. DeSalvo (Caltech)	
	Discussion	
10:55	R. DeSalvo (Caltech)	Why Do We Need To Develop Strainmeters And Dilatometers?
11:00	General Discussion	What Has Happened Here So Far And Are There Items That Have Arisen That Should Be Discussed During The Workshop
12:30	Adjourn	

PROGRAM 5/5

Wednesday PM	Space Antennae	
	Chair: G. Mueller	
3:30	G. Mueller (Florida)	LISA: An Update On The Long Baseline Interferometry
3:55	Discussion	
4:00	P. McNamara (ESA)	LISA Pathfinder
4:25	Discussion	
4:30	Break	
5:00	M. Hewitson (AEI Hannover)	Characterization Of LISA Pathfinder
5:25	Discussion	
5:30	G. Harry (MIT)	Big Bang Observer
5:55	Discussion	
6:00	Adjourn	
7:30	Banquet	
Thursday AM	Advances In Thermal Noise, Coatings I	
May 14	Chairs: G. Harry, S. Rowan	
8:00	I. Martin (Glasgow) C. Schwarz (Jena)	Status Of Loss Studies On Current IBS Coatings At Low Temperature
8:25	Discussion	
8:30	N. Morgado (LMA)	Coating Quality Factor Research On Going At LMA
8:55	Discussion	
9:00	E. Cesarini (Urbino)	Coach: The Status Of Art In Coating Characterization
9:25	Discussion	
9:30	Break	
10:00	K. Yamamoto (AEI Hannover)	Coating Thermal Noise Of A Finite-Size Cylindrical Mirror
10:25	Discussion	
10:30	A. Villar (Caltech)	TNI Measurements Of Thermal Noise In Optimized Coatings
10:55	Discussion	
11:00	Y. Chen (Caltech)	New Coating Designs To Minimize Thermal Noise
11:25	Discussion	
11:30	A. Freise (Birmingham)	Reducing Thermal Noise In Interferometry: The Prospects Of Optimized Beam Shapes And Higher-Order Laguerre-Gauss Modes
11:55	Discussion	
12:00	Extended Discussion	
12:30	Adjourn	

PROGRAM 5/5

Thursday PM	Advances in Thermal Noise, Coatings II	
	Chairs: S. Rowan, G. Harry	
3:00	G. Hammond (Glasgow)	Quasi-Monolithic Suspension Design
3:25	Discussion	
3:30	P. Murray (Glasgow)	Silicate Bonding
3:55	Discussion	
4:00	R. Nawrodt (Glasgow)	ET Suspension Design
4:25	Discussion	
4:30	Break	
	Advances in Cryogenics	
	Chair: K. Kuroda	
5:00	W. Johnson (LSU)	Lessons For Cryogenic Detectors
5:25	Discussion	
5:30	S. Schwarz (Jena)	Mechanical Loss Measurements At Low Temperatures Of Coating And Bulk Materials
5:55	Discussion	
6:00	T. Briant (Kastler Brossel, Universite P. et M. Curie)	High Sensitivity Interferometric Measurements In Cryogenic Environment: Optomechanical Correlations And Laser Cooling
6:25	Discussion	
6:30	K. Kuroda (ICRR)	Hot Radiation Reflected By Cold Wall In A Cryogenic Interferometer
6:55	Discussion	
7:00	Adjourn	
Friday AM	Innovative Options and Advanced Detectors R&D I	
May 15	Chair; B. Willke	
8:00	H. Lueck (AEI Hannover)	Diffraction Optics: Progress And Issue What Needs To Be Done
8:35	Discussion	
8:55	A. Khalaidovski (AEI Hannover)	Squeezed Light: What Is Possible And What Is Worth Achieving
9:30	Break	
10:00	Discussion	What Needs To Be Done
10:20	M. Evans (MIT)	Parametric Instability Control
10:40	C. Zhao (UWA)	Parametric Instability Control
11:00	Discussion	What Needs To Be Done
11:15	C. Man (Nice)	Lasers: What Is Possible And What Is Worth Achieving
11:50	Discussion	What Needs To Be Done
12:10	Adjourn	
Friday PM	Innovative Options and Advanced Detectors R&D II	
	Chair: S. Whitcomb	
3:00	Y. Chen (Caltech)	Atom Interferometer GW Detector: How And When
3:35	Discussion	What Needs To Be Done
3:55	K. Somiya (Caltech)	Displacement Noise Free Interferometry: True Potential
4:30	Break	
5:00	Discussion	What Needs To Be Done
5:20	K. Yamamoto (AEI Hannover)	Effect Of Energy Deposited By Cosmic-Ray Particles On Interferometric GW Detectors
5:55	Discussion	
6:15	Adjourn	