PACIFIC INSTITUTE OF THEORETICAL PHYSICS

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PROBING the MYSTERY:
THEORY & EXPERIMENT in QUANTUM GRAVITY

Galiano Island 17-20 Aug 2015

SCHEDULE

SUNDAY, 16 AUG 2015

18.00	***RECEPTION***	
19.30	***DINNER***	

MONDAY, 17 AUG 2015

07.30	***BREAKFAST***	
08.20	**Brief welcome and Information**	
08.30	**M ASPELMEYER**	Quantum control of levitated massive mechanical systems: a new approach for gravitational quantum physics
09.10	**E ADELBERGER**	Lab tests of gravity & probes for ultra-weak forces
09.50	**30 min Discussion session**	
10.20	***BREAK***	
10.40	**PCE STAMP**	The Correlated Worldline Theory of Quantum Gravity
11.20	**B-L HU**	Gravitational Cat States
12.00	**30 min Discussion session**	
12.30	***LUNCH***	
14.00	**Y CHEN**	Testing QM and Gravity using low-frequency mechanical oscillators
14.40	**M ROMERO-ISART**	Towards macroscopic quantum superpositions of levitated superconducting spheres
15.20	**30 min Discussion session**	
15.50	***BREAK***	
16.00	**RM WALD**	State vector reduction in Quantum Field Theory
16.40	**S GIDDINGS**	Black Holes & Fundamental Theory
17.10	**40 min Discussion session**	
19.00	***DINNER***	

TUESDAY, 18 AUG 2015

07.30 ***BREAKFAST***

08.30	**A BASSI**	Wave function collapse & Gravity
09.10	**S ADLER**	Is the physical metric a real number?
09.50	**30 min Discussion session**	

10.20 ***BREAK***

10.40	**J HARTLE**	One bubble to rule them all
11.20	**A BARVINSKY**	Cosmological initial conditions: new type of hill-top inflation from CFT driven cosmology

12.00 **30 min Discussion session**

12.30 ***LUNCH***

14.00	**I PIKOWSKI**	Universal decoherence due to gravitational time dilation
14.40	**C GOODING**	Bootstrapping time dilation decoherence
15.20	**40 min Discussion session**	

16.00 ***FREE AFTERNOON &/or BODEGA RIDGE HIKE***

19.00 ***WORKSHOP BANQUET***
with a MUSICAL PERFORMANCE

WEDNESDAY, 19 AUG 2015

07.30 ***BREAKFAST***

08.30	**J HOGAN**	Tests of gravity & the quantum superposition principle using atom Interferometry
09.10	**H MUELLER**	Probing suppressed "5th forces" with atom interferometry
09.50	**30 min Discussion session**	

10.20 ***BREAK***

10.40	**JF DONOGHUE**	Infrared Quantum Gravity
11.20	**D LITIM**	Fixed Points of quantum gravity.
12.00	**30 min Discussion session**	

12.30 ***LUNCH***

14.00	**C BURGESS**	EFT and gravitational response for dark vortices and other sources
14.40	**T SOTIRIOU**	Lorentz violations, causality, and black holes."

15.20 **40 min Discussion session**

16.00 ***FREE AFTERNOON***

19.00 ***DINNER***

THURSDAY, 20 AUG 2015

07.30	***BREAKFAST***	
08.30	**S-P MIAO**	Electrodynamic effects of inflationary gravitons
09.10	**R WOODARD**	A quantum gravitational model for inflation
09.50	**30 min Discussion session**	
10.20	***BREAK***	
10.40	**S CARLIP**	Gravitational microlensing and vacuum fluctuations
11.20	**R. JACKIW**	A new paradigm for Quantum spontaneous symmetry breaking?
12.00	**Extended Discussion session (1 hr)**	
13.00	***LUNCH***	
14.30	**ANY OTHER BUSINESS**	
17.00	***DINNER***	

Please note that his schedule is subject to modification, depending on how things develop during the meeting. Extra discussion sessions may well be organized.