

THEO MURPHY INTERNATIONAL SCIENTIFIC MEETING

The Newtonian constant of gravitation, a constant too difficult to measure?

Thursday 27 – Friday 28 February 2014

Organised by Dr Terry Quinn CBE FRS, Professor Clive Speake and Professor Jun Luo

DAY 1				DAY 2			
SESSION 1 Introduction and background		SESSION 2 Results from recent determinations of G		SESSION 3 How do we understand and deal with widely dispersed values of G		SESSION 4 Proposals for future work and open discussion	
09.00	Welcome by Royal Society & lead organiser						
09.05	Gary Gibbons The role of G in fundamental physics	13.30	Harold Parks G with a suspended laser interferometer	09.00	George Gillies The large masses in measurements of G: some examples and considerations	13.45	Jun Luo Future G work at HUST
09.30	Discussion	14.00	Discussion	09.40	Discussion	14.15	Discussion
09.45	Jens Gundlach G measured with a rotating torsion balance	14.15	Terry Quinn G using a torsion-strip balance	10.00	Jim Faller Precision measurement: the <i>Sine Qua Non</i> for big G determinations	14.30	G. M Tino G measured using atom interferometry
10.15	Discussion	14.45	Discussion	10.30	Discussion	15.00	Discussion
10.30	Coffee	15.00	Tea	10.45	Coffee	15.15	Tea
11.00	Stephan Schlamminger Measurement of G using 13 tons of mercury	15.30	Riley Newman A measurement of G using a cryogenic torsion pendulum	11.15	David Bartlett Can the dispersion of G results be explained by gravitational theory?	15.45	Terry Quinn/ Clive Speake How to resolve the present impasse?
11.30	Discussion	16.00	Discussion	11.45	Discussion		
11.45	Jun Luo G using a torsion pendulum time of swing	16.15	Clive Speake Systematic effects in G experiments	12.00	Barry Wood How CODATA deals with discrepant data	16.30	Summary of discussions and closing remarks
12.15	Discussion	16.45	Discussion	12.30	Discussion		
12.30	LUNCH	17.00	CLOSE	12.45	LUNCH	17.00	CLOSE