

BIPM Metrology Summer School 2008

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Objectives: provide an opportunity for future leaders of international metrology to obtain an overview of our field, and to establish the essential personal links and networks that will be useful for them and the whole community as their careers progress

Invited Nobel laureates

Prof Sir Harry Kroto
Prof William Phillips
Prof Klaus von Klitzing

Special guest

Mrs Dava Sobel, author of "Longitude"

and more than forty teachers, chosen among the best Metrology world experts

Main themes:

From classical SI to new SI
The international organization of metrology
Metrology in Physics and its applications
Metrology in Chemistry and its applications

Visits:

LNE (Trappes): 6 spots
BIPM: 5 spots
Paris Observatory (Cassini room, La Grande Galerie)

Other activities:

Workshops
Poster session
Picnic lunches at the BIPM
Summer School party

and warm and friendly atmosphere for two weeks...

Students:

Directors of NMIs were requested to nominate members of their staff by 31 January 2008.
92 students were selected in February 2008.

Starting time	Sunday 29 June 2008	Monday 30 June 2008	Tuesday 1 July 2008	Wednesday 2 July 2008	Thursday 3 July 2008	Friday 4 July 2008	Sat / Sun 5/6 July 2008	Monday 7 July 2008	Tuesday 8 July 2008	Wednesday 9 July 2008	Thursday 10 July 2008	Friday 11 July 2008
8:15 AM		Registration at the BIPM	R. Davis Mass measurement	R. Thalmann Dimensional metrology	Visit, LNE* Trappes	T. Witt Electricity		M. Stock Watt balance	A. Bauch μ -wave clocks and fountains	Visit, Paris Observatory*	P. Andreo Medical applications of ionizing radiation	K. von Klitzing QHE
9:15 AM		Welcome	S. Bell Humidity		Electricity, High Frequencies			K. Fujii Avogadro Project	P. Lomonde Combs and optical clocks	Introduction by D. Egret OP President	L. Karam Radioactivity	B. Wood CODATA
10:15 AM		Coffee break BIPM	Coffee break BIPM	Coffee break BIPM	Thermophysical properties of materials	Coffee break BIPM		Coffee break BIPM	Coffee break BIPM	D. Sobel Longitude	Coffee break BIPM	Coffee break BIPM
11:00 AM		M. Himbert SI units	M. Sargent Introduction to chemical Metrology	A. Bristow Biological standards	Nanometrology	J. Decker Nanotechnology		F. Ahlers Quantum electrical standards	P. Tavella Time scales	P. Wolf New clocks and fundamental physics	P. Andreo Dosimetry	B. Wood New SI
12:00 AM		A. Steele Uncertainties	M. Sargent Reference materials	A. Henrion Methods for organics	Quantum Metrological Triangle	H. Kroto Nanotubes		S. Giblin SET	BIPM visit The five BIPM Scientific Sections		BIPM visit The five BIPM Scientific Sections	Conclusions
1:00 PM		Lunch BIPM	Lunch BIPM	Lunch BIPM	Lunch BIPM	Lunch BIPM	Free	Lunch BIPM	Lunch BIPM	Lunch BIPM	Lunch BIPM	Lunch BIPM
2:00 PM												
2:30 PM		A. Samuel International organization of metrology	BIPM visit The five BIPM Scientific Sections	R. Steiner Design of an experiment (Watt balance)	R. Matschat Instrumental methods for inorganics	BIPM visit The five BIPM Scientific Sections		W. Phillips Cold atoms, Bose-Einstein Condensation	BIPM visit The five BIPM Scientific Sections	M. Mariassy Electrochemis- try	J. Zwinkels Photometry and Radiometry	
3:30 PM		Tea break BIPM	Tea break BIPM	Tea break BIPM	Tea break BIPM	Tea break BIPM		Tea break BIPM	Tea break BIPM	Tea break BIPM	Tea break BIPM	Tea break BIPM
4:15 PM	Registration at the NOVOTEL		Chemistry P. Taylor N. Majcen	Chemistry P. Taylor N. Majcen		M. Milton Gas metrology methods		Tea break BIPM	Electricity N. Fletcher B. Wood	L. Thienpont Laboratory medicine	W. Unger Surface analysis	
5:15 PM		Students' posters	Monte- Carlo "Uncertainty made easy" A. Steele, J. Decker	Monte- Carlo "Uncertainty made easy" A. Steele, J. Decker	J. Fischer Thermometry	M. Milton Air quality, Global warming		Electricity N. Fletcher B. Wood	QS, KCDB, Accreditation, ISO Guide 34 M. Sargent C. Thomas D. Pierre	S. Wise Food	H. Schimmel DNA and proteomics	
6:15 PM		Free	Free	Free	Free	Free		Free	Free	Free	Free	Free
7:00 PM	Ice-breaker NOVOTEL	Dinner NOVOTEL	Dinner NOVOTEL	Dinner NOVOTEL	Dinner NOVOTEL	Dinner NOVOTEL		Dinner NOVOTEL	Dinner NOVOTEL	Dinner NOVOTEL	Summer School Party	

Workshop: 2 parallel sessions with short talks, practical activities and discussion

Students' posters: free presentation of posters brought by the students

* partnership with the Laboratoire National de Métrologie et d'Essais (LNE) and the Paris Observatory (OP)