



BIPM, PAVILLON DE BRETEUIL, F-92312 SÈVRES CEDEX

CCRI(I) Seminar*

Wednesday 21 May 2003 16:00

Salle A, Pavillon du Mail

Radiometry and dosimetry in the energy range from 1 keV to 60 keV using synchrotron radiation

with presentations on the

Experimental facilities at BESSY II

– Dr Gerhard Ulm (PTB)

The PTB department 7.1 “Photon radiometry” operates a laboratory at the electron storage ring BESSY II for radiometry from the UV to the X-ray range. The storage ring is used as calculable broadband continuum source (primary source standard) for the calibration of energy-dispersive X-ray detectors. Continuously tunable monochromatized synchrotron radiation with photon energies up to 60 keV from bending magnets and a superconducting 7 T wavelength shifter in combination with primary detector standards (cryogenic electrical-substitution radiometers or a free-air ionization chamber) enables quantitative radiometric and dosimetric measurements. An overview of the facilities in the X-ray range will be given.

Dosimetric experiments at BESSY II

– Dr Hans-Michael Kramer (PTB)

The PTB department 6.2 "Dosimetry for radiotherapy and diagnostic radiology" realizes and disseminates dosimetric units using reference fields and the appropriate dosimetric procedures. The availability of mono-energetic photon radiation beams allows either new kinds of experiments to be conducted or a considerable improvement in the accuracy of known experiments. Experiments can be aimed at determining basic data such as interaction coefficients or instrument properties. Experiments performed so far at BESSY II and possible future ones will be presented.

* attendance only by prior arrangement. Please contact Dr P.J. Allisy-Roberts, CCRI Executive Secretary, using allisy-roberts@bipm.org by Friday 16 May.