NPL Primary Standard Cavity Chambers for Co-60 Air Kerma
Re-evaluation of Correction Factors

NPL is preparing to introduce new primary standard cavity chambers for Co-60 air kerma, with calibrations traceable to this new standard scheduled from Autumn 2004 onwards. Wall (and other) corrections for the new NPL standard will be calculated using EGSnrc Monte Carlo.

Corrections for the existing NPL cavity standard chambers have been recalculated using EGSnrc. A comparison of these new values with the existing corrections (which were obtained using EGS4) will be reported at the CCRI(I) meeting in May 2003.

In principle NPL could make one change to its air kerma standard in 2003, to reflect the revised corrections, followed by another change in 2004, on the introduction of the new standard. However in practice, we plan to merge these changes and change the NPL air kerma standard only in 2004.

In general, we recognise that users prefer us to minimise the number of changes to standards. This preference is all the stronger in the UK at present, since the dosimetry protocol for electron beam radiotherapy, based on the existing NPL air kerma standard, is due to be superseded by a protocol based on the NPL absorbed dose standard, sometime in 2003.

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NPL
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