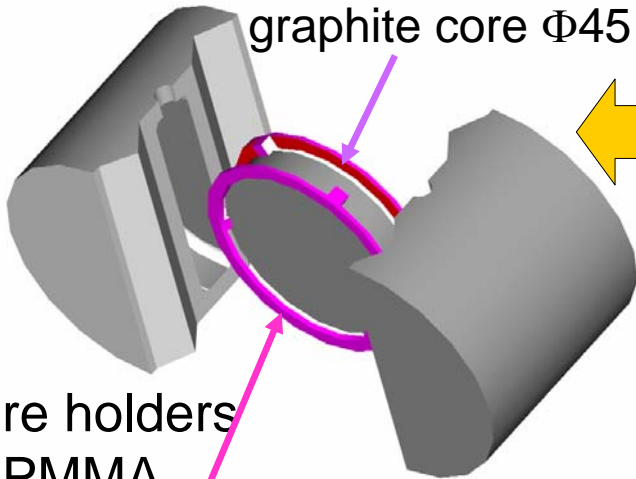


# Recent advances on the BIPM Absorbed Dose

...that is currently being made

graphite phantom & graphite core  $\Phi 45$  mm

core holders in PMMA



Approach...

Low teMPerature loSs;  
TherEfore vacuUm is applled and conTaCts are minimizeD;

Homogeneous temperature;

- 1) IrraDiate the whOle graPhite phanTom = keEp the Graphite phanToM sMaLleR than thE beAm siZe.
- 2) Assure tHermaL coNtact betwEen frOnt and back surFACES Of the GraPhite pHaNtom

RoBust and diSmouNTable.

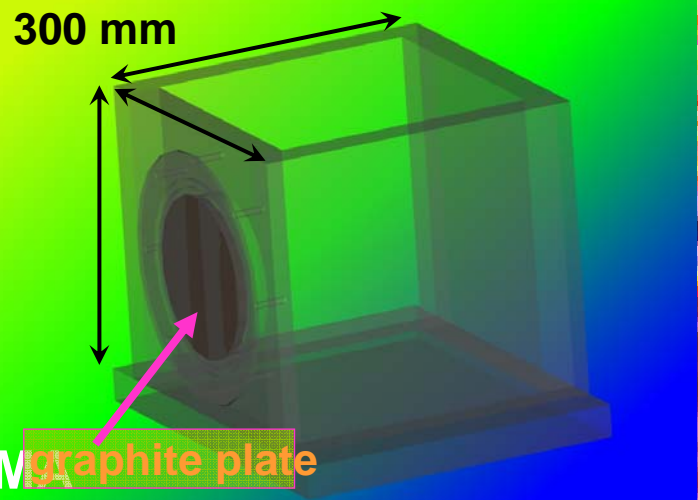
$$D_W = I_W N_{D,W} = I_W N_{D,g} \left( \frac{N_{D,W}}{N_{D,g}} \right)^{MC} = D_g \frac{I_W}{I_g} \left( \frac{N_{D,W}}{N_{D,g}} \right)^{MC}$$

The dose in graphite,  $D_g$ , is measured using the calorimeter.

$I_g$  is obtained using an ionization chamber placed in the same graphite phantom.

same ionization chamber in a

Combining ionometric measurements and Monte Carlo simulations, the corresponding dose in water can be obtained



Vacuum phantom in PMMA graphite plate