

## FINAL VERSION

### Consultative Committee for Thermometry

#### Recommendation T 3 (2005) to the CIPM

##### Creation of a *mise en pratique* of the definition of the kelvin

The Consultative Committee for Thermometry,

##### considering

- that the International Temperature Scale of 1990 (ITS-90) and the Provisional Low-Temperature Scale of 2000 (PLTS-2000) are internationally accepted practical temperature scales defining temperatures  $T_{90}$  and  $T_{2000}$  that are good approximations to thermodynamic temperature,  $T$ ,
- that the uncertainty of realization of certain thermometric fixed points is limited by ambiguities in the defined isotopic composition of the materials for these fixed-points,
- that clear definitions of isotopic reference compositions will assist in the establishment of internationally compatible Calibration and Measurement Capabilities,
- that recent thermodynamic temperature measurements have refined the best estimates of the differences  $T - T_{90}$  together with their uncertainties,
- that the creation of a formal *mise en pratique* of the definition of the kelvin would considerably simplify and clarify statements and recommendations of the CCT concerning the realization of the definition of the kelvin and the implementation of practical temperature scales,

##### recommends

- the creation of a *mise en pratique* of the definition of the kelvin containing, in due course, recommendations concerning the direct determination of thermodynamic temperature, the text of the ITS-90, the text of the PLTS-2000, a Technical Annex of material deemed essential for the unambiguous realization of both the ITS-90 and the PLTS-2000, and a section discussing the differences  $T - T_{90}$  and  $T - T_{2000}$  together with their uncertainties,
- approval by the CIPM of the text entitled “Technical annex for the *mise en pratique* of the definition of the kelvin”, adopted by the CCT at its 23<sup>rd</sup> meeting, as initial entry to the Technical Annex.