

RAS response to the International Earth Rotation and Reference Systems Service (IERS) survey on the redefinition of UTC

- a. If the definition is changed, then the name of UTC should also change. While the proposed re-definition will make only minor differences over the next few decades, it is a major conceptual change. It would decouple UTC from Earth rotation as represented by the UT1 timescale - and thereby break away from the original concept of universal time introduced by the IAU in 1925. We believe that it is poor practice to make changes that invalidate existing text books, especially at the conceptual level. Good practice demands a name change – to stimulate people to probe into definitions of terms.
- b. Whatever is decided at the ITU-R meeting in January 2012, there needs to be an easily accessible source of information on current and historical values of $dUT = UT1 - UTC$ (or whatever succeeds UTC). This is a fundamental requirement for anyone pointing observing systems at objects away from Earth, whether astronomers with telescopes or engineers tracking spacecraft. This information needs to be freely and easily available to all, including the amateur astronomical community. Until now, both amateur astronomers and professional scientists have relied on this and if the change is implemented, future generations should continue to have equivalent access.
- c. In the UK there is also a political issue: the proposed re-definition would necessitate primary legislation to change the basis of UK legal time from GMT to the new system derived from UTC, something the British Government has been reluctant to do in the past.