



Impact of the redefinition of the second for IUGG

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The International Union of Geodesy and Geophysics (IUGG)

- Centenary 1919-2019
- 8 associations
 - IAG geodesy
 - IASPEI sismology and physics of the Earth interior
 - IAVCEI volcanology and geochemistry
 - IAGA geomagnetism and aeronomy
 - IAMAS meteorology and atmospheric sciences
 - IAHS hydrology
 - IAPSO physical oceanography
 - IACS cryospheric sciences

Time/Frequency in IUGG

- Relevant to all components of the IUGG
- Current issues
 - Observing systems involving T/F e.g. GNSS
 - Time scales for tagging epochs of measurements
 - Time as argument of time series
 - ...
- IUGG and CCTF
 - IUGG liaison
 - Recent issues
 - UTC and leap second
 - Adoption of ITRS

New developments involving T/F

- Quantum sensors as clocks or gravimeters
- Joint WG IAG/BIPM « Relativistic geodesy: First steps towards a new geodetic technique » 2015-2019
- New project on this topic created in 2019 by IAG (Chair Jurgen Muller)
- Some challenges
 - Improvement of precision (E-18)
 - Refinement of definition and realization of space-time in the vicinity of the Earth

Impact of the redefinition of the second

- An important question for IUGG
- Need to be specified by the T/F community
- IUGG ready to make an investigation and report it, for instance through CCTF