

UTCr README
(05 February 2020)

THIS DIRECTORY CONTAINS:

- utcr/ Results of the computation of UTCr (one file per week).
- utcr/lab/ Results of the computation of UTCr (one file per laboratory).
- data/ data processed for the computation of UTCr.
- documents/ with information related to UTCr

Official results published from 1 July 2013 are in:

- utcr/

files **UTCr_yyww** with daily values of [UTCr-UTC(k)] at 0 h UTC for year yy and week ww starting from UTCr_1326. They are also available at <http://www.bipm.org/jsp/en/TimeFtp.jsp?TypePub=publication>;

Sub-directory "**pilot_experiment**" contains the results published during the pilot experiment phase:

files UTCr_yyww with daily values of [UTCr-UTC(k)] at 0 h UTC for year yy and week ww from UTCr_1205 to UTCr_1325;

files UTCr_p-lab with daily values of the differences between UTCr and UTC(lab) at 0 h UTC from MJD 55956 to MJD 56466.

- utcr/lab/

files **UTCr-lab** contain daily values of the differences between UTCr and UTC(lab) at 0 h UTC starting from MJD 56467. They are also available at <http://www.bipm.org/jsp/en/TimeFtp.jsp?TypePub=publication>.

- data/

Folder 'yyww/clocks/' where 'yy' is for the year 20yy. This directory contains all weekly clock data formatted for UTCr computation, for the corresponding year 20yy:

- Files '**uh__dd.ddd**' are daily values UTC(k)- clock of all clocks for MJD dddd.

The file format is:

```
000000000111111111122222222223333333333344444444445555555556
123456789012345678901234567890123456789012345678901234567890
XXXXX.XXX 100YY CCCCCC aaaaaaa.aaa 000000.000 AAAA
```

Description of a line containing clock data:

field 01 to 09 : XXXXX.XXX is MJD in format f9.3.
field 10 to 12 : blank characters
field 13 to 17 : 100YY is the laboratory code
field 18 : blank character
field 19 to 25 : CCCCCC is the code of one clock on 7 digits
field 26 : blank character
field 27 to 37 : aaaaaaa.a is [UTC(lab)-clock] in format F11.3, in ns
field 38 : blank character
field 39 to 48 : uuuuuu.u is uncertainty in format F10.3, in ns
field 49 : blank character
field 50 to 53 : AAAA is the laboratory acronym, up to 4 characters

➤ Files `'sh____dd.ddd'` are daily declared clock steps.

The file format is:

```
0000000001111111111222222222233333333334444444444555  
1234567890123456789012345678901234567890123456789012  
XXXXX.XXX CCCCCC cccccc.ccc bbbbbb.bbb AAAA 100YY
```

Description of a line containing clock step data:

```
field 01 to 09 : XXXXX.XXX is MJD on 5 digits and the fraction of day of the step  
field 10      : blank character  
field 11 to 17 : CCCCCC is the code of the clock on 7 digits  
field 18      : blank character  
field 19 to 29 : cccccc.ccc is the amount of the time step in format F11.3, in ns  
field 30      : blank character  
field 31 to 41 : bbbbbb.bbb is the amount of the frequency step in format F11.3,  
in ns/d  
field 42      : blank character  
field 43 to 46 : AAAA is the laboratory acronym, up to 4 characters  
field 47      : blank character  
field 48 to 52 : 100YY is the laboratory code on 5 digits
```

- documents/

- Files FA-TA.452/453/454 are the messages circulated among the laboratories informing on the pilot experiment on UTCr.
- Files FA-TA.xxx dated from 1 July 2013 concern the regular calculation of UTCr.
- Files UTCr-Bull_xx are the information bulletins on UTCr issued by the Time Department.
- File ReadMe_guidelines.pdf gives the information on data submission for UTCr via FTP server.