

NISTIR 8296-05

NIST Time and Frequency Bulletin

Kelsey Rodriguez, Editor

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U.S. Department of Commerce
Wilbur L. Ross, Jr., Secretary

National Institute of Standards and Technology
Walter Copan, NIST Director and Under Secretary of Commerce for Standards and Technology

5. UTC(NIST) – AT1 PARAMETERS

The table below lists parameters that are used to define UTC(NIST) with respect to our real-time scale AT1. To find the value of UTC(NIST) - AT1 at any time T (expressed as a Modified Julian Date, including a fraction if needed), the appropriate equation to use is the one for which the desired T is greater than or equal to the entry in the T_0 column and less than the entry in the last column. The values of x_{ls} , x , and y for that month are then used in the equation below to find the desired value. The parameters x and y represent the offsets in time and frequency, respectively, between UTC(NIST) and AT1; the parameter x_{ls} is the number of leap seconds applied to both UTC(NIST) and UTC, as specified by the IERS. Leap seconds are not applied to AT1.

UTC(NIST) - AT1 = $x_{ls} + x + y(T - T_0)$					
Month	x_{ls} (s)	x (ns)	y (ns/d)	T_0 (MJD)	Valid until 0000 on: (MJD)
Apr 20	-37	-483793.85	-37	58940	58970
Mar 20	-37	-482646.85	-37	58909	58940
Feb 20	-37	-482535.85	-37.00†	58906	58909
Feb 20	-37	-482020.65	-36.80†	58892	58906
Feb 20	-37	-481576.65	-37	58880	58892
Jan 20	-37	-481243.65	-37.00	58871	58880
Jan 20	-37	-480465.95	-36.80†	58850	58871
Jan 20	-37	-480429.45	-36.50	58849	58850
Dec 19	-37	-480210.45	-36.50†	58843	58849
Dec 19	-37	-479989.95	-36.75†	58837	58843
Dec 19	-37	-479284.10	-37.15	58818	58837
Nov 19	-37	-478912.60	-37.15†	58808	58818
Nov 19	-37	-478389.70	-37.35†	58794	58808
Nov 19	-37	-478167.40	-37.05*	58788	58794
Oct 19	-37	-477871.00	-37.05	58780	58788*
Oct 19	-37	-477011.95	-37.35	58757	58780†
Sep 19	-37	-475891.45	-37.35	58727	58757
Aug 19	-37	-474995.05	-37.35	58703	58727
Aug 19	-37	-474735.35	-37.10	58696	58703†
Jul 19	-37	-473696.55	-37.10	58668	58696
Jul 19	-37	-473584.35	-37.40	58665	58668†
Jun 19	-37	-473172.95	-37.40	58654	58665
Jun 19	-37	-472949.75	-37.20	58648	58654†
Jun 19	-37	-472469.4	-36.95	58635	58648†
May 19	-37	-471878.2	-36.95	58619	58635
May 19	-37	-471327.7	-36.70	58604	58619†
Apr 19	-37	-471107.5	-36.70	58598	58604
Apr 19	-37	-470592.3	-36.80	58584	58598†
Apr 19	-37	-470222.3	-37.00	58574	58584†
Mar 19	-37	-470074.3	-37.00	58570	58574
Mar 19	-37	-469817.05	-36.75	58563	58570†

† Rate change in mid-month

*Provisional value