

NISTIR 8296-08

NIST Time and Frequency Bulletin

Kelsey Rodriguez, Editor

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<https://doi.org/10.6028/NIST.IR.8296-08>

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

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August 2020



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)
Jul 20	-37	-487834.75	-37.30†	59046	59062
Jul 20	-37	-487213.95	-37.20†	59032	59046
Jul 20	-37	-487176.60	-37.35	59031	59032
Jun 20	-37	-486691.05	-37.35†	59018	59031
Jun 20	-37	486166.05	-37.50†	59004	59018
Jun 20	-37	-486054.45	-37.20	59001	59004
May 20	-37	-485384.85	-37.2	58983	59001
May 20	-37	-484903.85	-37	58970	58983
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†

† Rate change in mid-month

*Provisional value