TABLE E.1 Clock and Ephemeris Parameter Definitions

T_{GD}	Group delays (s)
IODC	Issue of data, clock
t_{oc}	Clock data reference times (s)
a_{f2}	Second-order correction to satellite clock (s/s^2)
a_{f1}	First-order correction to satellite clock (s/s)
a_{f0}	Constant correction to satellite clock (s)
M_0	Mean anomaly at reference time (semicircles)
Δ_n	Mean motion difference from computed value (semicircles/s)
e	Eccentricity (dimensionless)
$A^{1/2}$	Square root of the semimajor axis ($\sqrt{m}$)
$\Delta\Omega_0$	Right ascension at reference time (semicircle)
i_0	Inclination angle at reference time (semicircle)
ω	Argument of perigee (semicircle)
$\Delta\dot{\Omega}$	Rate of right ascension (semicircle/s)
$\Delta\dot{i}$	Rate of inclination angle (semicircles/s)
C_{uc}	Amplitude of the cosine harmonic correction term to the argument of latitude (rad)
C_{us}	Amplitude of the sine harmonic correction term to the argument of latitude (rad)
C_{rc}	Amplitude of the cosine harmonic correction term to the orbit radius (m)
C_{rs}	Amplitude of the sine harmonic correction term to the orbit radius (m)
C_{ic}	Amplitude of the cosine harmonic correction term to the angle of inclination (rad)
C_{is}	Amplitude of the sine harmonic correction term to the angle of inclination (rad)
t_{oe}	Ephemeris reference time (s)
IODE	Issue of data, ephemeris

Then the nominal satellite-vehicle time (in seconds) at which the satellite sent the signal was

$$t_{sv} = \tilde{t}_m - \tilde{t}_t \tag{E.2}$$

If the satellite clock is fast by Δt_{sv} seconds, then the actual GPS system time at which the signal was sent was

$$t = t_{sv} - \Delta t_{sv} \tag{E.3}$$

The correction Δt_{sv} is calculated by the polynomial correction

$$\Delta t_{sv} = a_{f0} + a_{f1}(t - t_{oc}) + a_{f2}(t - t_{oc})^2 + \Delta t_r \tag{E.4}$$

where t_{oc} and the polynomial coefficients are a portion of the navigation message. The term

$$\Delta t_r = FeA^{1/2} \sin(E_k) \tag{E.5}$$

is a relativistic correction, F is a constant (see App. A), e and A are defined in Table E.1, and E_k is defined in Sec. E.2.