

LISTS OF ABBREVIATIONS, ACRONYMS, AND SYMBOLS

Table 1: Abbreviations and Acronyms – Listed in Alphabetical Order

Abbreviation	Symbol	Term
A		<i>none</i>
B		
BCRS		Barycentric Celestial Reference System
C		
CEO		Celestial Ephemeris Origin (superseded)
CEP		Celestial Ephemeris Pole (superseded)
CIO		Celestial Intermediate Origin
CIP		Celestial Intermediate Pole
CIRS		Celestial Intermediate Reference System (acronym is not recommended)
CTRS		Conventional Terrestrial Reference System (superseded)
D		
Dec, DEC	δ	declination (generic)
Dec _{ICRS}	δ_{ICRS}	declination measured from the ICRS equator
Dpsi, Deps	$\Delta\psi, \Delta\epsilon$	nutations in longitude and obliquity
E		
EE	E_e	equation of the equinoxes
EO	E_o	equation of the origins
Eps	ϵ_A	obliquity of the ecliptic
Eps0	ϵ_0	obliquity of ecliptic at J2000.0
ERA	θ	Earth Rotation Angle
ERS		true equinox and equator of date reference system
ET		Ephemeris time (superseded)
F		
FCN		free core nutation
G		
GAST		Greenwich apparent sidereal time (GST)
GCRS		Geocentric Celestial Reference System
GHA	H	Greenwich hour angle
GHA Aries		Greenwich hour angle Aries
GMST		Greenwich mean sidereal time
GST		Greenwich sidereal time (GAST)
GTRS		Geocentric Terrestrial Reference System
H		<i>none</i>
I		
ICRF		International Celestial Reference Frame
ICRS		International Celestial Reference System

IAU NFA WG: List of abbreviations, acronyms and symbols (July 2006)

Abbreviation	Symbol	Term
IERS		International Earth Rotation and Reference Systems Service
ITRF		International Terrestrial Reference Frame
ITRS		International Terrestrial Reference System
J-K		<i>none</i>
L		
LAST		local apparent sidereal time
Lat	ϕ, ϕ'	latitude, geocentric latitude
LERA		local Earth Rotation Angle
LHA	h	local hour angle
LHA Aries		local hour angle Aries
LMST		local mean sidereal time
Long	λ	longitude
M-Q		<i>none</i>
R		
RA	α	right ascension (generic)
RA _e , RA _i	α_e	equinox right ascension, intermediate right ascension, respectively
RA _{ICRS}	α_{ICRS}	ICRS right ascension
S		<i>none</i>
T		
TAI		International Atomic Time
TCB		Barycentric Coordinate Time
TCG		Geocentric Coordinate Time
TDB		Barycentric Dynamical Time
TDT		Terrestrial Dynamical Time (superseded)
TEO		Terrestrial Ephemeris Origin (superseded)
TIO		Terrestrial Intermediate Origin
TIRS		Terrestrial Intermediate Reference System
TT		Terrestrial Time
U		
UT		Universal Time (UT, UT1)
UTC		Coordinated Universal Time
V-Z		<i>none</i>

Table 2: Symbols – Listed in Alphabetical Order

Symbol	Abbreviation	Term
α	RA	right ascension (generic)
α_e	RA _e	equinox right ascension
α_i	RA _i	intermediate right ascension
α_{ICRS}	RA _{ICRS}	ICRS right ascension
δ	Dec, DEC	declination
δ_{ICRS}	Dec _{ICRS}	declination measured from the ICRS equator
$d\alpha_0$		frame bias in RA, equinox offset at J2000.0
$\delta\psi_B$		frame bias in longitude between GCRS and J2000.0
$\delta\varepsilon_B$		frame bias in obliquity between GCRS and J2000.0
$\Delta\varepsilon$	Deps	nutation in obliquity
$\Delta\psi$	Dpsi	nutation in longitude
ε_0	Eps0	obliquity of ecliptic at J2000.0
ε_A	Eps	obliquity of the ecliptic
ξ_0, η_0		celestial pole offsets at J2000.0
θ	ERA	Earth Rotation Angle
λ	Long	longitude
ϕ, ϕ'	Lat	latitude, geocentric latitude
ψ_A		precession angle in longitude
χ_A		planetary precession angle
ω_A		precession angle in obliquity
B		frame bias matrix, GCRS to J2000.0
C		matrix from the GCRS to the Celestial Intermediate Reference System
E_e	EE	equation of the equinoxes
E_o	EO	equation of the origins
H	GHA	Greenwich hour angle
h	LHA	local hour angle
N		nutation matrix, mean to true equinox of date
NP		precession-nutation matrix, J2000.0 to true equinox of date
NPB		combined bias, precession, nutation matrix, GCRS to EES
P		precession matrix, J2000.0 to mean equinox of date
Q		matrix from Celestial Intermediate Reference System to GCRS
s		positioning of the CIO on the equator of the CIP (CIO locator)
s'		positioning of the TIO on the equator of the CIP (TIO locator)
Teph (or T _{eph})		time argument of the JPL ephemeris.
W		polar motion matrix, terrestrial to ITRS
X, Y		coordinates of the CIP in the GCRS
x_p, y_p or x, y		coordinates of the CIP in the ITRS

Note: Authors must always ensure that the symbols used in a particular document are defined adequately.