Equatorial Frame (Celestial equator)

Right Ascension : *radians*
Declination : *radians*
Equinox(same epoch) : *J2000, B1950, APPARENT*
ProperMotion Right Ascension : *milli arcseconds per year*
ProperMotion Declination : *milli arcseconds per year*
Parallax : *milli arseconds*
Radial Velocity : *Km/sec, positive means is moving away*

Galactic Frame (Galactic plane)

Latitude : *radians*
Longitude : *radians*

Horizontal Frame (Horizon)

Azimuth : *radians*
Elevation : *radians*

ST

Current time/Site
Terrestrial Time
UT1
Sidereal Time

TT

Input equatorial (J2000)

Precession/Nutation, proper motion

Input equatorial (B1950)

Precession/Nutation, proper motion,
aberration, light deflection

Input equatorial (APPARENT)

J2000 equatorial

Input galactic

Input horizontal

lon=lon*cos(lat)

Galactic Offsets

Precession/Nutation, parallax,
light deflection, aberration

Equatorial offsets

RA=RA*cos(DEC)

Pole motion, diurnal
abberation

Apparent horizontal

Apparent equatorial

Equatorial offsets

AZ=AZ*cos(EL)