| Elements | SubstGr | Abstract | Nillable | No link | AnyType | Head Elem of SubstGr | Member of SubstGr | Head Elem of SubstGr | Member of SubstGr |
|---|---|---|---|---|---|---|---|---|---|
| STCmetadata | s | | n | | | STCmetaData | | | |
| CatalogEntryLocation | | | n | | | | STCmetaData | | |
| ObsDataLocation | | | n | | | | STCmetaData | | |
| SearchLocation | | | n | | | | STCmetaData | | |
| STCDescription | | | n | | | | STCmetaData | | |
| STCResourceProfile | | | n | | | | STCmetaData | | |
| CoordSys | s | | n | | | CoordSys | | | |
| AstroCoordSystem | | | n | | | | CoordSys | | |
| PixelCoordSystem | | | n | | | | CoordSys | | |
| CoordFrame | | | n | | | | | | |
| TimeFrame | | | n | | | | | | |
| SpaceFrame | | | n | | | | | | |
| SpectralFrame | | | n | | | | | | |
| RedshiftFrame | | | n | | | | | | |
| PixelCoordFrame | | | n | | | | | | |
| SpaceRefFrame | s | a | | x | | SpaceRefFrame | | | |
| AZ_EL | | | | x | | | SpaceRefFrame | | |
| BODY | | | | x | | | SpaceRefFrame | | |
| ECLIPTIC | | | | x | | | SpaceRefFrame | | |
| FK4 | | | | x | | | SpaceRefFrame | | |
| FK5 | | | | x | | | SpaceRefFrame | | |
| GALACTIC_I | | | | x | | | SpaceRefFrame | | |
| GALACTIC_II | | | | x | | | SpaceRefFrame | | |
| GEO_C | | | | x | | | SpaceRefFrame | | |
| GEO_D | | | | x | | | SpaceRefFrame | | |
| GSE | | | | x | | | SpaceRefFrame | | |
| GSM | | | | x | | | SpaceRefFrame | | |
| HEE | | | | x | | | SpaceRefFrame | | |
| HEEQ | | | | x | | | SpaceRefFrame | | |
| HGC | | | | x | | | SpaceRefFrame | | |
| HGI | | | | x | | | SpaceRefFrame | | |
| HGS | | | | x | | | SpaceRefFrame | | |
| HPC | | | | x | | | SpaceRefFrame | | |
| HPR | | | | x | | | SpaceRefFrame | | |
| HRTN | | | | x | | | SpaceRefFrame | | |
| ICRS | | | | x | | | SpaceRefFrame | | |
| JUPITER_C_III | | | | x | | | SpaceRefFrame | | |
| JUPITER_G_III | | | | x | | | SpaceRefFrame | | |
| LUNA_C | | | | x | | | SpaceRefFrame | | |
| LUNA_G | | | | x | | | SpaceRefFrame | | |
| MAG | | | | x | | | SpaceRefFrame | | |
| MARS_C | | | | x | | | SpaceRefFrame | | |
| MARS_G | | | | x | | | SpaceRefFrame | | |
| MERCURY_C | | | | x | | | SpaceRefFrame | | |
| MERCURY_G | | | | x | | | SpaceRefFrame | | |
| NEPTUNE_C_III | | | | x | | | SpaceRefFrame | | |
| NEPTUNE_G_III | | | | x | | | SpaceRefFrame | | |
| PLUTO_C | | | | x | | | SpaceRefFrame | | |
| PLUTO_G | | | | x | | | SpaceRefFrame | | |
| SATURN_C_III | | | | x | | | SpaceRefFrame | | |
| SATURN_G_III | | | | x | | | SpaceRefFrame | | |
| SM | | | | x | | | SpaceRefFrame | | |
| SUPER_GALACTIC | | | | x | | | SpaceRefFrame | | |
| URANUS_C_III | | | | x | | | SpaceRefFrame | | |
| URANUS_G_III | | | | x | | | SpaceRefFrame | | |
| VENUS_C | | | | x | | | SpaceRefFrame | | |
| VENUS_G | | | | x | | | SpaceRefFrame | | |
| UNKNOWNFrame | | | | x | | | SpaceRefFrame | | |
| CoordRefFrame | s | a | | x | | | SpaceRefFrame | CoordRefFrame | |
| Cart2DRefFrame | | | | x | | | | | CoordRefFrame |
| Cart3DRefFrame | | | | x | | | | | CoordRefFrame |
| ScalarRefFrame | | | | x | | | | | CoordRefFrame |
| SphericalRefFrame | | | | x | | | | | CoordRefFrame |
| CustomSpaceRefFrame | s | a | | x | t | CustomSpaceRefFrame | | | |
| Cart1DSpaceRefFrame | | | | x | | | CustomSpaceRefFrame | | |
| Cart2DSpaceRefFrame | | | | x | | | CustomSpaceRefFrame | | |
| Cart3DSpaceRefFrame | | | | x | | | CustomSpaceRefFrame | | |
| SphericalSpaceRefFrame | | | | x | | | CustomSpaceRefFrame | | |
| CTransform2 | s | a | | x | t | CTransform2 | | | |
| Transform2 | | | n | | | | CTransform2 | | |
| Transform2Matrix | | | n | | | | CTransform2 | | |
| CTransform3 | s | a | | x | t | CTransform3 | | | |
| Transform3 | | | n | | | | CTransform3 | | |
| Transform3Matrix | | | n | | | | CTransform3 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ReferencePosition | s | a | | x | | **ReferencePosition** | | | |
| CoordRefPos | | | | x | | | **ReferencePosition** | | |
| BARYCENTER | | | | x | | | **ReferencePosition** | | |
| EMBARYCENTER | | | | x | | | **ReferencePosition** | | |
| GALACTIC_CENTER | | | | x | | | **ReferencePosition** | | |
| GEOCENTER | | | | x | | | **ReferencePosition** | | |
| HELIOCENTER | | | | x | | | **ReferencePosition** | | |
| JUPITER | | | | x | | | **ReferencePosition** | | |
| LOCAL_GROUP_CENTER | | | | x | | | **ReferencePosition** | | |
| LSR | | | | x | | | **ReferencePosition** | | |
| LSRD | | | | x | | | **ReferencePosition** | | |
| LSRK | | | | x | | | **ReferencePosition** | | |
| MARS | | | | x | | | **ReferencePosition** | | |
| MERCURY | | | | x | | | **ReferencePosition** | | |
| MOON | | | | x | | | **ReferencePosition** | | |
| NEPTUNE | | | | x | | | **ReferencePosition** | | |
| PLUTO | | | | x | | | **ReferencePosition** | | |
| RELOCATABLE | | | | x | | | **ReferencePosition** | | |
| SATURN | | | | x | | | **ReferencePosition** | | |
| TOPOCENTER | | | | x | | | **ReferencePosition** | | |
| URANUS | | | | x | | | **ReferencePosition** | | |
| VENUS | | | | x | | | **ReferencePosition** | | |
| UNKNOWNRefPos | | | | x | | | **ReferencePosition** | | |
| CoordFlavor | s | a | | x | | **CoordFlavor** | | | |
| CARTESIAN | | | | x | | | **CoordFlavor** | | |
| CYLINDRICAL | | | | x | | | **CoordFlavor** | | |
| HEALPIX | | | | x | | | **CoordFlavor** | | |
| POLAR | | | | x | | | **CoordFlavor** | | |
| SPHERICAL | | | | x | | | **CoordFlavor** | | |
| UNITSPHERE | | | | x | | | **CoordFlavor** | | |
| STRING | | | | x | | | **CoordFlavor** | | |
| Coords | s | | n | | | **Coords** | | | |
| AstroCoords | | | n | | | | **Coords** | | |
| PixelCoords | | | n | | | | **Coords** | | |
| Coordinate | s | | n | | | **Coordinate** | | | |
| Redshift | | | n | | | | **Coordinate** | | |
| Spectral | | | n | | | | **Coordinate** | | |
| GenCoordinate | s | | n | | | | **Coordinate** | **GenCoordinate** | |
| ScalarCoordinate | | | n | | | | | | **GenCoordinate** |
| StringCoordinate | | | n | | | | | | **GenCoordinate** |
| Vector2DCoordinate | | | n | | | | | | **GenCoordinate** |
| Vector3DCoordinate | | | n | | | | | | **GenCoordinate** |
| Position | s | | n | | | | **Coordinate** | **Position** | |
| Position1D | | | n | | | | | | **Position** |
| Position2D | | | n | | | | | | **Position** |
| Position3D | | | n | | | | | | **Position** |
| Velocity | s | | n | | | | **Coordinate** | **Velocity** | |
| Velocity1D | | | n | | | | | | **Velocity** |
| Velocity2D | | | n | | | | | | **Velocity** |
| Velocity3D | | | n | | | | | | **Velocity** |
| Pixel | s | | n | | | | **Coordinate** | **Pixel** | |
| Pixel1D | | | n | | | | | | **Pixel** |
| Pixel2D | | | n | | | | | | **Pixel** |
| Pixel3D | | | n | | | | | | **Pixel** |
| Time | | | n | | | | | | |
| AbsoluteTime | s | a | | x | t | **AbsoluteTime** | | | |
| ISOTime | | | n | | | | **AbsoluteTime** | | |
| JDTime | | | n | | | | **AbsoluteTime** | | |
| MJDTime | | | n | | | | **AbsoluteTime** | | |
| TimeOrigin | | | | x | | | **AbsoluteTime** | | |
| TimeOffset | | | n | | | | | | |
| CoordValue | s | a | | x | t | **CoordValue** | | | |
| Value | | | n | | | | **CoordValue** | | |
| CValue2 | s | a | | x | t | | **CoordValue** | **CValue2** | |
| Curve2 | | | n | | | | | | **CValue2** |
| Value2 | | | n | | | | | | **CValue2** |
| CValue3 | s | a | | x | t | | **CoordValue** | **CValue3** | |
| Curve3 | | | n | | | | | | **CValue3** |
| Value3 | | | n | | | | | | **CValue3** |
| CError | s | a | | x | t | **CError** | | | |
| Error | | | n | | | | **CError** | | |
| CError2 | s | a | | x | t | | **CError** | **CError2** | |
| Error2 | | | n | | | | | | **CError2** |
| Error2Matrix | | | n | | | | | | **CError2** |
| Error2Radius | | | n | | | | | | **CError2** |
| CError3 | s | a | | x | t | | **CError** | **CError3** | |

| Name | s | a | n | x | t | C1 | C2 | C3 | C4 |
|---|---|---|---|---|---|---|---|---|---|
| Error3 | | | n | | | | | | **CError3** |
| Error3Matrix | | | n | | | | | | **CError3** |
| Error3Radius | | | n | | | | | | **CError3** |
| CResolution | **s** | **a** | | **x** | **t** | **CResolution** | | | |
| Resolution | | | n | | | | **CResolution** | | |
| CResolution2 | **s** | **a** | | **x** | **t** | | **CResolution** | **CResolution2** | |
| Resolution2 | | | n | | | | | | **CResolution2** |
| Resolution2Matrix | | | n | | | | | | **CResolution2** |
| Resolution2Radius | | | n | | | | | | **CResolution2** |
| CResolution3 | **s** | **a** | | **x** | **t** | | **CResolution** | **CResolution3** | |
| Resolution3 | | | n | | | | | | **CResolution3** |
| Resolution3Matrix | | | n | | | | | | **CResolution3** |
| Resolution3Radius | | | n | | | | | | **CResolution3** |
| CSize | **s** | **a** | | **x** | **t** | **CSize** | | | |
| Size | | | n | | | | **CSize** | | |
| CSize2 | **s** | **a** | | **x** | **t** | | **CSize** | **CSize2** | |
| Size2 | | | n | | | | | | **CSize2** |
| Size2Matrix | | | n | | | | | | **CSize2** |
| Size2Radius | | | n | | | | | | **CSize2** |
| CSize3 | **s** | **a** | | **x** | **t** | | **CSize** | **CSize3** | |
| Size3 | | | n | | | | | | **CSize3** |
| Size3Matrix | | | n | | | | | | **CSize3** |
| Size3Radius | | | n | | | | | | **CSize3** |
| CPixSize | **s** | **a** | | **x** | **t** | **CPixSize** | | | |
| PixSize | | | n | | | | **CPixSize** | | |
| CPixSize2 | **s** | **a** | | **x** | **t** | | **CPixSize** | **CPixSize2** | |
| PixSize2 | | | n | | | | | | **CPixSize2** |
| PixSize2Matrix | | | n | | | | | | **CPixSize2** |
| CPixSize3 | **s** | **a** | | **x** | **t** | | **CPixSize** | **CPixSize3** | |
| PixSize3 | | | n | | | | | | **CPixSize3** |
| PixSize3Matrix | | | n | | | | | | **CPixSize3** |
| CoordArea | **s** | | n | | | **CoordArea** | | | |
| AstroCoordArea | | | n | | | | **CoordArea** | | |
| PixelCoordArea | | | n | | | | **CoordArea** | | |
| CoordInterval | **s** | | n | | | **CoordInterval** | | | |
| Coord2VecInterval | | | n | | | | **CoordInterval** | | |
| Coord3VecInterval | | | n | | | | **CoordInterval** | | |
| CoordScalarInterval | | | n | | | | **CoordInterval** | | |
| PositionInterval | **s** | | n | | | **PositionInterval** | | | |
| PositionScalarInterval | | | n | | | | **PositionInterval** | | |
| Position2VecInterval | | | n | | | | **PositionInterval** | | |
| Position3VecInterval | | | n | | | | **PositionInterval** | | |
| RegionFile | | | n | | | | **PositionInterval** | | |
| Sphere | | | n | | | | **PositionInterval** | | |
| Region | **s** | | n | | | | **PositionInterval** | **Region** | |
| AllSky | | | n | | | | | | **Region** |
| Box | | | n | | | | | | **Region** |
| Circle | | | n | | | | | | **Region** |
| Convex | | | n | | | | | | **Region** |
| ConvexHull | | | n | | | | | | **Region** |
| Difference | | | n | | | | | | **Region** |
| Ellipse | | | n | | | | | | **Region** |
| Intersection | | | n | | | | | | **Region** |
| Negation | | | n | | | | | | **Region** |
| Polygon | | | n | | | | | | **Region** |
| Sector | | | n | | | | | | **Region** |
| SkyIndex | | | n | | | | | | **Region** |
| Union | | | n | | | | | | **Region** |
| VelocityInterval | **s** | | n | | | **VelocityInterval** | | | |
| Velocity2VecInterval | | | n | | | | **VelocityInterval** | | |
| Velocity3VecInterval | | | n | | | | **VelocityInterval** | | |
| VelocityScalarInterval | | | n | | | | **VelocityInterval** | | |
| VelocitySphere | | | n | | | | **VelocityInterval** | | |
| PixelCoordInterval | **s** | | n | | | **PixelCoordInterval** | | | |
| PixelCoord2VecInterval | | | n | | | | **PixelCoordInterval** | | |
| PixelCoord3VecInterval | | | n | | | | **PixelCoordInterval** | | |
| PixelCoordScalarInterval | | | n | | | | **PixelCoordInterval** | | |