

MiscSphericalCoord

Inherits From: MiscMathCoord : MiscCoord : Object
Declared In: misckit/miscgiskit/MiscSphericalCoord.h

Class Description

A MiscSphericalCoord object holds a set of spherical coordinate points, ie phi (angle from pole in positive z direction towards equator), theta (equatorial angle from zero meridian at x axis towards y axis), and rho (sphere radius) values. Phi and theta are stored internally as radians at all times, but may be loaded or retrieved in degrees if desired.

Method Types

- | | |
|------------------------|-----------------------------------------|
| Accessing Coord values | - setCoordPhiDegrees: thetaDegrees:rho: |
| | - setCoordPhiRadians thetaRadians:rho: |
| | - coordPhiDegrees: thetaDegrees: rho: |
| | - coordPhiRadians: thetaRadians: rho: |

- phiRadians;
- phiDegrees;
- thetaRadians;
- thetaDegrees;
- rho

Instance Methods

coordPhiDegrees: thetaDegrees:rho:

- **coordPhiDegrees:**(double*)*phiValue* **thetaDegrees:**(double*)*thetaValue* **rho:**(double*)*rValue*

Get the ϕ (in decimal degrees), θ (in decimal degrees) and rho values of the point at the current index. Returns **self**.

See also: - **coordPhiRadians thetaRadians:rho:**

coordPhiRadians thetaRadians:rho:

- **coordPhiRadians:**(double*)*phiValue* **thetaRadians:**(double*)*thetaValue* **rho:**(double*)*rValue*

Get the ϕ (in radians), θ (in radians) and rho values of the point at the current index. Returns **self**.

See also: - **coordPhiDegrees: thetaDegrees:rho:**

phiDegrees

- (double)**phiDegrees**

Returns the ϕ value (in decimal degrees) of the point at the current index.

See also: - rho, - phiRadians, - thetaDegrees, - thetaRadians

phiRadians

- (double)**phiRadians**

Returns the ϕ value (in radians) of the point at the current index.

See also: - rho, - phiDegrees, - thetaDegrees, - thetaRadians

rho

- (double)**rho**

Returns rho, the radius value of the point at the current index.

See also: - phiDegrees, - phiRadians, - thetaDegrees, - thetaRadians

setCoordPhiDegrees: thetaDegrees:rho:

- **setCoordPhiDegrees:**(double)*phiValue* **thetaDegrees:**(double)*thetaValue* **rho:**(double)*rValue*

Sets the ϕ (in decimal degrees), θ (in decimal degrees) and rho values of the point at the current index.

See also: -setCoordPhiRadians thetaRadians:rho:

setCoordPhiRadians thetaRadians:rho:

- **setCoordPhiRadians:**(double)*phiValue* **thetaRadians:**(double)*thetaValue* **r:**(double)*rValue*

Sets the ϕ (in radians), θ (in radians) and rho values of the point at the current index.

See also: - setCoordPhiDegrees: thetaDegrees:rho:

thetaDegrees

- (double)**thetaDegrees**

Returns the θ value (in decimal degrees) of the point at the current index.

See also: - rho, - phiDegrees, - phiRadians, - thetaRadians

thetaRadians

- (double)**thetaRadians**

Returns the θ value (in radians) of the point at the current index.

See also: - rho, - phiDegrees, - phiRadians, - thetaDegrees