The PGC Coordinate Converter is a simple web-based application to convert geographic coordinates between formats.

Quick Links

The PGC Coordinate Converter can be accessed at the URL below.

Coordinate Converter: https://www.pgc.umn.edu/apps/convert

Introduction

The PGC Coordinate Converter converts geographic coordinates (latitude and longitude) between different formats. The application converts to and from the following coordinate formats:

Decimal Degrees (DD)

Floating point number representing geographic latitude and longitude. Latitude values range from -90 to 90 and longitude values from -180 to 180. For most practical (non-survey) use, rounding to 6 digits is sufficient.

Uses: GIS datasets, Mathematical Calculations

Degrees Decimal Minutes (DDM)

String (text) representing geographic latitude and longitude. Latitude values range from -90 to 90 and longitude values from -180 to 180. For most practical (non-survey) use, rounding the minutes to 4 digits is sufficient.

Uses: Navigation

Degrees Minutes Seconds (DMS)

String (text) representing geographic latitude and longitude in four parts (degree value, minute value, second value, and a direction). Latitude values range from -90 to 90 and longitude values from -180 to 180. For most practical (non-survey) use, rounding the seconds to 4 digits is sufficient.

Uses: Navigation

WGS84 Antarctic Polar Stereographic (EPSG:3031)

Floating point number representation (in meters) for projected (not geographic) coordinates by an x value (easting) and y value (northing) from the origin (0,0) at the geographic south pole. This projection creates a “grid” over Antarctica with 0° longitude as “up” (also referred to as Grid North).

Uses: Mapping

Detailed information from the EPSG website.
**WGS84 NSIDC Sea Ice Polar Stereographic North (EPSG:3413)**

Floating point number representation (in meters) for projected (not geographic) coordinates by an x value (easting) and y value (northing) from the origin (0,0) at the geographic north pole. This projection creates a “grid” over the Arctic with 0° longitude as “up” (also referred to as Grid North).

**Uses:** Mapping

Detailed information from the [EPSG website](https://www.epsg.org/).

**Examples**

<table>
<thead>
<tr>
<th>Example</th>
<th>Latitude / Y</th>
<th>Longitude / X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decimal Degrees (DD)</td>
<td>-77.508333</td>
<td>164.754167</td>
</tr>
<tr>
<td>Degrees Decimal Minutes (DDM)</td>
<td>77° 30.5′ S</td>
<td>164° 45.25′ E</td>
</tr>
<tr>
<td>Degrees Minutes Seconds (DMS)</td>
<td>77° 30′ 29.9988″ S</td>
<td>164° 45′ 15.0012″ E</td>
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<td>EPSG:3031</td>
<td>-1314485.732632</td>
<td>358267.239976</td>
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<tr>
<td>EPSG:3413</td>
<td>-1314485.732632*</td>
<td>358267.239976*</td>
</tr>
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