GMT Common Command Line Options

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-B

Sets map boundary tickmark intervals. *tickinfo* is a textstring made up of one or more concatenated substrings of the form [which]tick[m|c]. The optional which can be either a for annotation interval [Default], f for frame tick interval, or g for gridline interval. If frame interval is not set, it is assumed to be the same as annotation interval. tick is the desired tick interval. The optional m|c indicates minutes (m) or seconds (c). To specify separate x and y ticks, separate the substrings that apply to the x and y axes with a slash [/] (If a 3-D basemap is selected with -E, -Jz, a third substring pertaining to the vertical axis may be appended.) For linear/log/power projections (-Jx): Labels for each axis can be added by surrounding them with colons. If the first character in the label is a period, then the label is used as plot title. If the label consists of more than one word, enclose the entire label in double quotes (e.g., :"my label":). By default, all 4 boundaries are plotted (referred to as W, E, S, N). To change the default, append the code for those you want (e.g., WS for standard lower-left x- and y-axis system). Upper case (e.g., W) means draw axis/tickmarks and annotate it, whereas lower case (e.g., w) will only draw axis/tickmarks. Note that this convention means that you cannot use the exponential notation for tick-intervals as a conflict with wesn will occur. (If a 3-D basemap is selected with -E and -Jz, append Z or z to control the appearance of the vertical axis. Append + to draw the outline of the cube defined by -R)

For non-geographical projections: Give negative scale (in -Jx) or axis length (in -JX) to change the direction of increasing coordinates (i.e., to make the y-axis positive down).

For log10 axes: Annotations can be specified in one of three ways: (1) tick can be 1, 2, or 3. Annotations will then occur at 1, 1–2–5, or 1–2–3–4–...–9, respectively. This option can also be used for the frame and grid intervals. (2) An I is appended to the tickinfo string. Then, log10 of the tick value is plotted at every integer log10 value. (3) A p is appended to the tickinfo string. Then, annotations appear as 10 raised to log10 of the tick value.

For power axes: Annotations can be specified in one of two ways: (1) tick sets the regular annotation interval. (2) A p is appended to the tickinfo string. Then, the annotation interval is expected to be in transformed units, but the annotation value will be plotted as untransformed units. E.g., if tick = 1 and power = 0.5 (i.e., sqrt), then equidistant annotations labeled 1-4-9,... will appear.

-H Input data has header record(s). Optionally, append the number of such recods. [Default is 1]

-J

Selects the map projection. The following character determines the projection. If the character is upper case then the argument(s) supplied as scale(s) is interpreted to be the map width (or axis lengths) in inch, else the scale argument(s) is the map scale (see its definition for each projection). Choose one of the following projections (The E or C after projection names stands for Equal-Area and Conformal, respectively):
CYLINDRICAL PROJECTIONS:

–Jc\{lon0\}lat0\{scale\} or –JC\{lon0\}lat0\{width\} (Cassini)
  Give projection center and scale \(1:xxxx\) or inch/degree).

–Jm\{parameters\} (Mercator [C]). Specify one of:
  –Jm\{scale\} or –JM\{width\} \(1:xxxx\) or inch/degree).
  –JC\{lon0\}lat0\{scale\} or –JC\{lon0\}lat0\{width\}
  Give central meridian, standard latitude and scale along parallel \(1:xxxx\) or inch/degree).

–Jp\{parameters\} (Oblique Mercator [C]). Specify one of:
  –Jp\{scale\} or –JP\{width\} \(1:xxxx\) or inch/degree).
  –JC\{lon0\}lat0\{scale\} or –JC\{lon0\}lat0\{width\}
  Give central meridian, standard latitude and scale along parallel \(1:xxxx\) or inch/degree).

–Jq\{lon0\}scale or –JQ\{lon0\}width (Equidistant Cylindrical Projection (Plate Carree))
  Give the central meridian and scale \(1:xxxx\) or inch/degree).

–Jt\{lon0\}scale or –JT\{lon0\}width (TM - Transverse Mercator [C])
  Give the central meridian and scale \(1:xxxx\) or inch/degree).

–Ju\{zone\}scale or –JU\{zone\}width (UTM - Universal Transverse Mercator [C])
  Give the zone number and scale \(1:xxxx\) or inch/degree; negative zone for southern hemisphere.)

–Jy\{lon0\}lats\{scale\} or –JY\{lon0\}lats\{width\} (Basic Cylindrical Projections [E])
  Give the central meridian, standard parallel, and scale \(1:xxxx\) or inch/degree).
  The standard parallel is typically one of these (but can be any value):
  45  - The Peters projection  37.4  - The Trystan Edwards projection
  30  - The Behrman projection  0  - The Lambert projection

AZIMUTHAL PROJECTIONS:

–J\{alon0\}lat0\{scale\} or –JA\{lon0\}lat0\{width\} (Lambert [E]).
  \{lon0\}lat0 specifies the projection center.
  Give scale as \(1:xxxx\) or radius/lat, where radius is distance in inch from origin to oblique latitude lat.

–J\{elon0\}lat0\{scale\} or –JE\{lon0\}lat0\{width\} (Equidistant).
  \{lon0\}lat0 specifies the projection center.
  Give scale as \(1:xxxx\) or radius/lat, where radius is distance in inch from origin to oblique latitude lat.

–Jg\{lon0\}lat0\{scale\} or –JG\{lon0\}lat0\{width\} (Orthographic).
  \{lon0\}lat0 specifies the projection center.
  Give scale as \(1:xxxx\) or radius/lat, where radius is distance in inch from origin to oblique latitude lat.

–Js\{lon0\}lat0\{scale\} or –JS\{lon0\}lat0\{width\} (General Stereographic [C])
  \{lon0\}lat0 specifies the projection center.
  Give scale as \(1:xxxx\) or radius/lat, where radius is distance in inch from origin to oblique latitude lat.

CONIC PROJECTIONS:

–J\{blon0\}lat0\{lat1\}lat2\{scale\} or –JB\{blon0\}lat0\{lat1\}lat2\{width\} (Albers [E])
  Give projection center, two standard parallels, and scale \(1:xxxx\) or inch/degree).

–J\{l0n0\}lat0\{lat1\}lat2\{scale\} or –JL\{l0n0\}lat0\{lat1\}lat2\{width\} (Lambert [C])
  Give origin, 2 standard parallels, and scale along these \(1:xxxx\) or inch/degree).

MISCELLANEOUS PROJECTIONS:

–Jh\{lon0\}scale or –JH\{lon0\}width (Hammer [E])
  Give the central meridian and scale along equator \(1:xxxx\) or inch/degree).
–Jlon0scale or –Jlon0width (Sinusoidal [E])
  Give the central meridian and scale along equator (1:xxxx or inch/degree).
–Jklon0scale or –JKlon0width (Eckert VI [E])
  Give the central meridian and scale along equator (1:xxxx or inch/degree).
–Jnlon0scale or –JNlon0width (Robinson)
  Give the central meridian and scale along equator (1:xxxx or inch/degree).
–Jrlon0scale –JRlon0width (Winkel Tripel)
  Give the central meridian and scale along equator (1:xxxx or inch/degree).
–Jwlon0scale or –JWlon0width (Mollweide [E])
  Give the central meridian and scale along equator (1:xxxx or inch/degree).

NON-GEOGRAPHICAL PROJECTIONS:

–Jpscale or –JPwidth (Linear projection for polar (theta,r) coordinates)
  Give scale in inch/r-unit.
–Jxyscale[/yscale] or –Jxwidth[/height]. scale [or width] can be any of the following 3 types:
  –Jxscale - Regular linear scaling.
  –Jxscalere - Take log10 of values before scaling.
  –Jxscalepower - Raise values to power before scaling.
Give xscale in inch/x-unit and yscale in inch/y-unit. (yscale = xscale if not specified separately). Use negative scale(s) to reverse the direction of an axis (e.g., to have y be positive down).

Append ’d’ if x and y are geographical coordinates in degrees. Default axes lengths (see gmtdefaults) can be invoked using –JXh (for landscape); –JXv (for portrait) will swap the x- and y-axes lengths. The GMT default unit for this installation is inch. However, you may change this by editing your .gmtdefaults file(s) (run gmtdefaults to create one if you don't have it).

The ellipsoid used in the map projections is user-definable by editing the .gmtdefaults file in your home directory. 12 commonly used ellipsoids and a spheroid are currently supported, and users may also specify their own ellipsoid parameters (see man gmtdefaults for more details). GMT default is WGS-84.

–Jz Sets the vertical scaling (for 3-D maps). Same syntax as –Jx. Used in addition to -J above!

–K More PostScript code will be appended later [Default terminates the plot system].

–O Selects Overlay plot mode [Default initializes a new plot system].

–P Selects Portrait plotting mode [GMT Default is Landscape, see gmtdefaults to change this].

–R west, east, south, and north specify the Region of interest. To specify boundaries in degrees and minutes [and seconds], use the dd:mm[.ss] format. Append r if lower left and upper right map coordinates are given instead of wesn.

–U Draw Unix System time stamp on plot. User may specify where the lower left corner of the stamp should fall on the page relative to lower left corner of plot in inch [Default is (-0.75,-0.75)]. Optionally, append a label, or c (which will plot the command string.)

–V Selects verbose mode, which will send progress reports to stderr [Default runs "silently"].

–X –Y Shift origin of plot by (x-shift,y-shift) inch [Default is (1,1) for new plots, (0,0) for overlays].

–c Specifies the number of plot copies. [Default is 1]

–: Input is latitude, longitude. [Default is x, y or longitude, latitude]