

The Nibirum Star Maps

Four star maps are available to help illustrate the entire visible sky as seen from the world of Nibirum. Each is given in separate colour and black-and-white versions, and on three of the four colour variants (though not that for the planisphere map), an option is provided in the FCW files to show, or hide, the colours of the brightest stars along with some brief information about them.

Each map has a grid superimposed upon it, the graticule lines set at ten-degree intervals.

The line of Nibirum's ecliptic, the apparent path of the planet's Sun through the sky, is also shown, as a labelled, dashed line. This is inclined at about 25° to Nibirum's equator (Earth's ecliptic is angled at about 23½°).

The method used to create the star maps using the CC3+ mapping software (including generating the random placement of all the stars) is described here on the ProFantasy Forum:

<http://forum.profantasy.com/comments.php?DiscussionID=8014>

A total of 512 stars is shown over the whole sky, divided into four brightness, or magnitude, classes from 1st (the brightest) to 4th. These are the same magnitude classes as have been used from Earth since perhaps the second century BCE. There are six such classes in total, with those of 6th magnitude being the faintest stars at the limit of normal human vision. Most stars making up the patterns grouped as Earthly constellations are drawn from the first four magnitude classes, partly hence their use on these maps. For Nibirum, there are 26 1st magnitude stars (compared to Earth's 22), 28 of 2nd magnitude (Earth = 26), 124 3rd magnitude (Earth = 123) and 334 4th magnitude (Earth = 342).

Should you wish to add more stars in a similar fashion for the fainter stars, Earth's sky has approximately 1,090 5th magnitude stars and nearly 7,500 6th magnitude ones. On maps of this scale, such extra star numbers would make for a very cluttered appearance, another reason to show only the brighter stars.

The random placement of stars in Nibirum's sky is entirely deliberate, as this recreates exactly the situation we see from Earth, so constellations can be constructed in the same, at least slightly imperfect, way. That is more difficult to achieve where stars are placed in position by design.

Note too that no particularly bright stars closely mark either sky-pole for Nibirum. This has also been the case for most of recorded history on Earth, where the current north-pole star, 2nd-magnitude Polaris, is the brightest star in our sky that can ever be as close to the sky's north pole position as it is now. It has only been the closer star to the pole of at least 4th magnitude for about the last thousand years, and even it needs a little experience to find. In Earth's southern sky modernly, no star brighter than 4th magnitude lies within ten degrees of the sky's southern pole. Consequently, both Earthly and Nibirese travellers without sophisticated technological/magical aids must equally apply their skills and knowledge to navigate by the stars, and not just when finding north or south.

From our planet, only the 22 1st magnitude stars are bright enough to show colours to the human eye. Of these, 14 might be seen as blue-white by the more perceptive, 5 as orange-red and 3 as yellow-white. In reality, the blue- and yellow-whites are more commonly just perceived as “white”, however.

As Nibirum is a fantasy world, while these numbers were used as a guide, a little extra colour was added as well, to give 10 blue-white stars, 6 orange-red ones, 4 of yellow-white hue and 3 each of green-white and purple coloration. By using standard RPG percentage-dice rolls to assign these colours, a mild gradation within each was possible too, paler or darker. For those interested, the D100 intervals were: 01-40 = blue-white, 41-65 = orange-red, 66-80 = yellow-white, 81-90 = green-white and 91-100 = purple.

The Star Maps

The four main maps are:

- 1) The twin polar-projection hemispheres;
- 2) The double-sided planisphere disc;
- 3) The combined circular polar-projection & rectangular-equatorial set; and
- 4) The long whole-equatorial-sky rectangle, with again two polar-projection circles.

Map 1, Twin Hemispheres

This shows two circular star charts which just touch at their horizontal mid-edges. The left circle shows the northern sky from pole to equator (the disc's outer edge), the right circle the southern sky. The ecliptic line forms an identical arc on each circle. As the two discs are really each flat drawings of a hemispherical sky-dome, the Sun would seem to move from top to bottom along the ecliptic on the left-hand map circle (from the northern spring equinox, through the northern summer solstice point to the northern autumn equinox), but bottom to top of the right-hand circle (southern spring = northern autumn equinox, through southern summer solstice to the southern autumn equinox point).

Map 2, Planisphere Disc

A planisphere is a handy device that allows the easy visualisation of the sky at a particular latitude for any time of the day or night through the year. It consists of a wheel-shaped sky map set below an outer disc that has a shaped window representing the true horizon for its stated latitude (although usable up to five degrees or a little more north and south of that line as well). Both discs have gradations along their outer edges so they can be rotated against one another, and set to any date or time desired.

Since Nibirum is an imaginary world, those using it for fantasy RPGs, say, might need to know the look of the sky from many different places. So this map was designed as a double-sided planisphere disc to fit into a latitude mask like those freely available from this Japanese website (the details are all in English):

http://www.geocities.jp/toshimi_taki/planisphere/planisphere.htm .

The “dbl_side_a.zip” file link near the end of that webpage has a set of planisphere mask templates to print-off and make-up for a range of different latitudes, into any of which a suitably resized and glued back-to-back printout of this planisphere double-disc map can be slid and used.

Each part of this map shows an entire sky hemisphere, plus an overlapping zone 25° wide north or south of the equator on the respective chart. The northern sky, as usual, is the left-hand disc, the southern the right-hand one, with the whole ecliptic ring (an ellipse on this map projection) shown on both. The circumference of each disc is marked in degrees to allow the setting of dates and times with the latitude mask in place, without pre-empting how different cultures on Nibirum might wish to style their calendars or daily time-keeping standards.

Maps 3 & 4, Polar-Rectangular Charts

As Map 4 is simply a revision of Map 3, where the two equatorial rectangular charts have been combined as one, they can be described together easily too. Each part of the chart shows a section of the sky to an outer edge of 45° from the poles for the circular maps, or both 45° north and south of the equator for the upper and lower edges of the rectangles, which latter all have the equator running along their central horizontal axes. The complete ecliptic line curves across the rectangular charts, on which the Sun would seem to move right to left during the year as seen from Nibirum. Once you know where the Sun is, the area 180° horizontally away shows the stars that will be visible highest in the sky in the middle of the night for that same time of year.

By using a combination of all these charts, and hiding the graticule grids in the FCW files, you can start to pick out prominent star patterns, and begin constructing constellations for any culture on Nibirum you might wish. If you're stumped for inspiration, there are some pointers to try in the Nibirum Star Maps topic, as previously noted, on the ProFantasy Forum here:

<http://forum.profantasy.com/comments.php?DiscussionID=8014> .