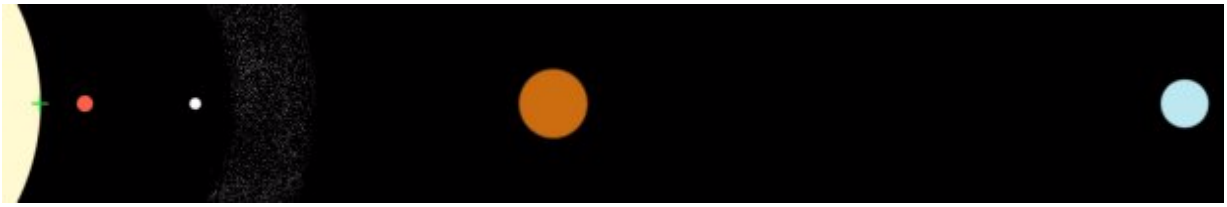
THE SHINER SYSTEM



S RF WF SR G BF

S: Shiner
RF: Red Fire
WF: White Fire
SR: The Shining Ring
G: Glower
BF: Blue Fire

Two scales are used in the image above:
The horizontal distances between the heavenly bodies are drawn to scale, but all objects are shown 10x bigger to indicate their relative sizes. The green cross denotes the centre of Shiner for the distance scale.

Astronomical Data

Shiner

Star type: K0
Diameter: 2.2 Million Km
Surface Temperature: 5400°K

Red Fire

Distance from Shiner: 11 Million Km
Diameter: 40,000 Km
Orbital Period: 8 Earthdays
Surface Temperature: nearly white hot
Insolation: 57 KW/m ²
Atmosphere: a thin plasma of metallic ions.

White Fire

Distance from Shiner: 39 Million Km
Diameter: 30,000 Km
Orbital Period: 175 Earthdays
Surface Temperature: c. 800°K
Insolation: 4.5 KW/m ²
Atmosphere: extremely dense, poisonous mixture of carbon dioxide, sulphur dioxide, etc..

The Shining Ring

Distances from Shiner:
Inner edge: c. 51 Million Km
Outer edge: c. 70 Million Km
Composition: trillions of rocky asteroids coated in shiny metal emitted from Red Fire as plasma during billions of years.

Glower

(Rings not shown above for clarity: see Glowrealm Factoid for details.)
Brown Dwarf (almost)
Mass: c. 70x Jupiter
Distance from Shiner: 130 Million Km
Diameter: 170,000 Km
Orbital Period: 328 Earthdays
Small diameter, as Glower's core is composed of degenerate matter.
Surface Temperature: 824°K
Glower emits radiation mostly in the infrared, warming the Glowrealm.
Insolation: 408 W/m ² (This also applies to the moon, Home.)
Atmosphere: dense mixture of hydrogen, helium, nitrogen, etc., lit from below by extensive orange glows of nuclear fusion reactions occurring sporadically at the core surface. Great storms of lightning race continually across Glower's angry face.

Blue Fire

(Ring not shown above for clarity: see Blue Fire Factoid for details.)
Gas giant
Mass: c. 0.5x Jupiter
Distance from Shiner: 290 Million Km
Diameter: 120,000 Km
Orbital Period: 1093 Earthdays
Surface Temperature: no solid surface, but cold.
Insolation: 82 W/m ²
Atmosphere: turbulent mixture of nitrogen, methane, etc., with high white clouds of water ice crystals.

Ellipticals

All large and therefore potentially dangerous Glower-crossing asteroids were mined down to the last molecule by the Exhodon, during the final period of Glowrealm construction. The material was used for the construction of Habitats and facilities.

Many small rocks still zoom about in near-Glower space, however. Any which approach the Glowrealm are pushed into a safe direction by the Glowrealm Meteor Defence system (see “Exhodon”, chapter GMD).

The Ice Halo

Distances from Shiner:
Inner edge: c. 520 Million Km
Outer edge: fades around 3000 Million Km
Composition: trillions of icy asteroids and planetesimals left over during the formation of the Shiner system. Insolation is so low that the ices were never melted, thus preserving their original composition.

Material Control has numerous fusion-powered mining spacecraft in this cold dark region. The larger craft mine for volatiles and transport them to the Glowrealm. The gigantic craft nudge asteroids into cometary orbits, so that they may be mined as they transit the inner Shiner system.

Specially constructed entertainment Habitats provide warmth and comfort for miners who need a break from the lonely darkness.