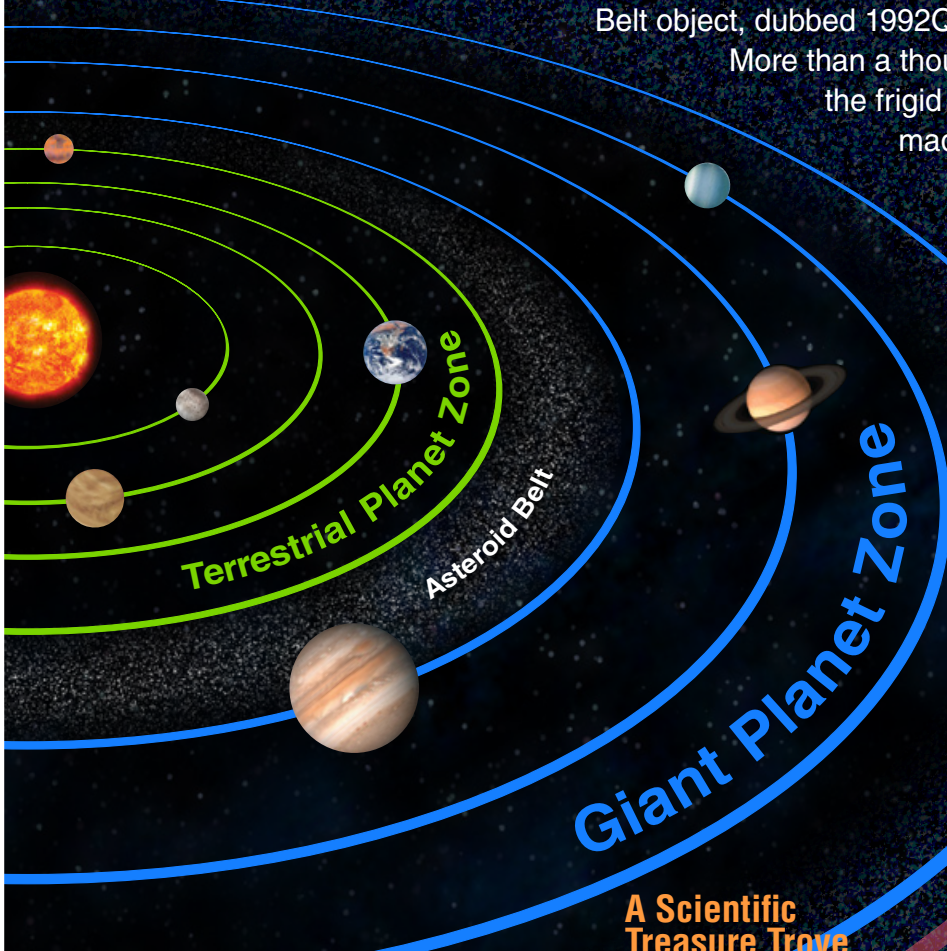




Before Clyde Tombaugh discovered Pluto in 1930, the solar system appeared to simply consist of terrestrial and giant planets. Once it was discovered, small, icy Pluto near the edge of the solar system bore little resemblance to either class of larger planets.

Decades later, researchers predicted the existence of a belt of comets beyond the orbit of Neptune, within which Pluto orbited. Thus was born a new concept for the architecture of the solar system that placed Pluto into better context. The first small Kuiper Belt object, dubbed 1992QB1, was discovered in 1992.

More than a thousand other discoveries in the frigid “third zone” have been made since.



The Third Zone

The Kuiper Belt of icy objects discovered in the 1990s led researchers to re-examine their view of the architecture of the solar system and led to the concept of the third zone. It contains comets, larger objects called planetesimals, and small planets like Pluto. Structures like the Kuiper Belt have since been found to exist around other stars.

A Third Planet Class

Like many other planets, Pluto has a solid crust, a mantle, and probably a core. It has moons, an atmosphere, and even seasons we can observe; it also may have polar caps. Some dwarf planets (like Pluto) have atmospheres and are expected to have an active geology and tectonics, just like their terrestrial planet counterparts. Many planetary scientists consider dwarf planets like Pluto to be a third class of planet.

A Scientific Treasure Trove

The Kuiper Belt is the largest structure in our planetary system and contains more than 100,000 miniature worlds, along with a handful of small planets like Pluto — called dwarf planets. All the objects in the Kuiper Belt are believed to be ancient bodies that trace their history back to the formation of the solar system.

Oh, Baby

The dwarf planets of the Kuiper Belt are believed to be planetary embryos — bodies that reached the mid-stage of planetary development, but grew no further.

Who Knew?

Once considered a misfit, Pluto is seen as the king of the dwarf class of planets in the Kuiper Belt, with a population already greater than the terrestrial and giant planets combined. Some theories predict there could be 100 to 1,000 dwarf planets in the Oort Cloud (much farther out than the Kuiper Belt), significantly outnumbering the larger planets. Pretty cool!

For illustration purposes only (not to scale)

the Kuiper Belt & the third zone

