

AMERICAN MUSEUM OF NATURAL HISTORY

Frontiers in Physical Science

Week 1

Introduction: Orsola De Marco

Orsola De Marco:

My name is Orsola De Marco. I'm an astrophysicist for the American Museum of Natural History. My main function here is to do research which I carry out inside the Department of Astrophysics within the Museum. But I also help out with educational programs for teachers and for the children.

My research deals with stars. Stars live and die like people. They're born out of a big cloud of mushy gas. From that cloud, they condense. Eventually, they start burning. And for a long, long time, they burn that fuel inside of them, except eventually the fuel will run out. And at that point, the star will die.

This particular part of the second floor of the Hayden Planetarium is dedicated to explaining the size of things, and to try to give the visitor the idea of how big things can be and how small they can also be. Here we have the Sun, represented by a small, white sphere, and Rigel, in comparison, is represented by the whole of the Hayden Sphere.

If we can then make a leap with the imagination, and imagine now that the Hayden Planetarium is the Sun, then up there we have the big giant gas planets. Then further along on the floor, we have the rocky planets. My stars, or what I call my stars, the white dwarfs, are the size of Earth. Earth is much, much smaller than the Sun, represented here by the Hayden Sphere. And the Sun itself is much, much smaller than a supergiant star. So you see the range of stellar sizes, exemplified on this part of the exhibit.