Print Article | Close Window

April 8, 2006

Local couple launches book that explains our central place in the cosmos

BY PEGGY TOWNSEND
SENTINEL STAFF WRITER

If you lived in ancient Israel, you pretty much knew what the cosmos was like.

You lived on a flat earth with a bubble of air on top of it. Above that was a hard, invisible dome and everything else was water.

Surprisingly, most of us in the modern world have less of a picture of the universe than those ancient Hebrews did.

But two Santa Cruz residents, Joel Primack and Nancy Abrams, are out to change that.

Primack, an acclaimed cosmologist, and Abrams, a writer and composer, have written a book about the universe that uses symbols and meditations to explain our place in the cosmos.

And unexpectedly for many, that place is right in the center of it.

Using the latest information from what some call the golden age of cosmology, the couple also explains things like why extraterrestrials might resemble us, why humans are the correct size to not only be complex but to be able to communicate, and why we are not just "specks" in a vast space.

It is a book so exciting it set off a bidding war between two big publishing houses in New York and has launched the couple on a two-month book tour across the country.

April 11, they will be at the Capitola Book Cafe to talk about their book, "The View from the Center of the Universe."

A Golden Age

It's a sunny day and Primack and Abrams squeeze under the shade of an umbrella on their deck that overlooks the city of Santa Cruz.

"A lot of people don't appreciate the fact there has been a sea change in the understanding of the universe in the last eight years," says Primack, an amiable man in a red polo shirt and black slacks who — along with UC Santa Cruz astronomers Sandra Faber and George Blumenthal and another scientist — revolutionized the idea of what the universe is made of.

"For most of the 20th century, cosmology has been more fiction than fact," says Primack.

But with new understandings of the origins and appearance of the universe, that has changed.

Primack smiles.

"This book is the first story of the origin and evolution of the universe that might actually be true," he says.

But writing a book about the universe was not an easy task, even though Abrams and Primack have taught a course on "Cosmology and Culture" for years.

How do you easily explain things like Cold Dark Matter and cosmic time? Or size scales and eternal inflation?

Primack and Abrams turned to symbols, just like the ancients did.

In order to explain the size of the universe, for instance, they called up the Uroboros, the old drawing of the snake swallowing its tail.

The tail is the Planck length — the tiniest size in the universe — they explained in their book.

The head — the largest — is the cosmic horizon.

And, it turns out, the size that's exactly in the middle of those two points is a human.

We are, then, at the center of all possible sizes in the universe, Primack and Abrams say.

Not only that, when you look back in time, we also are at the center of our visible universe.

"Our book not only gives you a modern picture of the universe," says Abrams, "but we also tell you what it means to you and how it connects to everyday life."

An Idea Is Born

Primack and Abrams' book did not start with a big bang.

Instead, it began quietly, when Doug Abrams no relation of Idea Architects in Santa Cruz, read a 2002 article in the Sentinel about Primack and Abrams' cosmology course.

Abrams, a former editor with Harper Collins and now an independent literary agent representing books by Desmond Tutu and Jesus scholar Dr. James Tabor, was intrigued.

"I'm very interested in cosmology, particularly what it says about humanity's place in the universe," says Abrams, a tall, slender father of three.

He called Abrams and Primack with the idea that they should write a book, and a year later — with the editing help of their actress daughter Samara, 25 she told them their first draft was "boring" — the couple had a proposal ready to show publishers.

Abrams and Primack remember how they were in Washington, D.C., in the midst of a storm that had cut power, uprooted trees and canceled the meeting they were attending when Doug Abrams called on their cell phones.

Standing outside a restaurant, amid the branches of fallen trees, they were told two publishers wanted to make an exclusive offer on their book.

The amount, Nancy Abrams says, "was a good 10 times more than we expected."

The couple flew to New York a few days later, where they were courted by the two publishers.

The winning offer, from Penguin, was in the mid six-figure range, the couple say.

We'Re Not Specks

"We are the first culture in history to have no picture in our head of what the universe is," says

Abrams, a petite woman with neat chin-length dark hair who was the creative force behind the book.

Primack chimes in: "It has become more or less a part of our modern ethos that we are alienated from the universe;" that we are insignificant flecks in the cosmos.

Not only is that a dangerous way to think, they say, but advances in science prove it is also wrong.

Humans are central to the universe in at least seven ways, they say, and realizing that fact will change our view of earth and ourselves.

Knowing that we are at the very center of all possible sizes in the universe, for instance — "how much more significant can that be?" Abrams asks.

"It forces you to ask questions you might never have asked."

And, understanding our universe, they say, will not only help us understand financial and political events in our world, but ecological consequences, too.

"People like to feel a part of something bigger than themselves," Abrams says.

"And we give them something pretty huge to feel a part of."

Contact Peggy Townsend at ptownsend@santacruzsentinel.com.

If You Go

WHAT: Joel Primack and Nancy Abrams will sign and discuss their book 'The View from the Center of the Universe.'

WHEN: 7:30 p.m. Tuesday, April 11.

WHERE: Capitola Book Cafe, 1475 41st Ave.

COST: Free.

DETAILS: 462-4415.

Also: The couple also will speak at 7:30 p.m. May 8 at Bookshop Santa Cruz, 1520 Pacific Ave.

Excerpt

'Like us, aliens are likely to be made of the most abundant reactive elements — hydrogen, oxygen, carbon and nitrogen — which we know have a uniquely complex chemistry.

'But a recent discovery has revealed an unexpected way that aliens are likely to resemble us: They are likely to have similar circulatory systems and therefore also to have similar rates of using energy and perhaps even similar lifespans. This is more than just idle speculation. Biologists have known for many years about complex life on Earth, but they have only recently begun to understand how these regularities of life follow not from biology but from fundamental principles of physics that are likely to be applicable to life even on other worlds.'

About The Authors

Nancy Abrams: Born Sept. 10, 1948, in Elizabeth, N.J.

Joel Primack: Born July 14, 1945, in Santa Barbara.

She: Fulbright Scholar, lawyer, writer, has released three albums of her songs.

He: Professor of physics at UC Santa Cruz and one of those who discovered the theory of Cold Dark Matter, which is now accepted as the standard theory of the structure and evolution of the universe.

What you don't know about them: Married since 1977, they met at a meeting of President Gerald Ford's Science Advisory Committee in Washington, D.C.

Print Article

You can find this story online at:
http://www.santacruzsentinel.com/archive/2006/April/08/style/stories/01style.htm

---

Copyright © Santa Cruz Sentinel. All rights reserved.