

Theorist lectures on secrets of universe

□ Stephen Hawking presents theories about black holes, the big bang and time travel

By Christopher Blair
Emerald Editor

Dr. Stephen W. Hawking steered his wheelchair onstage at the Hult Center's Silva Concert Hall to the sound of applause and cheers from the sell-out crowd.

The chair spun slowly to face the audience. After a momentary pause, a computer-generated voice asked, "Can you hear me?"

The audience could, and responded with more applause. Hawking, aided by a graduate assistant, an overhead projector and some humorous transparencies, spent the next hour explaining the basics of the universe's birth, life and its possible end.

Hawking, 50, a theoretical physicist from Cambridge University in England who is often compared to Albert Einstein and Isaac Newton, lectured in Eugene Saturday night. He has dedicated his life to unlocking the secrets of the universe, including such mysteries as black holes, "dark matter" and the so-called big bang.

Diagnosed with amyotrophic lateral sclerosis in the early

1970s, Hawking uses a computer and voice synthesizer to communicate.

Hawking's lecture was a primer on theoretical astronomy. He explained that the universe, which is currently expanding at high speed, will either expand forever, or, billions of years from now, stop expanding and collapse.

The key, he said, was determining the universe's mass and gravity. The stars and galaxies astronomers can see account for less than 1 percent of the mass necessary to halt the expansion. The key may lie in so-called dark matter, which has not been detected but may have at least some of the mass necessary to hold galaxies and the universe together.

Because it is difficult to know the truth behind the universe's workings, Hawking compared the universe's two possible fates to the work of oracles and prophets in ancient history, who offered ambiguous predictions to kings and warriors.

"In the tradition of oracles and prophets, I'm hedging my bets by predicting both ways," he said.

Some of Hawking's most celebrated work has been research on black holes, the remnants of dead, collapsed, supermassive stars whose gravity is so strong light cannot escape.

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Millrace oil spill still a mystery

By Tiffany Woods
Emerald Contributor

An investigation into a recent Eugene Millrace oil spill, which officials labeled minor, has yet to find the cause of the spill or where it originated.

Dave Nuss, Eugene fire marshal, estimated that between 10 and 30 gallons of lightweight oil leaked into the Millrace near 17th Avenue and Franklin Boulevard Jan. 11.

The oil did not pose an environmental threat, Nuss said.

The fire department responded to the spill, and a two-member cleanup crew collected what was classified as a minor amount of oil with three oil absorbing booms.

"It was not a big-time hazardous material," Nuss said. "On a scale of one to 10, it was definitely a one."

Nuss said that Eugene's drinking water supply was not affected because the Millrace is an enclosed water source.

The cleanup crew tracked the spill up the Millrace to a storm sewer outlet near the State Highway Department Yards at 2141 E. 15th Ave.

Public Works Maintenance and the Oregon Department of Environmental Quality were notified and are now working to find where the spill originated, which is becoming increasingly difficult to determine.

Phil Prince, EFD battalion chief, said that although the leak was traced to the State Highway Department grounds "there is nothing conclusive that it was the yard."

The DEQ determines who pays for the clean-up, but according to Nuss, no one has been billed yet because no responsible party has been identified.

As a result, the fire department pays for the clean-up from its own funds. If a source is discovered later, the city may choose to bill the responsible party for the cost of the investigation.

The State Highway Department Yard was contacted by the City of Eugene and would not claim responsibility for the spill.

"They could not attribute it to our yard," Larry Asburry, the highway department's district manager, said.

Asburry said that the yard safeguards against oil leaks with an oil interceptor which separates the waste oil from the water before it enters the storm sewers.

In the early 1980's, however, the yard did experience an oil spill prior to the use of the interceptor. According to Bob Hammitt, maintenance director for Eugene, a "substantial quantity" of diesel flowed into the Millrace after a truck drove away with a hose still attached to it.

The previous spill resulted in a clean-up of the area as well as nearby ducks. The highway department yard currently disposes of waste oil in a tank. An oil recycling company collects from there.

Improperly disposing of oil violates the Eugene Fire Code, but there is no present ordinance against it. The fire department is in the process of drafting an ordinance to address issues such as abandonment, illegal dumping, and illegal discharge of hazardous material.

STREETWISE

QUESTION:

Do you think the United States should give support to the republics of the former Soviet Union?

"That's a hard one. Not necessarily, because I think we need more support in this country than sending it to the Soviet Union. I think we need more help in the U.S., but they need help too."

--Christine Briggs
junior, geography



"I think we should because the people need to eat and it's important for us to maintain a good relationship with them."

--Dave Gromaux
junior, international studies



"Definitely, so they have some stabilizing element so it doesn't become really radical. I always think about the Nazis and how bad it got and it could get that bad."

--Hope Pratt
senior, art history



"Maybe a little bit because they (the people in the Soviet Union) are poor, not (us) in the United States. Goods should be shared."

--Thomas Hansen
graduate, biology



"Yes, I think it would help in the future because maybe when the Soviet Union grows stronger they will help the U.S. in return."

--Sanny Lesmana
sophomore, pre-business



"No, I don't. I think we are in enough trouble with our economy as it is. We need to take care of ourselves first and that's what's wrong."

--Jason Jones
junior, psychology



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