

Possible black hole at center of galaxy

PHOENIX, Ariz. (AP) — Stars that zip along at high speeds and bursts of infrared radiation lend new support to the theory that a black hole the size of a million suns lies at the center of the Milky Way, the galactic home of the Earth.

The research, presented Tuesday by two University of Arizona astronomers, strengthens the notion that a massive body exerting a powerful gravitational pull is centered on an object known as the Sgr-A-Star located in the core of the Milky Way 28,000 light years away.

One of the astronomers, Laird Close, said a new instrument has detected for the first time streams of infrared radiation from Sgr-A-Star. The finding of infrared radiation is consistent with the presence of a black hole in the Milky Way's core.

"We have detected a source of infrared, which is powerful evidence that there is a huge object, a likely a black hole, at the center of the Milky Way," Close said at a news conference.

The research used a telescope that takes out the twinkle of stars, caused by atmospheric distortion, and can pinpoint infrared radiation from Sgr-A-Star. The presence of such radiation is considered critical evidence of a black hole. Infrared radiation would be generated as gas and other material falls at an accelerating rate toward the center of a black hole.

Another Arizona astronomer, Joseph Haller, measured the movement and concentration of stars in the galactic core and found more evidence for a black hole.

He said the study showed that stars within about four trillion miles of Sgr-A-Star had accelerated to almost a quarter of a million miles an hour, a movement that could be caused only by a powerful gravitational attraction.

Haller said he also measured the mass of material near Sgr-A-Star and determined that within 0.7 to 1.5 light years around the object the mass was equal to about 900,000 suns.

"That amount of mass is consistent with the idea that Sgr-A-Star is a black hole," said Haller.

A light year, the distance light will travel in one year in a vacuum, is about six trillion miles.

University of Illinois astronomer Kwok-Yung Lo said that although the observations were important, they fell short of presenting proof of a black hole at the Sgr-A-Star.

Studies of Sgr-A-Star show that it is a very small body and yet appears to have a massive gravitational pull, he said. This is consistent with a black hole.

Sgr-A-Star also emits a radio signal that astronomers say is the type of emission that would be expected from a black hole.

To prove it is a black hole, however, said Lo, astronomers need to show that the mass of Sgr-A-Star is equal to about one million suns within an area about two million miles across. Such a concentration of matter would create a gravitational pull so powerful that nothing could escape, not even light. This is the characteristic that gives black holes their name.

Haller agreed.

"To determine that this is a black hole, we need to get in much, much closer," he said.

Chimney catches burglar

OCEANSIDE, Calif. (AP)

— So how does Santa Claus get down those chimneys? Frank Morales tried it and got stuck — upside down, his head and hands dangling inside the fireplace of a stranger's house.

"It was hilarious," said homeowner Margie Beavers, 56. "If it hadn't been so hilarious I would have been scared out of my wits."

Morales landed at the bottom of the chimney, where his waist became wedged, with a loud thump and began hollering for help, awakening Beavers and her 62-year-old husband, Larry, shortly after 2 a.m. Monday.

"I ran into the living room and was going to the door when I realized (the voice) wasn't coming from the door," Margie Beavers said.

"I yelled, 'Where are you? Are you in my house?' He said he was in my chimney, and then I said, 'What are you doing in there?' and he said, 'I'm Santa Claus.'"

Margie Beavers saw a man's head and upper torso behind Christmas stockings still hanging from the mantle and called police.

Officers summoned firefighters, who had to chip away part of the inside of the fireplace to free Morales.

"Instead of thanking them, (Morales) became uncooperative and combative," said police Sgt. Reggie Grigsby. "He had to be subdued and taken into custody."

MCAT, LSAT, GMAT, GRE

If you're taking one of these tests, take Kaplan first. We teach you exactly what the test covers and show you the test taking strategies you'll need to score your best. No one teaches you to think like the test makers better than Kaplan.

Reach your full potential!
Classes forming now. **345-4420**

KAPLAN
The answer to the test question. Visit our new center
140 West 8th,
Downtown Eugene

OSPIRG'S HUNGER AND HOMELESS GROUP PRESENTS

welcomes

FAITH NO MORE

Featuring an Angel Dust

TICKETS ON SALE NOW!

SPECIAL GUESTS
BABES IN TOYLAND
PLUS **KYUSS**

SUNDAY
JANUARY 17
7:30 PM
EMU BALLROOM

TICKETS AVAILABLE AT EMU MAIN DESK, FACE THE MUSIC, RECORD GARDEN, CD WORLD, HOUSE OF RECORDS
PRODUCED BY MCA CONCERTS

Are you worried about succeeding in your courses this term?

Academic Learning Services offers small group tutorials at the following times:

MATH 095	3:30 pm UH	CH 222	3:30 pm MW
MATH 111	2:00 pm UH	EC 202	3:30 pm MW
	2:30 pm MW	FR 102	2:30 pm MW
	3:30 pm UH	FR 202	3:00 pm UH
MATH 112	2:30 pm MW	GER 102	3:30 pm MW
MATH 241	3:30 pm MW	GER 202	2:30 pm MW
MATH 242	1:30 pm MW	PH 202	1:30 pm MW
	3:00 pm UH	SPAN 102	2:00 pm UH
MATH 243	2:00 pm UH		2:30 pm MW
MATH 251	3:30 pm UH	SPAN 202	3:30 pm MW
MATH 252	3:30 pm UH		

*Additional groups will be opened as necessary.

If you are interested in joining one or more of these groups, see Kim Lilley at Academic Learning Services, 68 PLC. The fee is \$60 per group.

If you need assistance in courses other than those listed above, our tutorial registry can provide names and telephone numbers of qualified tutors.

For more information contact:
Academic Learning Services
68 PLC 346-3226

Full Service

**EURO-ASIAN
AUTO REPAIR**



A.S.E. Certified Technician
BOSCH AUTHORIZED SERVICE

CLOSE TO CAMPUS



1917 Franklin Blvd., Eugene
485-8226