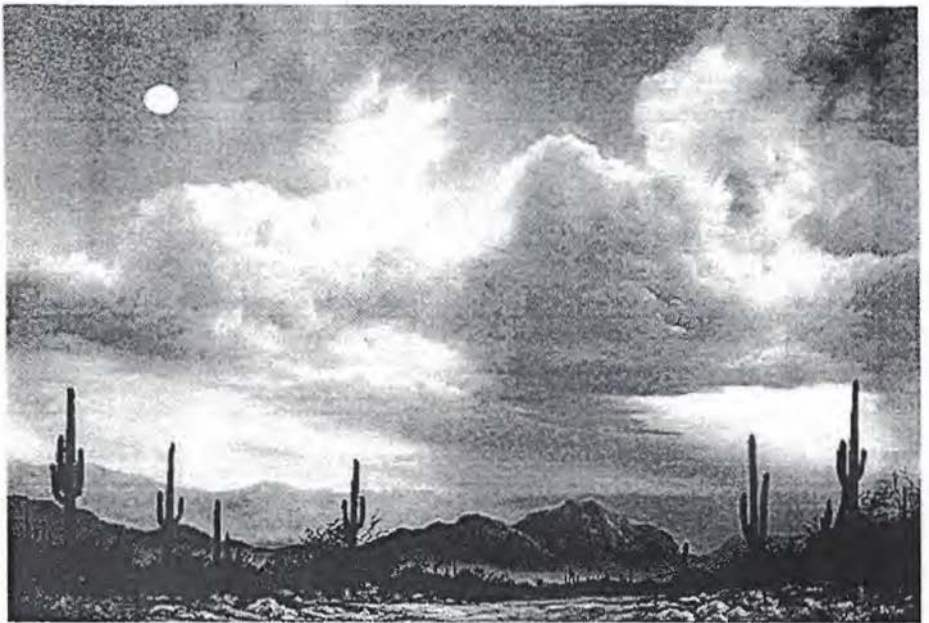


# MUFON

## Mutual UFO Network

### Arizona Chapter

# January 2001



MUFON'S Mission is the Systematic Collection and Analysis of UFO Data with the Ultimate Goal of Learning the Origin and Nature of the UFO Phenomenon

Visit the new MUFON AZ web site at  
<http://hometown.aol.com/mufonjason/mufonaz.html>

V01 10#1

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## Directors Message

Bill Morris, assistant State Director for MUFON in Arizona, has stepped down from his position in MUFON. Bill has a flourishing business that needs his attention. I want to personally thank Bill for his help in always bringing a calm and direct approach to handling MUFON matters. His dedication to the organization was beyond reproach.

George Parks, Pima County Section Director, has been appointed the new Assistant State Director for MUFON in Arizona. George has been a tireless worker for the Tucson area and has brought much needed enthusiasm to MUFON. All of us are proud to have you George!

I am pleased to announce that Jason Ingraham has been appointed the new Maricopa County Section Director for MUFON-AZ. Jason has been a dedicated supporter of myself and our local Chapter. His hard work on the new MUFON- AZ website, which he created on his own, with no direction, should be

commended. Please give him your respect and support as my replacement.

I will continue my work on investigations, facilitation of the newsletter, treasury, and promotion of our group. I have been the Maricopa County Section Director for almost 4 years, and thank all of you that have assisted me in this position.

**Jim Kelly**

## Reminder

**There will be no meeting in January due to our relocation.**

**We might have a very exciting guest speaker announcement in the next issue. Stay tuned.**

## MUFON AZ Meeting Information

**Pima County Chapter:** Meetings held at Wilmot Library, 530 N. Wilmot, Tucson. Call George Parks for more information 520/742-6651

**Pinal County Chapter:** Contact Ken Kerber for more information 520/797-2157

**Yuma County Chapter:** Meetings are quarterly. Call Richard King for more information 520/747-7787

**Maricopa County Chapter:** See enclosed meeting flyer for details.

**Experiencer's Meeting:** For information, call Dr. Ruth Hover at 480/837-0446

## Classified Ads

Advertise in the MUFON AZ Newsletter! Ads up to three lines long are \$5.00; business card-sized ads are \$10.00 (we can reproduce your business card in the ad). Call Jim Kelly at (480) 945-5582 for prices on larger ads. Submit your ad and payment by the first of the month to have it in that month's newsletter issue.

## Article Submission

If you have any articles or letters you would like to submit for the newsletter, please call Teri Acton at (480) 945-9589. Suggestions/articles can also be e-mailed to [tlacton@aol.com](mailto:tlacton@aol.com). Your ideas and comments are welcomed and appreciated!

## MUFON Membership Badges

Orders are being taken for your MUFON Membership Badges. These are the 1-3" x 3" blue badges with 3 lines and white print listing your name on the first line, "Arizona MUFON" on the second line, and a title or phrase such as "The Truth is Out There" on the third line. The cost is \$5.00 each, unless we have enough orders to get a price break, then they will be less. See the sign-up sheet in the front lobby at each meeting, or you can fax your order to (602) 837-0094. You may also mail your order to Ruth and Harry Hover, 16714 E. Gunsight #155, Fountain Hills, AZ 85268. For more information, please call the Hovers at (480) 837-0446.

## MUFON Meeting Video Tapes Now Available

We now have video tapes for sale of some of our past meetings! Please contact Chris at Argo Productions at 1-800-576-2745. The following programs can be purchased:

Dr. Nick Begich (July 28, 2000 meeting) \$10.00  
Don Ecker (October 25, 2000 meeting) \$15.00  
Stanton Friedman (November 15, 2000) \$20.00

Order forms will be available at all future meetings!

## Upcoming Events

Phoenix Rising Presents:  
*The Hidden Life of  
Historical Jesus*

The real story of the most famous man who  
ever lived

With Dr. Glenn Kimball\*

Friday, February 9, 2001, 7:30 p.m.  
Scottsdale Civic Center Library  
3839 Civic Center Blvd., Scottsdale, AZ  
Admission: \$10.00 at the door  
Center doors open at 6:30 p.m. for book signing

The actual story of Jesus and his family translated from ancient manuscripts that lay buried in the seventeen miles of vaults beneath the Vatican. These are accounts of a historical Jesus from the records of his actual brothers – part of a body of documents called the "Only Rule of our Faith," the original Bible before the Bible!

\* Glenn Kimball, Ph.D. is a professional lecturer and author of two books on the life of Jesus: Hidden Stories of the Childhood Jesus and Hidden Politics of the Crucifixion. He is a graduate of Southern Illinois University and is President of the International Exchange School. Dr. Kimball has lived in South America, Mexico and Europe. For more information, call 602-957-4170.

## LETTERS

### OMNIA MUTANTUR --- EVERYTHING CHANGES

In the case of the MUFON Arizona Chapter and Maricopa County Section, changes are for the better.

Over a year ago, the new State Director and Maricopa County Section Director were installed when the "new guard" took over. Let's be honest; there is a terrific improvement.

Speakers at our meetings are of high quality, while the newsletter contains many useful information and wide range of sighting reports and various articles. E-mail and Internet links were established.

We, of the "old guard" tried our best, but new methods and modernization were necessary. This is progress.

Best wishes to State Director Bob Sylvester, Maricopa County Section Director Jim Kelly, Dr. Ruth Hover, Newsletter Producer Teri Acton, Sandy Sylvester, Peter Creelman and all of the active members.

All of my support and admiration. Keep up the good work,

**Jim (Dimitri) Ossipov,**  
MUFON- AZ member

### Art Bell Back on Air February 5, 2001

LOS ANGELES, Jan. 5, 2001 Art Bell, the radio personality famous for his spontaneous and compelling conversations about all things unexplained, has announced his return to radio. Bell resumes his reign as host of the most listened to live overnight radio program, Coast to Coast AM on Feb. 5 from 1am to 6am ET.

Bell states, "The negotiation was brutal and bloody! The result...fewer commercials and back to five hours."

Bell resigned last April because of family and legal issues that required his full attention. These have been resolved. His passion for radio and his audience has propelled him back with a renewed commitment to the unique show he created in 1993. Coast to Coast AM airs on more than 430 stations nationwide.

"I am ecstatic to welcome Art Bell back to his program," said Kraig T. Kitchin, president/COO of Premiere Radio Networks. "It was a bloody negotiation as pulling someone out of retirement always is. I am wildly enthusiastic to bring the news to affiliates and listeners nationwide...imagine their reaction! I also want to add my thanks to Mike Siegel."

## Bizarre new planets puzzle astronomers

BY JEFF FOUST  
SPACEFLIGHT NOW

January 10, 2001

Astronomers Tuesday announced the discovery of a pair of new and highly unusual planetary systems that challenge their views on the structure of solar systems and even the definition of a planet.

A team of astronomers, led by veteran planet hunter Geoffrey Marcy of the University of California Berkeley, reported their discoveries -- one solar system with an improbably large planet and another where the planets orbit their parent star in lockstep -- at a conference of the American Astronomical Society in San Diego on Tuesday.

One of the new planets is the largest extrasolar planet yet discovered with an estimated mass 17 times that of Jupiter, our solar system's largest world. It lies an average of 430 million kilometers from the star HD 168443, 123 light-years from the Earth, completing one elliptical orbit around the Sun-like star every 4.85 years.

Objects as large as this are usually not classified as planets: at masses about 13 times that of Jupiter, gravitational pressures grow high enough in the core of such bodies to initiate fusion of deuterium atoms, the widely accepted dividing line between planets and more massive brown dwarfs, or failed stars. However, the unusually close proximity of this object to its parent star, as well as the existence of a previously-discovered planet 7.7 times the mass of Jupiter in an even closer orbit lead Marcy and his colleagues to reconsider that classification.

"This massive planetary object defies our expectations for the largest planets," said Paul Butler, a staff scientist at the Carnegie Institution of Washington and a member of Marcy's team. "But it's orbiting right there next to another planet. We never expected Nature would make such gargantuan planets, and indeed maybe they aren't planets at all."

"How did this form so close in orbit around the star, and in close association with another planet?" asked Steve Vogt, a University of California Santa Cruz astronomer and another member of the discovery team. "This is going to bug astronomers."

Another new planetary system that may bug astronomers is around the star Gliese 876, a small M-type star 15 light-years from Earth. In addition to a previously known planet orbiting the star every 60 days, astronomers said Tuesday they discovered another, smaller planet orbiting the star in exactly half the time. The planets appeared to be locked in a 2:1 gravitational resonance, the first such resonance seen outside the solar system.

Although astronomers had enough data for years to discover the inner planet, it eluded discovery until Marcy tried to account for minute errors in the orbit of the outer planet, only to conclude that a two-planet system was a better fit to their data. "We were fooled," Vogt said. "The synchrony

allowed one planet -- the smaller, inner planet -- to hide in the wobble of the other."

Such resonances have been found within our own solar system. Neptune and Pluto are locked in a 3:2 resonance, where Neptune orbits the Sun three times for every two circuits by Pluto. In addition, three of Jupiter's largest moons -- Io, Europa, and Ganymede -- orbit the planet in a 4:2:1 resonance.

"The resonance between the two orbiting planets is among the most exciting planet detection discoveries to date," said Jack Lissauer, a planetary dynamicist at NASA's Ames Research Center. "This is the first extra-solar planetary system to show a strong resonance. It also is the smallest star known to have any orbiting planets, much less two."

Scientists hope the discovery of a similar resonance in another solar system may provide insights into their formation. "Questions about planetary migration and gravitational influence are still very much unsolved," Lissauer noted.

With the latest discoveries astronomers have now cataloged 55 extrasolar planets orbiting nearby, mostly Sun-like stars in the last five years. Most of those planets have been found by Marcy's group and another team led by Michel Mayor of Switzerland's Geneva Observatory. Both teams use similar techniques to indirectly detect the planets, looking for small periodic variations in the Doppler shifts of spectra lines from the stars. Such shifts are caused when the star wobbles under the gravitational influence of an orbiting planet or planets.

Astronomers plan to continue their searches for years to come: Marcy's group is in the midst of a multi-year project to look for planets around 1,100 stars within 300 light-years of Earth.

## **Strong Evidence for Alien Life on Two New Planets**

**From UFOcity.com**  
**January 7, 2001**

LONDON.- Astronomers found the strongest evidence yet for alien life in a solar system having characteristics similar to our own. The discovery was made by SETI scientists working with NASA and Britain's Jodrell Bank observatory, searching for life beyond known boundaries.

Observations indicate that the star system, known as CM Draconis, has two planets in the so-called "life belt", sufficiently close for water to exist in liquid form, which could suppose the presence of life. Instruments were employed close to their design limits when the observations were made, thus, the discoveries have been treated with great caution.

Further details shall be provided during the annual meeting of the American Astronomical Association to be held this week in San Diego, California. If there were life in any of the planets of the CM Draconis system, it would be subject to conditions very different from those on Earth. At the system's center would be two small red stars (colder than the sun) oscillating around each other while the planets orbit both. A binary system such as this one experiences constant variations in the duration of night and day, and complex seasonal and meteorological structures.

Laurance Doyle, the SETI researcher conducting the study, said that the exact measurements of the candidate worlds are uncertain, but that their diameters would be larger than Earth (17,000 km versus 12,000 km) and some 9 times smaller than Jupiter. Doyle also discovered a third Jovian-sized planet orbiting beyond the other two. This is significant, as these giant worlds, through their gravitation, would attract the asteroids and meteorites which could otherwise crash into the smaller planets. Jupiter may have played a similar role in our own star system.

Doyle measured the light in a decreasing manner from the CM Draconis stars, while its planets passed between them and Earth. These stars are some 57 light years away from us. Similar techniques have been employed in detecting more than 50 planets orbiting other stars.

Professor Jill Tarter, SETI's director, stated that Doyle's work represents powerful evidence of the existence of Earthlike planets. "These are promising results," she said. "There might be life, there might be none, but at least we can see our work is worthwhile."

## **Big Bang Theory - Proof at Last**

**From SpaceNews.com**  
**December 22, 2000**

For the first time, an actual measurement has been made of the temperature of the cosmic microwave background radiation, at a time when the Universe was only about 2.5 billion years old. A team of astronomers from India, France and ESO achieved this fundamental and very difficult observation by obtaining a detailed spectrum of a quasar in the distant Universe, using the UV-Visual Echelle Spectrograph (UVES) instrument at the ESO 8.2-m VLT KUEYEN telescope at the Paranal Observatory.

Most astrophysicists believe that the Universe was formed in what is known as the Big Bang. If this were true, the glow of this primeval fireball should have been warmer in the past - which is exactly what they found by the new measurements.

According to a recent press release by the European Southern Observatory: This analysis of the VLT spectrum of the distant quasar not only gives the definitive proof of the presence of the relict radiation in the early Universe, it also shows that it was indeed significantly warmer than it is today, as predicted by the theory.

American physicists Arno A. Penzias and Robert W. Wilson, who were rewarded with the Nobel Prize in 1978, discovered the primeval fireball's relict radiation. Their discovery was made in 1964 by means of radio observations. Precision measurements by the COBE satellite later showed that this ancient radiation fills the Universe, with a present-day temperature of slightly less than 3 degrees above zero.

This radiation comes from all directions, yet it is extremely uniform. Slight temperature variations in different directions have been measured most recently by means of detailed observations from a balloon above Antarctica (the Boomerang experiment).

Since the universe is expanding, it must have been denser in the past. A particular prediction of the Big Bang theory is also that the temperature of the CMBR must have been higher



at earlier times. However, although quite a few attempts have been made, no clear observational confirmation of this has been possible so far. In fact, the best observations until now have only been able to establish upper limits to the cosmic temperature at earlier epochs.

It was actually suggested more than 30 years ago that observing specific absorption lines in the spectra of distant quasars could test the predicted increase of temperature with distance (redshift).

The idea is simply that at earlier epochs, the CMBR was hot enough to excite certain atomic levels, and thus to give rise to particular absorption lines in the spectrum of a celestial object.

Some faint absorption lines of neutral carbon atoms were found to be especially promising, in the sense that they were predicted to be very sensitive to the surrounding temperature. However, previous generations of (smaller) astronomical telescopes were unable to achieve spectra of sufficient quality of these faint absorption lines in faint and remote objects in the early (more distant) Universe.

The advent of 8-m class telescopes has now changed this situation. A few years ago, the 10-m Keck telescope (Mauna Kea, Hawaii, USA) obtained a spectrum of a quasar that was sufficiently detailed to determine an upper limit to the temperature of the CMBR at the corresponding epoch, about 3.4 billion years after the Big Bang.

However, a major difficulty of such observations is the necessity to exclude other sources of excitation (heating). It is well known that some other physical processes may also affect the observed absorption lines, such as collisions between the atoms and heating by the ultraviolet light emitted by young and hot stars.

The main problem is therefore to disentangle the various effects in order to "isolate" that of the CMBR. This can only be achieved by means of exceptionally "clean" and detailed spectra of these faint objects, a demanding task. For that reason all previous measurements have only led to upper limits on the CMBR temperature.

The new VLT spectrum of the quasar PKS 1232+0815 provides the long hoped-for break-through in this important area of cosmological research.

On its way to us, the light from this distant object is absorbed by intervening material, among other by a gaseous cloud in a galaxy at high redshift ( $z \approx 2.34$ ). This distance corresponds to a cosmic time when the Universe was less than one fifth of its present age.

Another detailed analysis allowed the determination of the physical conditions in the cloud - the presence of molecular hydrogen lines was crucial for this to succeed. It clearly showed that the excitation process of atomic collisions couldn't be solely responsible for the shape and strength of the observed absorption lines. An additional source of heat must be present and this can only be the heating by the CMBR.

Moreover, it was possible to place constraints on the effect of other possible excitation processes. This made it possible for the astronomers to derive the temperature  $T$  of the CMBR at this large distance and early cosmic epoch and to place a very firm lower limit on this temperature. The final result is that  $T$  is hotter than 6 K and cooler than 14 K; this is in full agreement with the Big Bang prediction of  $T = 9$  K.

This is thus the first real proof that the CMBR was indeed warmer in the past.

## Look, Up in the Sky: Robofly

*By Louise Knapp*

In the future, some of those flies that splatter on your windshield as you speed down the freeway may be of the mechanical variety.

Researchers at the University of California, Berkeley, are aiming to create biologically inspired "roboflies" — tiny, inexpensive, quick-moving robots they can send into space for planetary exploration.

"The idea here is, rather than build one super-fancy 'Rover' that may fall under a rock and destroy the whole mission, you could release thousands of these things and if some of them were lost or destroyed it really wouldn't make a difference," said Michael Dickinson, assistant professor at the Department of Integrative Biology at Cal.

Dickinson and his colleagues believe robots that can mimic insects will have a much greater ability to cover difficult terrain at high speeds than larger robots. They believe this new class of "bot" will be substantially more compliant and stable than current models.

At a projected \$10 a pop, losing a robofly or two is not going to put much of a dent in Uncle Sam's pocket.

Space exploration isn't the only application the roboflies are slated to perform. They're also expected to be deployed on search-and-rescue missions.

"Flies are really good at finding large, warm, smelly, carbon-dioxide-emitting things. It's how mosquitoes and black flies make a living," Dickinson said.

For example, roboflies could be used to search for survivors in earthquake-damaged buildings.

"This would require something agile and small enough to move around and within very confined spaces," said Theresa McMullen, program officer at the Office of Naval Research, in an e-mail interview.

McMullen, who describes the robofly as a "stealth flyer," also has some military uses planned. Agent fly may well be ordered out on reconnaissance missions.

Squads of roboflies could be sent to search out targets, collect and provide information on damage assessment, search for chemical and biological warfare agents, or track the source of chemical plumes.

A superfly indeed. The only question that remains is: Can it actually be built?

"I don't know if this design will work," said Thomas Consi, senior lecturer at the Massachusetts Institute of Technology's Department of Ocean Engineering. "The general approach, to build a complete system like this, is a good idea. It's looking at robotics through less of a tunnel vision of programming and algorithms only. Whether the project fails or succeeds, we'll learn a lot from it."

What's clear is that making small robots is a big endeavor.

"It's entirely possible they will be successful. Their limitation is in the power source," said Stanford University engineering researcher Beth Pruitt. "At the moment they don't

have a lightweight power source needed for sustainable flight."

The Berkeley team is confident without being Pollyannaish.

"It's been a tremendous challenge all along. It's very complicated and intricate," said Ron Fearing, head of the research team and vice chairman for undergraduate matters at Berkeley.

Dickinson, who describes himself as "the biological inspiration" of the project, studies real flies and works out what fly traits can be mechanically copied. From this research, a replica is constructed.

"One of the problems of building something as small as a fly is that you can't use conventional things like pulleys and gears and pistons," Dickinson said.

The fly will weigh 100 milligrams and have a wingspan of 2 centimeters.

"Making it is sort of like elaborate origami. We actually cut out, with a laser, patterns in stainless steel and then we fold them into complicated shapes," Dickinson added.

The thorax of the fly is built of steel with little flexure joints made out of polyester. The artificial muscles are made from a single crystal piezoelectric material, a ceramic substance that deforms in the presence of a voltage field.

The voltage field causes the crystal to bend, and the shape of the crystal determines the way it bends. This bending motion simulates muscle movement, and causes the wings to beat.

"From a power point of view we need the crystal to make enough energy -- mechanical power -- that will actually keep the device in the air," said Dickinson. The wings must move at 150 beats per second.

Energy creation is not the only problem facing the Berkeley team. Flight stabilization is also a major challenge. Larger aircraft achieve stability through aerodynamics.

The robofly, because it is so small and has flapping wings, doesn't possess this property, making it especially hard to achieve stable hovering.

"Animals and human-built devices that can hover are really part of an exclusive club. If we can solve the hovering problem a lot of the other stuff will be much easier," Dickinson said.

Once these problems are solved, the next step will be to look at the power source. The team hopes the final version will be powered by light-harnessing photo cells.

Robofly will have to carry a small on-board capacitor, or battery, that would enable flight even when light conditions are not favorable.

To detect its surroundings, the fly will have two types of sensors. One will be an optic-flow sensor analogous to a fly's compound eyes, the other will be an on-board gyroscope, also analogous to a real fly's sensory organs.

"These things are not going to be able to carry super-fancy surveillance cameras, so the information they collect is going to be relatively simple and signal bandwidth," Dickinson said.

Once the prototype is up and running the testing will begin.

"We expect to have it flying in the lab by 2002. We may get it flying on a tether before this in still conditions," Fearing said.

The research is sponsored jointly by the Office of Naval Research and the Defense Advanced Research Project Agency to a tune of \$500,000 per year with a total of \$1.785 million spent to date.

## **Largest Structure in the Distant Universe Mapped**

**January 10, 2001**  
**From SpaceNews.com**

According to a recent press release by NASA, astronomers have discovered evidence for what could possibly be the largest structure anywhere in the observable universe. The evidence discovered points to an immense concentration of galaxies over 6.5 billion light years away in the largest known group of quasars. The galaxies absorb light from the spectra of even more distant quasars - located behind the large quasar group. It is this light absorption that made the discovery possible.

Huge structures are generally rare in space. The universe at the distance of the cluster is seen at only about a third of its present age. According to the press release, if the concentration of galaxies and quasars is caused by a larger than usual amount of matter in the area, traditional theories of the evolution of the universe have difficulty explaining how gravity could pull extremely massive structures together over such a large distance, in such a relatively short time. To find out whether the theories still hold, it is crucial for the actual amount of matter connected with quasars and galaxies at such great distances to be measured.

Located south of the heart of the constellation Leo, the massive galaxy concentration spans a region up to two by five degrees - forty times the area of the full moon. It is found within a large quasar group, measuring roughly 600 million light years across, making it the largest structure known in the early universe. (A light year is the distance traveled by light in a year, about six trillion miles).

"A successful theory has to explain the extremes. Bizarre things like this huge supercluster present a unique opportunity to measure how well quasars and galaxies reveal the mass in such a big region of space, which can then be connected to predictions from theories," said Dr. Gerard Williger of the National Optical Astronomy Observatories, who is currently stationed at NASA's Goddard Space Flight Center in Greenbelt, MD.

"The light we are presently observing from this large quasar group had to cross such a vast distance to reach us that it actually left the group before the Earth was formed," said Williger. "We see these galaxies as they existed billions of years ago. The amount of matter connected with quasars and galaxies at such distances and distant times in the past is probably not be the same as we would measure in the local universe today, so it's very important to find out how much mass we are actually looking at in the supercluster. The first step is to look for signs of extra galaxies in the area, and now we have evidence for a surplus of galaxies."

This research was presented Monday during the winter meeting of the American Astronomical Society in San Diego, California. The same research is also being prepared for submission to the Astrophysical Journal.

The cluster of galaxies is outlined by a very large number of quasars - giving it the designation "large quasar group". Quasars are galaxies with bright cores, most likely powered by giant black holes. Some quasars are as bright as a trillion suns. Astronomers use quasars as "cosmic beacons" to search the remotest reaches of the universe. This particular large quasar group holds a total of 18 quasars in a space roughly a half billion light years across. Usually, only two to three quasars would be expected in a region this size if there were no galaxy cluster present.

The quasars are not the only discovery made. Williger, Dr. Luis Campusano (University of Chile), Dr. Roger Clowes and graduate student Chris Haines (University of Central Lancashire, England) found a large number of clouds of gas in the same area using the 4-meter (159 inch) telescope at the National Science Foundation's Cerro Tololo Inter-American Observatory in Chile. They are thought to originate in the haloes surrounding galaxies, which are probably too faint and can't be seen directly. However, light from quasars behind the cluster is absorbed by magnesium atoms in the halo gas of the galaxies. This absorption produces "shadows" in front of the quasars and reveals the existence of the galaxies. To date, 11 faint absorber galaxies have been found in the same space as the large group of quasars - three times more than expected.

The scientists cautioned that these results still need to pass peer review. They must also be confirmed with a larger data sample, ideally toward other large quasar groups.

The press release stated, "The discovery of the light absorption by the galaxies puts 'flesh' on the 'skeleton' of the group outlined by the quasars." This allows Williger, Campusano, Clowes and their collaborators to further study the relationship between galaxies and quasars in a large group. Quasars can form from merging galaxies - common in the cores of clusters. They may also develop from the compression of gas where the edges of clusters of galaxies meet. One model shows that quasars in the distant past should then be found both in the centers and on the edges of galaxy clusters. At later times, as gas in the center of the galaxy clusters forms into actual galaxies, most of the remaining gas should be found on the outskirts of galaxy clusters, and quasars should be found mostly on their peripheries. Information about the galaxies in the large quasar group will help to determine whether this view is correct.

"At the moment, computer simulations of the formation of large structures in the universe are just starting to deal with sizes as large as this large quasar group. These groups are fantastic laboratories for the studying the formation and evolution of quasars and galaxies," said Williger.

## Aussie scientists stumble across the Doomsday Bug from Yahoo! News

Australian gene engineers accidentally created a mouse virus that kills every one of its victims by wrecking their immune system, a discovery with the potential for making the ultimate terrorist weapon. New Scientist reports.

The killer bug was invented quite inadvertently, while the researchers were trying to create a contraceptive vaccine for mice as a pest control, the British weekly reports in next Saturday's issue.

They inserted into a mousepox virus a gene that creates large amounts of interleukin 4 (IL-4), a naturally-occurring molecule that produces antibodies in the immune system. The idea was to stimulate antibodies to destroy eggs in female mice, thus making the rodents infertile.

Mousepox, a close relation to smallpox, normally only causes mild symptoms among the type of mice being used in the study, and was only being used as a vehicle to deliver the IL-4.

But when the IL-4 gene was inserted, the engineered virus ran amok, attacking the "cell-mediated response" -- the part of the immune system that fights viral infection. All the animals in the study were wiped out in just nine days.

Worse, the engineered virus was astonishingly resistant to vaccines. A vaccine that would normally protect these mice from mousepox only worked in half of the mice exposed to the killer version.

Co-researcher Ron Jackson, of the Canberra-based institute CSIRO, said the discovery was a frightening indicator of what could happen if the human smallpox virus was similarly modified.

"It would be safe to assume that if some idiot did put human IL-4 into human smallpox, they'd increase the lethality quite dramatically," he told New Scientist. "Seeing the consequences of what happened in the mice, I wouldn't want to be the one to do the experiment."

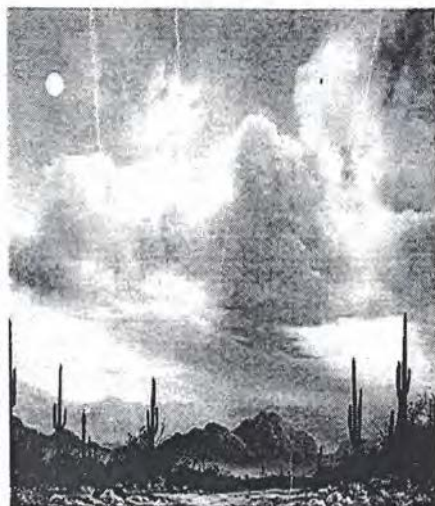
"It's surprising how very, very bad the virus is," said Anne Hill, a vaccine expert from Oregon Health Sciences University in Portland, Oregon.

Smallpox has been eradicated as a disease thanks to a global vaccination campaign, although two laboratories -- one in the United States, the other in Russia -- still have ampoules containing the virus, under an arrangement with the World Health Organization (WHO).

The incident highlights how easy it could be for some with bio-engineering knowledge to create a murderous virus for which there would be no cure or effective vaccine, New Scientist said.

"Vast amounts of time and effort have gone into policing the military's use of biotechnology. But the activities of civilian biologists have been ignored," it said. "Yet genetic engineering techniques are now so widespread that potentially dangerous results are bound to emerge accidentally."

It suggests tougher vetting of research proposals; a greater effort to train students in biological subjects about potential dangers arising from lab work; and encouraging greater openness among biologists to discuss the misuse of genetic engineering.



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**MUFON-AZ/Jim Kelly  
1607 N. Sunset Drive  
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**Expiration Date: 1/1/01  
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