

Forty years ago the U.S. raced to plant the first foot on the moon. Now, as India, Russia, South Korea and China compete to return for further exploration, the U.S. has all but dropped out -- and even Buzz Aldrin thinks that may be OK.

Aldrin, speaking to FoxNews.com, says the next step for NASA should be to create a long-term plan for more ambitious efforts -- visiting Mars or a nearby asteroid -- aided by robotics and astronauts from other countries.

"It's much better to take our experience and aid other countries in conducting their races," says Aldrin.

But many argue that letting other countries win the race to return is akin to admitting failure. Beyond inspiring millions with the magnitude of what Americans are capable of, the race to the moon was viewed as essential to proving scientific competition for the country.

"We're at a very embarrassing moment," says Jeffrey Manber, the author of "Selling Peace," a book that details Russian-American cooperation in space. "Space policy of the last several decades has been a failure.

We'll be dependent on Russia for the next 5 to 7 years to fly to and from the International Space Station. And we got here because we stayed too long with the space shuttle program."

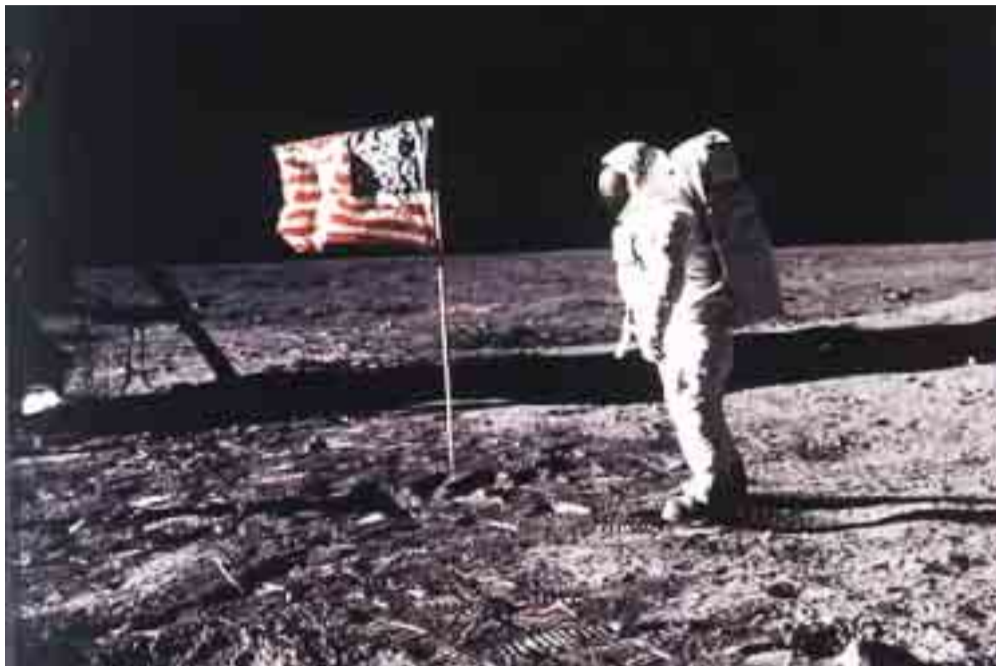
A NASA artist's rendering of possible activities during future space exploration missions, at a manned lunar base.

NASA had been betting on the Constellation program: the new Orion spacecraft, the Ares rocket and the Altair lunar lander.

Testing has already started on Orion at the Plum Brook Station in Ohio.

But work over the past 5 to 6 years has

Moon base alpha: If not U.S., then who?



come to a standstill, and future space missions are uncertain following news that President Barack Obama is canceling Constellation.

It's a cantankerous issue, mostly because after those famous first steps on July 20, 1969, no one expected such little progress in space exploration.

The U.S. has visited the moon six times in total, including the first landing where Arm-

strong famously flubbed his pre-scripted line -- he was supposed to say one small step for a man (meaning himself) but said a small step for man instead.

The last visit took place in 1972 with Apollo 17 -- famous for bringing back moon rocks.

Americans are divided on the current space race with China, Russia, South Korea and India. Many FoxNews.com read-

ers expressed outrage that the U.S. would abandon its efforts to remain competitive in space exploration, while many believe our tax dollars would be better spent creating new jobs.

Jamie Larson, who works for a family insurance business in Fergus Falls, Minn., says he's a sci-fi fan in favor of the U.S. making a return trip to the moon -- but wonders if it's feasible or even practical.

"As an American I believe we need to be on the forefront of space exploration, whether it be returning to the Moon or a Mars landing," he told FoxNews.com.

"It's important that we are able to keep a country like China from claiming the moon as theirs.

"The race to the Moon is one the United States has already won," says John M. Logsdon, former director of the Space Policy Institute, professor at George Washington University, and a key NASA advisor.

"The stated target for Russia to send people to the Moon is 2025 and for China there is no formal target, but 2030 is a reasonable estimate.

The United States can, and probably will, be back to the moon before then. Much more likely is a global cooperative effort to explore space beyond low-Earth orbit."

Manber disagrees, saying China will likely land on the moon before any other country, for exploration reasons and as a symbolic act. That country, he says, has 200,000 engineers in its space program and long-term goals for space.

America, meanwhile, runs what Manber calls "sprints" that are more reactionary and tend to be more about proving our international prowess. Russian plans lie somewhere in between.

(Source: FoxNews.com)



IBM unveils new server systems

International Business Machines Corp., the largest computer-services provider, is introducing new server systems, aiming to bolster its leading position as software rival Oracle Corp. enters the market.

The Power7 systems will be tailored for specific projects, such as running electrical grids or financial analytics, Rodney Adkins, senior vice-president for systems and technology, said last week in an interview.

The systems, made of integrated servers, software and storage, will start selling this month.

The release marks the first new systems since Adkins took over IBM's hardware division in October, after predecessor Bob Moffat left the company amid the Galleon Group insider-trading scandal.

IBM's focus on project-specific systems, along with investments in research and development, will help it gain market share even as Oracle starts selling similar servers with its acquisition of Sun Microsystems Inc., he said.

"It's easy in this industry to say, 'I have this piece, I have this piece, I have this piece, now I have it all,'" said Adkins. "It really requires innovation."

With the purchase of server maker Sun, Oracle Chief Executive Officer Larry Ellison has said he plans to challenge IBM by selling computers packaged with software customized for industries, such as retailing.

Global sales of high-end servers will be about \$14 billion this year, according to Framingham, Massachusetts-based researcher IDC.

IBM held 40 percent of that market in the third quarter, IDC's most recent report. Hewlett-Packard Co. had 27 percent, followed by Sun with 26 percent.

(Source: Bloomberg)

Apple says 27in iMac screen problems 'resolved'

Apple has released a software update to solve many of the issues with the computer's display.

Apple says that a firmware update for its 27in iMac displays should resolve issues such as screen flicker.

An unspecified number of users reported problems with the screen of their iMac, including cracked and flickering displays, and screens that appeared to have a yellow tint.

Apple has issued two software updates that say has resolved the issues with the screens. One, update TS3207, updates the display firmware to "address issues that may cause intermittent flickering". The second, update DL984, updates the graphics firmware on ATI Radeon HD 4670 and 4850 graphics cards to "address issues that may cause image corruption or display flickering".

Some websites, including Gizmodo, said that Apple had offered a 15 percent cash refund to customers suffering from these problems, but the technology company has refused to comment on the speculation.

It's three months since Apple unveiled its update iMac desktops, but shipments of the 27in model have been regularly delayed. Apple has attributed the delays to the popularity of the computer, and said it was "working hard" to fulfill orders "as quickly as possible."

"The 27in iMac has been a huge hit with customers, and we are working to increase supply to meet with strong demand."

(Source: Daily Telegraph)



Tiny galaxies reveal how first stars formed

When you picture a galaxy in your mind's eye, it's often a spiral with magnificent structure - long, swirling, milky-white arms of stars and gas.

Lowell Observatory astronomer Deidre Hunter has spent most the last 17 years methodically studying unfamiliar galaxies that you might not expect - small, diffuse galaxies: the dwarf irregulars - to learn all she can about star formation and what it can tell her and her colleagues about the birth of the first stars after the Big Bang.

In an NSF-funded project called LITTLE THINGS - for Local Irregulars That Trace Luminosity Extremes (LITTLE) and The HI Nearby Galaxy Survey (THINGS) - Hunter's team is mapping the gasses in these diffuse, enigmatic galaxies to discern the many processes of star formation.

"Star formation in dwarfs today is similar to star formation right after the Big Bang," Hunter said.

"Stars form out of clouds of gas. Our quest is to figure out what the molecular clouds in these irregular galaxies are, and the processes that form stars."

The LITTLE THINGS team is closely studying 41 dwarf-irregular galaxies through the lens of numerous data sets. And the galaxies are small, relatively speaking. One, DDO 75, has 1/3500 the mass of the Milky Way. Another, Leo T, was recently discovered in the Local Group of galaxies, the closest neighbors to our own Milky Way.

"Leo T is comparable in brightness to a large star cluster that contains several million stars; in contrast, the Milky Way contains about 300 billion stars," Hunter said.

Some of the galaxies in our sample area are not much brighter than a large star cluster."

The process of star formation is very inefficient. Some 50 to 90 percent of the gas present in star-forming molecular clouds, including the gas in the tiny irregular galaxies, remains after stars form.

"This produces the nebulae," Hunter said. "They are like signposts that say, 'massive stars are found here.'"

In a general sense it's like weather clouds on Earth. You need these molecular clouds that form out of the ubiquitous atomic hydrogen gas to precipitate stars."

Hunter added that there are probably multiple processes going on, which adds to the complexity and time-intensive nature of the LITTLE THINGS study.

In the dwarf galaxies, there's star-induced star formation. There's also turbulence.

"It's not just density, but also the motions of the gas," Hunter says.

The data sets Hunter and her colleagues are using include optical-wavelength data Hunter already collected and analyzed using research telescopes at Lowell's Anderson Mesa facility near Flagstaff.

But some of the new, key data is in radio wavelengths, and they come from NSF's Very Large Array (VLA) located west of Socorro, New Mexico.

In May of 2007, Hunter was invited to give a talk at the VLA. Afterwards, a scientist with the facility suggested she put in a large proposal, that is, a proposal for a large amount of VLA telescope time.

(Source: LiveScience.com)

Bright Shanghai lights block view of astronomers

BEIJING (China Daily) -- China's second-largest optical telescope at the Sheshan branch of the Shanghai Astronomical Observatory can no longer participate in world-class observation due to excessive light pollution in the area, astronomers said.

Even routine space observations are being affected by light pollution, Yu Nanhua, a researcher at the Sheshan branch, said.

The observatory equipment needs to be moved elsewhere to continue the astronomy research, he said.

Unlike air and water pollution, light pollution has long been ignored by the public in past decades in China, as it does not present clear evidence to support a threat to public health.

Light pollution is a broad term that refers to multiple problems, all of which are caused by inefficient, unappealing, or unnecessary use of artificial light.

Astronomers require observations of extremely faint objects that can be made only with telescopes at sites free of light pollution.

According to the International Astronomical Union, the artificial light background for a world-class observatory should be less than 10 percent. However, light tests at Sheshan branch far exceeded the standard.

"Our telescope used to spot stars with magnitudes of 17 or 18. However, at the moment, we are only able to catch magnitudes of 13 or 14," said Zhao Junliang, the former head of Shanghai Astronomical Observatory.

The failure of the telescope, with a 1.56-m diameter, was caused by the dazzling lights of Sheshan area.

The Sheshan branch of Shanghai Astronomical Ob-



servatory was built on Sheshan Mountain about 38 km away from Shanghai, which was considered an ideal place for astronomical observation in the past.

However, with accelerated economic growth and increasing urbanization, Sheshan has developed into a sightseeing destination for tourists. This led to streetlights, floodlights and hotel lights, which has brought negative effects to astronomical observation.

Even though the Sheshan branch installed better observation instruments in the last few years, the result was still unsatisfactory.

The Shanghai astronomical observatory personnel have decided to move some of its equipment to Zhejiang province and establish China's first night sky protected area in Tianhuangping, Anji city.

"It is very difficult to transfer a 1.56-m diameter telescope to another location. The transportation price is as costly as building a new one," Zhao said.

Shanghai is not the only city that faces this situation. The world-famous Greenwich Observatory was moved out of London due to light pollution as well.

Many countries in a similar situation have built their astronomical observatory overseas.

Places such as Hawaii and Chile are ideal, as they are less explored. That is an option worth considering.

The remote-monitoring observations have come to maturity, and used widely," Zhao said.

But astronomers aren't the only ones affected by light pollution. Ordinary citizens are as well.

Urban growth, farm exports drive tropical deforestation

PARIS (AFP) — The biggest causes of deforestation in tropical countries are population growth in cities and agricultural exports, a finding that should shape decisions on preventing forest loss, experts said Sunday.

Under December's Copenhagen Accord, rich countries are pledging some 10 billion dollars over the next three years to help poor countries tackle climate change.

A big but so far unspecified chunk of the cash will go on programs to prevent loss of tropical forests, which is a major source of greenhouse gases.

Beyond 2012, tens of billions of dollars per year could be primed if a planned UN pact on curbing climate change comes to fruition.

But environmental scientists publishing in the journal Nature Geoscience on Sunday cautioned against a rush to favor schemes that are unlikely to work.

A common theory is that pressure on forests can be eased by reducing the population in rural areas, or discouraging rural people from clearing land for fuel or food for their own use.

The study, led by Ruth DeFries of New York's Columbia University, looked at satellite data for forest loss in 41



countries from 2000 to 2005 and matched this against a host of other factors.

Two much bigger causes accelerated forest loss, they found.

One was the demographic growth of the host country's cities.

Urbanization raises consumption levels and boosts demands for agricultural products. City dwellers eat more processed food and meat, which in turn encourages large-scale farming that leads to forest clearance.

The other factor is agricultural exports, which also amplified demands for farmland.

"The strong trend in movement of people to cities in the tropics is, counter-intuitively, likely to be associated with greater pressures for clearing tropical forests," says the study.

"We therefore suggest that policies to reduce deforestation among local, rural populations will not address the main cause of deforestation in the future."

Poor tropical countries thus face a dilemma if they want to feed their swelling cities, export food to gain wealth and preserve their forest treasure.

One solution, says DeFries, is boost food yields in lands that have already been cleared.