



News Update

04/09/2006

Yellowstone Caldera 'Buldge' Showing Slightly Accelerated Speed

By USGS, Apr 4, 2006



Earthquake activity in the Yellowstone region is at relatively low background levels. During the month of March 2006, 113 earthquakes were located in the Yellowstone region. The largest of these shocks was a magnitude 2.5 on March 5, at 6:47 AM MST, located about 2 miles east southeast of West Yellowstone, Montana. No earthquakes in this period were reportedly felt.

During January through March of 2006, continuous GPS data show that most of the Yellowstone caldera continued moving upward at the same relatively rates as the past year. The maximum measured ground uplift over the past 18 months is ~10 cm at both the Yellowstone Lake and White Lake GPS stations. An example can be found at:

http://www.mines.utah.edu/~ggcmpsem/UUSATR/GPS/Site_Info/lkwy.html.

In contrast, ground-deformation data for the Norris Junction (NRWY) station indicates subsidence over the same period of time. Recently, a transient event started after the beginning of 2006, when the station subsided at a relatively fast rate of 2.5 cm/month, and was followed by an abrupt uplift at the end of February 2006. The change correlated in time with a M=3.1 earthquake on Feb. 26, ~6.5 miles SE of Canyon Junction. Currently, the region near NRWY appears to have returned to subsidence.

The ground deformation time series of NRWY can be seen at:

http://www.mines.utah.edu/~ggcmpsem/UUSATR/GPS/Site_Info/pboscat_nrwy.gif

The general uplift of the Yellowstone caldera and the more localized subsidence at Norris are scientifically interesting and will continue to be monitored closely by YVO staff. An article on another recent uplift episode at Yellowstone and discussion of long-term ground deformation at Yellowstone and elsewhere can be found at: <http://volcanoes.usgs.gov/yvo/2006/uplift.html>

28 injured in continuing Pakistan aftershocks

By Xinhua, Apr 4, 2006

ISLAMABAD, April 4 (Xinhua) -- At least 28 people were injured when two moderate earthquakes jolted Islamabad and northern parts of Pakistan on Tuesday, a TV channel reported.

The people were injured in parts of the Batgram district in the North West Frontier Province (NWFP) when the first aftershock measuring 5.2 on the Richter scale shook Islamabad, Muzaffarabad, the capital of Pakistan-controlled Kashmir, Peshawar, Batgram and Balakot at 2:12 p.m. (0912 GMT), Geo TV reported.

"It was moderate intensity of aftershock," said Chaudhry Qamar-uz-Zaman, chief of the country's seismological department, adding it was aftershock of the massive Oct. 8 quake, which killed more than 73,000 people in the country.

Geo television quoted hospital sources as saying that up to 28 people injured due to collapsing of walls and other parts of buildings.

The epicenter was 200 kilometers northeast of Peshawar in the Hazra division in the NWFP

Another low intensity aftershock, measuring 4.2 was felt at 2:16 p.m. (0916 GMT) Qamar-uz-Zaman said.

Some 1,842 aftershocks have been recorded in Pakistan since the 7.6-magnitude earthquake last Oct. that displaced 2.8 million people in northern Pakistan and Pakistan-controlled Kashmir.

[Source](#)



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Hurricane expert predicts 2006 Atlantic season

Apr 4, 2006

One of the nation's foremost hurricane experts is out with his predictions for this year.

Doctor William Gray predicts there will be 17 tropical storms in 2006.

Nine of them will gain hurricane status and five will become major hurricanes with winds of 111 miles per hour or greater.

There is more to be concerned about. The Colorado State University scientist also predicts there is a 64-percent chance of a major hurricane making landfall along the east coast of the U.S.

That's higher than average.

Hurricane season starts June 1st.

[Source](#)



Tropical Cyclone Hubert Weakens Off Australia's Northern Coast

By Bloomberg.com, Apr 8, 2006

Tropical Cyclone Hubert, which shut almost a third of Australia's oil output and interrupted iron ore exports, has been downgraded to a storm as it moves toward the nation's north-western coast.

Hubert is now classed as an ex-cyclone and is no longer expected to cause sustained gales, Australia's Bureau of Meteorology said in a statement issued last night.

BHP Billiton, Woodside Petroleum Ltd. and Santos Ltd., the nation's three biggest oil and gas producers, this week shut down offshore fields because of the cyclone, stopping about 154,000 barrels a day of oil output.

Hubert was north-western Australia's fifth tropical cyclone this year, bringing the number already to the total forecast by Bureau of Meteorology over the November-April season.

[Source](#)

Mt. Veniaminof Erupts

By KTVA, Apr 7, 2006

ANCHORAGE - There was a minor eruption at a volcano in Alaska Thursday, but it wasn't Augustine creating the noise this time.

Mt. Veniaminof on the Alaska Peninsula began to emit ash in the morning. The weather service issued an ashfall advisory for areas to the east of the volcano including the community of Chignik.

The cloud was believed to have reached about 10-thousand feet. The advisory was cancelled at 5 p.m.

[Source](#)





News Update

04/09/2006

Scientists Discover Mars' Atmosphere Altered By Solar Flares

By Science Daily, Apr 7, 2006

BOSTON - Boston University astronomers announced today the first clear evidence that solar flares change the upper atmosphere of Mars. In an article published in the February 24th issue of the journal Science, the researchers describe how X-ray bursts from the Sun in April 2001 recorded by satellites near Earth reached Mars and caused dramatic enhancements to the planet's ionosphere -- the region of a planet's atmosphere where the Sun's ultraviolet and X-rays are absorbed by atoms and molecules. The measurements were made by the Mars Global Surveyor (MGS) spacecraft at the Red Planet as it transmitted signals back to NASA's antenna sites back on Earth.

"On April 15th and 26th of 2001, radio signals from MGS showed that the martian ionosphere was unusually dense, and this was the clue that some extra production of ions and electrons had occurred," explained Michael Mendillo, professor of astronomy, who led the BU research team in its Center for Space Physics.

"At Earth, the GOES satellites measure the Sun's X-rays almost continuously," said Dr. Paul Withers of BU. "Our search of their large database discovered several cases of flares occurring just minutes before MGS detected enhancements in Mars' ionosphere."

The extra electrons produced by the Sun's X-rays cause subtle changes in how the MGS radiowaves travel towards Earth. Therefore, the team wanted to find several unambiguous case study events before announcing their findings.

The Radio Science Experiment on MGS has made observations of Mars' ionosphere since its arrival there in late 1999. Its radio transmissions are received by NASA and then cast into scientifically meaningful data by Dr. David Hinson at Stanford University who provides open access to researchers worldwide via a website. "We needed Dr. Hinson's expert advice to make sure that some odd changes in the MGS radio signal had not occurred just by chance," Dr. Withers added.

To confirm that the photons from these flares had sufficient fluxes to actually modify an ionosphere, additional evidence was sought using measurements on Earth. "During this period, the Sun, Earth and Mars were nearly in a straight line and thus the X-rays measured at Earth should have caused enhancements here as well as at Mars," Mendillo added.

Using several ionospheric radars spread over the globe, operated by scientists at the University of Massachusetts/Lowell, Professor Bodo Reinisch confirmed that the Sun's X-rays caused equally impressive modifications to Earth's ionosphere at the precise times required on those days.

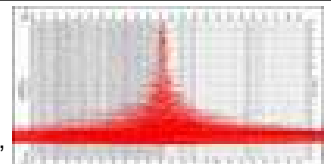
"The science yield from this work will be in the new field of Comparative Atmospheres," Mendillo pointed out. "By that I mean studies of the same process in Nature, in this case making an ionosphere on two planets simultaneously, offer insights and constraints to models not always possible when studying that process on a single planet. The fifth member of our team, Professor Henry Rishbeth of the University of Southampton in England, provides the expertise in theory and modeling that will be the focus of our follow-up studies."

[Source](#)

Strong earthquake near Fiji

By China View, Apr 7, 2006

NADI, Fiji- An earthquake measuring 6.3 on the Richter scale shook the Pacific Ocean seabed near Fiji Friday, but there were no report of damage or injuries and no tsunami warning issued.



The strong earthquake occurred at 8:30 p.m. local time (0830 GMT) about 225 kilometers (140 miles) northwest of Fijian capital Suva.

Residents in Nadi, a tourist resort of Fiji, also felt the quake as buildings were shaking. But there were no immediate report of damage or injuries.

Local people said that earthquakes have been frequent in this area.

[Source](#)