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Thursday, July 30, 2009

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The New York Times News Blog

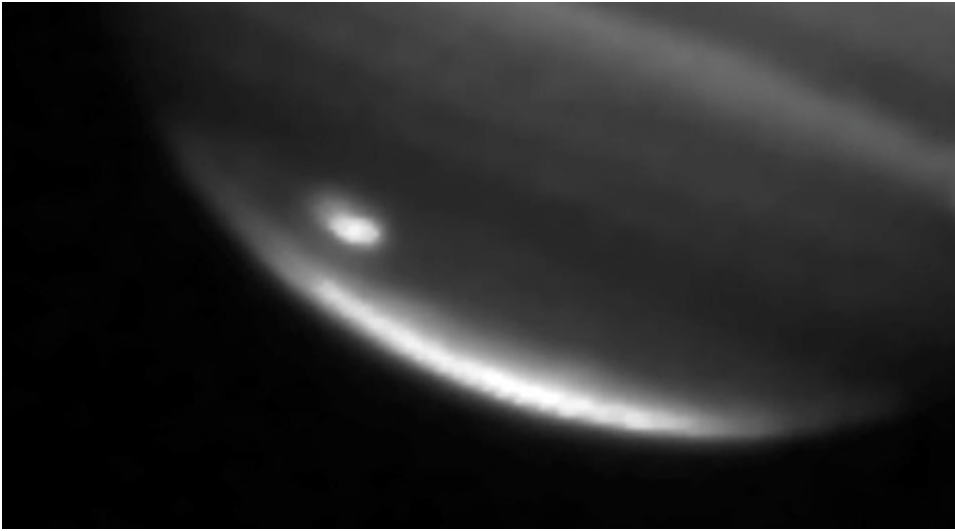


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July 21, 2009, 8:59 am

## **Amateur Finds New Earth-Sized Blot on Jupiter**

By [Robert Mackey](#)



NASA/JPL, via Associated

Press A large impact mark on Jupiter's south polar region captured on Monday by NASA's Infrared Telescope Facility in Mauna Kea, Hawaii.

NASA has confirmed the discovery of a new "scar" the size of the Earth in Jupiter's atmosphere, apparently showing that the planet was hit by something large in recent days. The impact mark was first spotted on Monday morning by an amateur astronomer in Australia, who then drew the attention of scientists at NASA's Jet Propulsion Laboratory to the change in Jupiter's south polar region.

The apparent impact comes almost exactly 15 years after a comet named Shoemaker-Levy 9 struck Jupiter, "sending up blazing fireballs and churning the Jovian atmosphere into dark storms, one of them as large as Earth," as The New York Times [reported on July 19, 1994](#).

Images of the impact mark, as seen through a NASA telescope in Hawaii, were [posted on the space agency's Web site](#) on Monday with this explanation:

Following up on a tip by an amateur astronomer, Anthony Wesley of Australia, that a new dark "scar" had suddenly appeared on Jupiter, this morning between 3 and 9 a.m. PDT (6 a.m. and noon EDT) scientists at NASA's Jet Propulsion Laboratory in Pasadena, Calif., using NASA's Infrared Telescope Facility at the summit of Mauna Kea, Hawaii, gathered evidence indicating an impact.

New infrared images show the likely impact point was near the south polar region, with a visibly dark "scar" and bright upwelling particles in the upper atmosphere detected in near-infrared wavelengths.

Glenn Orton, a scientist at the Jet Propulsion Laboratory, said "It could be the impact of a comet, but we don't know for sure yet."

Mr. Orton [told New Scientist magazine](#) that the planet could have been hit by a block of ice or a comet that was too faint for astronomers to detect before the impact. Leigh Fletcher, an astronomer at the Jet Propulsion Lab told the magazine the impact scar "is about the size of the Earth."

In Australia, [the Sydney Morning Herald reported](#) that the amateur astronomer, Anthony Wesley, a 44-year-old computer programmer from a village north of Canberra, made the discovery "using [his backyard 14.5-inch reflecting telescope](#)." The Herald explained: "Wesley, who has been keen on astronomy

since he was a child, said telescopes and other astronomy equipment were so inexpensive now that the hobby had become a viable pastime for just about anybody. His own equipment cost about \$10,000.”

Mr. Wesley recorded the discovery of the impact mark, and posted several of the first images he took of it, in [an observation report](#) he posted online:



Anthony Wesley One of several images of the impact mark on Jupiter — the dark spot at the upper right of this photograph — taken by the man who discovered it.

I came back to the scope at about 12:40am I noticed a dark spot rotating into view in Jupiters south polar region started to get curious. When first seen close to the limb (and in poor conditions) it was only a vaguely dark spot, I thought likely to be just a normal dark polar storm. However as it rotated further into view, and the conditions improved I suddenly realised that it wasn't just dark, it was black in all channels, meaning it was truly a black spot.

My next thought was that it must be either a dark moon (like Callisto) or a moon shadow, but it was in the wrong place and the wrong size. Also I'd noticed it was moving too slow to be a moon or shadow. As far as I could see it was rotating in sync with a nearby white oval storm that I was very familiar with - this could only mean that the back feature was at the cloud level and not a projected shadow from a moon. I started to get excited.

It took another 15 minutes to really believe that I was seeing something new - I'd imaged that exact region only 2 days earlier and checking back to that image showed no sign of any anomalous black spot.

Now I was caught between a rock and a hard place - I wanted to keep imaging but also I was aware of the importance of alerting others to this possible new event. Could it actually be an impact mark on Jupiter? I had no real idea, and the odds on that happening were so small as to be laughable, but I was really struggling to see any other possibility given the location of the mark. If it really was an impact mark then I had to start telling people, and quickly.

The Guardian [reports](#) that Mr. Wesley, who “spends about 20 hours a week on his passion of watching and photographing Jupiter,” almost missed making the discovery because he interrupted his work late on Sunday night to watch sports on television. Mr. Wesley told The Guardian:

I was imaging Jupiter until about midnight and seriously thought about packing up and going back to the house to watch the golf and the cricket. In the end I decided to just take a break and I went back to the house to watch Tom Watson almost make history.

I came back down half an hour later and I could see this black mark had turned into view.

In another interview, Mr. Wesley told the Sydney Morning Herald that spotting the impact mark on Jupiter made him glad the huge planet is in Earth's neighborhood: "If anything like that had hit the Earth it would have been curtains for us, so we can feel very happy that Jupiter is doing its vacuum-cleaner job and hoovering up all these large pieces before they come for us."

**Update | 3:13 p.m.** To clear up the confusion of some readers who think the telescope in question was just over a foot long — a reader helpfully draws our attention to a photograph of Mr. Wesley posted on his Web site with what the Sydney Morning Herald called "his backyard 14.5-inch reflecting telescope." As this image makes obvious a 14.5-inch reflecting telescope is *not* 14.5 inches long, but considerably larger:



**Update | 4:22 p.m.** Since several readers objected that the previous update said what the 14.5 inches was not a measurement of (length), but did not state what it is a measurement of (diameter), we should state clearly that 14.5 inches is the diameter of the telescope's mirror.\*

*\*An earlier version of this post incorrectly referred to the diameter of the telescope's lens being 14.5 inches. As a reader, Paul Green, pointed out, a reflecting telescope has a mirror, not a lens.*

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1. 1. July 21, 2009 9:12 am [Link](#)

My God, it’s full of stars!

— *Will Hortman*

2. 2. July 21, 2009 9:25 am [Link](#)

What a discovery! Thank you Mr. Wesley and Jupiter. Glad to have you both watching the skies!

— *Matt*

3. 3. July 21, 2009 9:30 am [Link](#)

- Astronomers say that the comets in the periphery of our solar system - the Kuiper Belt and the Opik - Oort Cloud - could be shaken if Another Star would come closer.  
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<http://cristiannegreanu.blogspot.com/2009/07/cbs-news-jupiter-hit-by-large-object.html>

— *Phaeton*

4. 4. July 21, 2009 9:40 am [Link](#)

Congratulations to Mr. Wesley! Amateur astronomers are doing a great job.

— *Dr. Astro*

5. 5. July 21, 2009 9:50 am [Link](#)

Am I missing something? I would have expected some enormous sky-searching agency (i.e., NASA or something of similar ilk) to have “warned” us about this impending impact days, weeks or months ago. We certainly knew about Shoemaker-Levy a long time before it hit.

— *zorbathegeek*

6. 6. July 21, 2009 9:55 am [Link](#)

This reminds us that we should invest in developing ways to deflect threatening objects from space, and spend more effort than we are now on detecting them.

— *richard schumacher*

7. 7. July 21, 2009 10:02 am [Link](#)

nise

— *praveenkumar*

8. 8. July 21, 2009 10:03 am [Link](#)

Thank God for Aussie nerds, keeping our planet safe from unreported Jovian pockmarks.

— *Russell from Atlanta*

9. 9. July 21, 2009 10:04 am [Link](#)

That little circle is the size of the earth? ... that's a huge planet!

— *John*

10. 10. July 21, 2009 10:05 am [Link](#)

It looks more like a spot on the camera lens to me. Kinda like the one that showed a spot on my cat's face when I took a picture of him. The scientists should try cleaning the lens of the big Jupiter camera.

— *Peter*

11. 11. July 21, 2009 10:07 am [Link](#)

Don't worry be happy

— *Robert*

12. 12. July 21, 2009 10:11 am [Link](#)

1. "Large" seems like an understatement.

2. I'm not an astronomer, but I guess I always figured that someone would see such "large" objects before they actually make impact. (I guess it's sort of like the financial crisis...)

— *Adam*

13. 13. July 21, 2009 10:12 am [Link](#)

"If anything like that had hit the Earth it would have been curtains for us, so we can feel very happy that Jupiter is doing its vacuum-cleaner job and hoovering up all these large pieces before they come for us."

Should we go back to worshipping Jupiter? "He" seems to be very protective of us, almost, uh, Godlike?

— *Ben Daggett*

14. 14. July 21, 2009 10:13 am [Link](#)

The science of astronomy, perhaps more than any other science, owes so much of its progress to enthusiastic amateurs rather than professionals. This is what makes it such an exhilarating science - the sense that anyone with a keen eye and a bit of equipment might be the one to spot something important.

Prof. Hawking et al. notwithstanding, I suspect we are likely to eliminate ourselves by other means long before Gaia gets whacked by a homicidal asteroid ("roid rage"?), but ultimately if the asteroid has your name on it ...

— *ACW*

15. 15. July 21, 2009 10:17 am [Link](#)

Congrats Mr. Wesley.

Mr. Wesley's discovery is a validation for many amateur astronomers who look up to the skies because they love it.

Jupiter's rotation period is relatively short (12 hrs. maybe), which means the impact was hours before Mr. Wesley caught the image. Remarkable.

— *Stephen*

16. 16. July 21, 2009 10:17 am [Link](#)

Way to go, man.

— *Joseph*

17. 17. July 21, 2009 10:19 am [Link](#)

But i said look here brother

who you jiving with that Cosmic Debris?

p.s: Mr Wesley, is that a real poncho?

– *save*

18. 18. July 21, 2009 10:19 am [Link](#)

Well its always nice to know that we can be wiped out by a Giant Asteroid before we even know what hit us. I'd like to thank gas giants for keeping us safe from rogue objects of mass destruction.

– *Sean*

19. 19. July 21, 2009 10:20 am [Link](#)

terrifying.

just proves there's massive objects out there we have no clue about.

– *pete*

20. 20. July 21, 2009 10:20 am [Link](#)

Naw–We're too busy spending money to land on the moon....again.

– *Jody-Jo*

21. 21. July 21, 2009 10:20 am [Link](#)

Truly amazing that a comet capable of making an “Earth sized” crater on Jupiter went undetected here at home..... we're too busy bombing one another, polluting our planet and attending Michael Jackson vigils to notice.

or maybe NASA knew and didn't say anything? advising of a potential impact here at home would only cause panic...

– *steven*

22. 22. July 21, 2009 10:22 am [Link](#)

Makes me feel rather insignificant.

– *Claudia O*

23. 23. July 21, 2009 10:24 am [Link](#)

Maybe it's the remains of Shoemaker-Levy, bobbing to the surface after their 15 year old plunge!

– *orin*

24. 24. July 21, 2009 10:25 am [Link](#)

The sky is falling! Thank God. Let's put an end to all this madness.

– *Ardiente Pensar*

25. 25. July 21, 2009 10:26 am [Link](#)

It took a dedicated amateur astronomer to make this discovery. How many billions of dollars are wasted on NASA each year? And now they want to spend billions more to go to Mars. I suspect a dedicated amateur could do it cheaper and better. What about Wallace and Gromet?

– *my*

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July 29  
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In a television interview on Tuesday night, Sabrina Boyd, whose husband and two sons were arrested and charged with plotting to commit "violent jihad" in other countries, said, "I know that my husband and my sons are free of guilt."

July 29

[\(29\)](#)

### [A New Airport Ritual, Swine Flu Screening](#)

Just a few months after the first cases of the new strain of H1N1 swine flu were reported, passengers have started to post video of how airports around the world are conducting swine flu screenings.

July 28

[\(36\)](#)

### [Shatner Performs Palin's 'Poetry'](#)

On Monday night, William Shatner appeared on NBC's "Tonight Show" to apply his vocal stylings to a section of former Alaska Governor Sarah Palin's farewell speech.

July 28

[\(123\)](#)

### [Americans Arrested for Plotting 'Violent Jihad' Abroad](#)

According to the indictment, the seven men arrested in North Carolina by federal agents had plotted to wage "violent jihad" outside the United States.

July 27

[\(53\)](#)

### [Nepal Hails 'Goddess' From 'Absolutely Fabulous'](#)

On Sunday in Nepal, Joanna Lumley, the actress who starred in "Absolutely Fabulous," was mobbed at the airport in Kathmandu, not by fans of the sit-com but by Gurkhas, the Nepalese fighters whose cause she has championed in Britain.



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Readers are encouraged to take part in the blogging by using the comments threads to suggest links to relevant material elsewhere on the Web or by submitting eyewitness accounts, photographs or video of news events. [Read more.](#)

## About The Lede Blogger

Robert Mackey writes and edits The Lede, the news blog of The New York Times, which also features posts written by members of The Times' staff in New York and around the world. [Read more.](#)

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