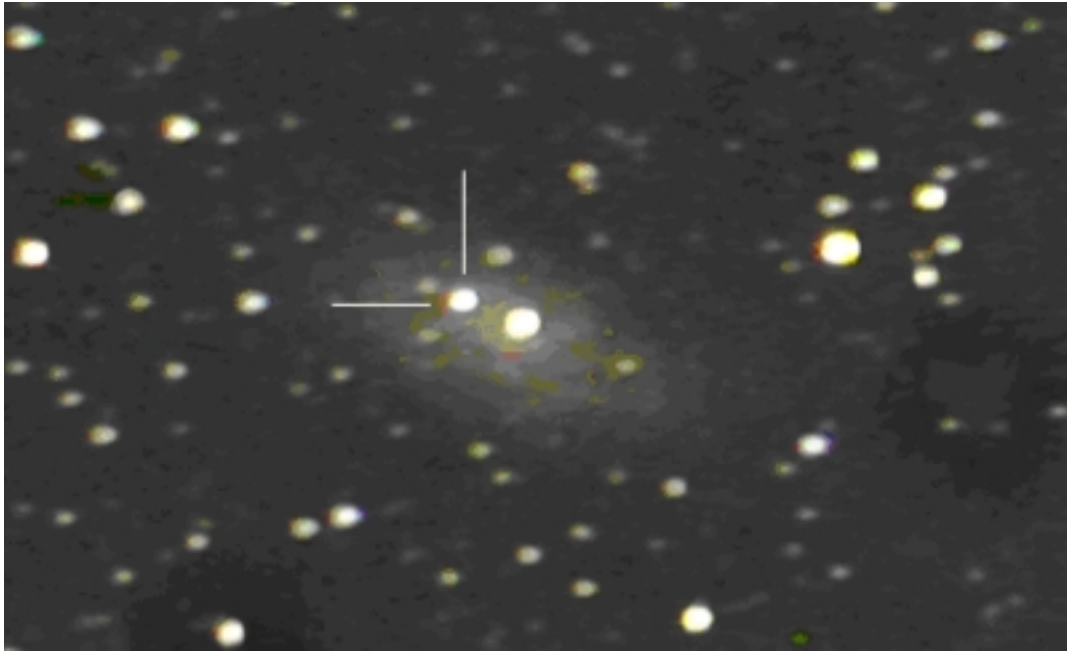


Bob Evans: Record Holder of Visual Supernovae Discoveries!



*Bob's 41st supernova discovery in NGC 5530: the exploding star is indicated.
The star at centre is a foreground object.
Image courtesy of Gerry Aarts (WSAAG).*

During the evening of Thursday the 13th of September 2007, Bob Evans of Hazelbrook in the Blue Mountains discovered his 41st supernova. The object, now designated SN 2007it, is in the galaxy NGC 5530 in the constellation of Lupus, the wolf. These are visual discoveries; that is, through the eyepiece of a telescope. **His total count to date is 42 visual and 5 photographic discoveries.**

Bob Evans is a Trustee of Linden Observatory. Bob has been one of many observers on the Saturday viewing nights at Linden, and on this night he had SN 2007it to show to all. The night was only two days after discovery, and the brightness of the exploding star had dropped only a little from around 13th magnitude to 14th, and all who looked were able to see it.

Described as a 'near-by' spiral galaxy, still tens of millions of light years away, NGC 5530 appeared in the eyepiece a very faint fuzzy patch with two dim stars on it; one a foreground star of the Milky Way, and the other the supernova shining from a-far. The photograph above was taken during the same night by Gerry Aarts of the Western Sydney Amateur Astronomy Group (WSAAG), and that club also meets at the Observatory.

SN2007it is classified a Type II supernova. That is, a very massive star exploding at the end of its short life. These explosions seed the cosmos with monumental amounts of oxygen and other elements. The oxygen atoms in the air you're breathing now and the gold in any jewelry you're wearing could very well have come through such an explosion.

Observatory visits: There are two Saturday nights a month that visitors can come to Linden Observatory. See ... WSAAG and Linden Observatory (<http://wsaag.org/index.php/observatories/linden-observatory>)

Alan Plummer: Linden Observatory.

With thanks to Nick Lomb and the Sydney Observatory (<http://www.sydneyobservatory.com.au>) blog as the original source of the article. Updated with Alan's permission.

Supernovae Discoveries by Bob Evans

To put this feat in context, there are several other observers with perhaps two or more visual discoveries, but no other visual observers have got into double figures (probably not even past four or five).

Visual Discoveries.

SN 1981A in NGC 1532. Type 2 plateau. Mag.13.5. Brooms Head. 25cm telescope.

SN 1981D in NGC 1316 (Fornax A). Type 1a. Mag. 12.7. While visiting Siding Spring. 25cm telescope.

SN 1983G in NGC 4753. Type 1a. Mag.13. At home in Maclean. 25cm telescope.

SN 1983N in NGC 5236 (M83.) Prototype of Type 1b. Found at Mag.12.5. Max.@Mag.11.2. Maclean. 25cm telescope.

SN 1983S in NGC 1448. Type 2 plateau. Mag.14.5. Maclean. 25cm telescope.

SN 1983V in NGC 1365. Type 1c. Mag. 13.5. Maclean. 25cm telescope.

SN 1984E in NGC 3169. Type 2 pec. Mag. 15.0. Maclean. 25cm telescope.

SN 1984J in NGC 1559. Type 2. Mag.13.2. Maclean. 25cm telescope.

SN 1984L in NGC 991. Prototype of Type 1b. Mag. 13.8. Maclean. 25cm telescope.

SN 1984N in NGC 7184. Type 1. Mag. 14. Maclean. 25cm telescope.

SN 1985P in NGC 1433. Type 2 plateau. Mag.13.5. Napoleon Reefs. 25cm telescope.

SN 1986A in NGC 3367. Type 1a. Mag.14.0. Hazelbrook. 41cm telescope.

SN 1986G in NGC 5128 (Centaurus A). Type 1a, (Subluminous). Found at Mag. 13.0, Max. at 11.4. Hazelbrook. 41cm telescope.

SN 1986L in NGC 1559. Type 2. Mag.13.5. Hazelbrook. 41cm telescope.

SN 1987B in NGC 5850. Type 2 pec. Mag.15.0. Hazelbrook. 41cm.

SN 1987N in NGC 7606. Type 1a. Mag.13.8. Found while visiting Siding Spring Observatory. 25cm telescope.

SN 1988A in NGC 4579 (M58). Type 2 plateau. Mag.13.5. Hazelbrook. 41cm telescope.

SN 1989B in NGC 3627 (M66.) Type 1a. Mag.12.2. Hazelbrook. 41cm telescope.

SN 1990K in NGC 150. Type 2. Mag.14.0. Hazelbrook. 41cm.

SN 1990M in NGC 5493. Type 1a. Mag.12.5. Hazelbrook. 41cm.

SN 1990W in NGC 6221. Type 1c. Mag.15.0. Hazelbrook. 41cm.

SN 1991T in NGC 4527. Type 1a (overluminous). Mag.12.0. Hazelbrook. 41cm telescope.

SN 1991X in NGC 4902. Type 1a. Mag.13.0. Hazelbrook. 41cm.

SN 1992ad in NGC 4411B. Type 2 plateau. Mag.13.5. Hazelbrook. 41cm telescope.

SN 1992ba in NGC 2082. Type 2 plateau. Mag.15.2. Hazelbrook. 41cm telescope.

SN 1993L in IC 5270. Type 1a. Mag.14.0. Hazelbrook. 41cm telescope.

SN 1995G in NGC 1643. Type 2. Mag 15.5. Found visually with 40 inch Siding Spring Observatory telescope.

SN 1995V in NGC 1087. Type 2. Mag.15.0. Found visually with 40 inch Siding Spring Observatory telescope.

SN 1995ad in NGC 2139. Type 2 plateau. Mag. 14.0. Coonabarabran. 41cm telescope.

SN 1996X in NGC 5061. Type 1a. Mag 13.0. Coonabarabran. 41cm telescope.

SN 1996al in NGC 7689. Type 2. Mag.15.0. Found visually with 40 inch Siding Spring Observatory telescope.

SN 1997bp in NGC 4680. Type 1a. Mag.14.5. Hazelbrook. 31cm telescope.

SN 2000cj in NGC 6753. Type 1a. Mag. 14.0. Hazelbrook. 31cm telescope.

SN 2001du in NGC 1365. Type 2 plateau. Mag.14.0. Hazelbrook. 31cm telescope.

SN 2001ig in NGC 7424. Type 2b. Mag.14.0. Hazelbrook. 31cm telescope.

SN 2003B in NGC 1097. Type 2 plateau. Mag. 14.0. Frog Rock. (near Mudgee). 41cm telescope.

SN 2003gd in NGC 628 (M74). Type 2 plateau. Mag.13.5. Hazelbrook. 31cm telescope.

SN 2003gs in NGC 936. Type 1a (subluminous.) Mag.13.0. Hazelbrook. 31cm telescope.

SN 2003hn in NGC 1448. Type 2 plateau. Mag. 14.0. Hazelbrook. 31cm telescope.

SN 2005df in NGC 1559. Type 1a. Found at Mag. 13.0. Max. at 12.0. Hazelbrook. 31cm telescope.

SN 2007it in NGC 5530. Type 2. Mag. 13.5. Frog Rock. 41cm telescope.

SN 2008aw in NGC 4939. Type 2 plateau. Mag.15.0. Frog Rock. 41cm.

Three of the above SNe were found visually with the 40inch telescope on Siding Spring in the 1990s. It has since been moved. These were the SNe in NGC 1643, NGC 1087 and NGC 7689. The first was confirmed the next night with a plate taken with the UK Schmidt. The second SN was confirmed immediately by the observer who was using the 2.3 metre ANU telescope (by taking a CCD picture), and the third was confirmed immediately by the observers using the Anglo-Australian Telescope, which had a high-dispersion Eschelle spectrograph attached. (The 615 hydrogen line covered 20 nanometres - thus showing rapid expansion from a large explosion.)

Photographic Discoveries of Supernovae.

SN 1988ai in ESO 293-G34. Found in 2002.

SN 1996A. Anonymous galaxy. Type 2.

SN 1996O. MCG +03-41-115. Type 1a. In the Hercules Cluster of galaxies.

SN 1996ad. Anonymous galaxy. Type unknown. In the Hercules Cluster of galaxies.

SN 1996as. Anonymous galaxy. Type 2.

Other Discoveries.

Comet 1996J1 (Evans-Drinkwater). Non-periodic. Found on a U. K. Schmidt film taken during a SN search in 1996.



From the left, Christian Pollas, Jose Maza, Yours Truly,
Dmitri Tsvetkov, Brian Schmidt, Alex Filippenko, Weidong Li

Three Generations of Supernova Hunters

The group photo was taken back in 2003 in Valencia, Spain, at an IAU supernova conference to mark the tenth anniversary of the supernova in M81. It was a five-day conference. So the Spanish amateur who found it was there, and he and I gave one of the two public lectures. Brian Schmidt looks a lot younger, and Weidong Li has been dead for a few years now. Mario Hamuy took the photo - an astronomer at the Carnegie Institute of Washington who was heavily involved in SNe work. The photo was circulated privately, but was published in the book, which flowed from that Conference.

Christian Pollas is a French astronomer who found SNe with a modest Schmidt on films taken for other purposes.

Jose Maza runs astronomy in Santiago, Chile. His team has found a number of southern SNe photographically at first - now CCD.

Dmitri Tsvetkov is at the Sternberg Institute in Moscow, and found some SNe 30 years ago photographically.

Alex Filippenko is at University of California, Berkeley, and was on both the SPC and High-Z teams, which found the acceleration of the universe.

Weidong Li ran the Lick Observatory automatic SN search telescope under Alex's supervision, so he found hundreds of SNe.

It was a kind of historic picture. Alex organised it and entitled it "Three Generations of Supernova Hunters." Weidong was supposed to represent the third generation, but Alex does it now with Keck telescopes.