Astronomy for a Flat World
or
How a Dutch Schoolteacher found a Dead Quasar
or
What to do with 150,000 Free Research Assistants
It’s a big sky out there
or, what to do with more than 125,000 research assistants.

Chris Lintott
Somerville College
Kevin Schawinski, Kate Land,
Anze Slosar, Jordan Raddick,
Steven Bamford, Daniel Thomas,
Bob Nichol,
Alex Szalay, Jan van den Berg,
Phil Murray, Daniel Andreescu
Elliptical galaxies

Spiral galaxies

Irregulars

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http://stardustathome.ssl.berkeley.edu
Phase 1: 40,000,000 views of dust grains by ~20,000 people
Welcome to Galaxy Zoo's view of the Universe. If you're here you should already have seen the Tutorial, but feel free to go and remind yourself. There's no need to agonise for too long over any one image, just make your best guess in each case.
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THE 8 O’CLOCK ARC: A SERENDIPITOUS DISCOVERY OF A STRONGLY LENSED LYMAN BREAK GALAXY IN THE SDSS DR4 IMAGING DATA

Sahar S. Allam,^1,2 Douglas L. Tucker,^1 Huan Lin,^1 H. Thomas Diehl,^1 James Annis,^1 Elizabeth J. Buckley-Germain,^1,3 Joshua A. Frieman,^1,3


ABSTRACT

We report on the serendipitous discovery of the brightest Lyman Break Galaxy (LBG) currently known, a galaxy at z = 2.73 that is being strongly lensed by the z = 0.38 Luminous Red Galaxy (LRG) SDSS J002240.91+143110.4. The arc of this gravitational lens system, which we have dubbed the “8 o’clock arc” due to its time of discovery, was initially identified in the imaging data of the Sloan Digital Sky Survey Data Release 4 (SDSS DR4); follow-up observations on the Astrophysical Research Consortium (ARC) 3.5m telescope at Apache Point Observatory confirmed the lensing nature of this system and led to the identification of the arc’s spectrum as that of an LBG. The arc has a spectrum and a redshift remarkably similar to those of the previous record-holder for brightest LBG (MS 1512-cB58, a.k.a. “cB58”), but, with an estimated total magnitude of (g,r,i) = (20.0,19.2,19.0) and surface brightness of (μr,μr,μi) = (23.3,22.5,22.3) mag arcsec^{-2}, the 8 o’clock arc is thrice as bright. The 8 o’clock arc, which consists of three lensed images of the LBG, is 162” (9.6”) long and has a length-to-width ratio of 6:1. A fourth image of the LBG — a counter-image — can also be identified in the ARC 3.5m g-band images. A simple lens model for the system assuming a singular isothermal ellipsoid potential yields an Einstein radius of θ_{Ein} = 2.91” ± 0.14”, a total mass for the lensing LRG (within the 10.6±0.5 h^{-1} kpc enclosed by the lensed images) of 1.04×10^{12} h^{-1} M_{⊙}, and a magnification factor for the LBG of 12.3^{+1.5}_{-3.6}. The LBG itself is intrinsically quite luminous (∼ 6× L_{*}) and shows indications of massive recent star formation, perhaps as high as 160 h^{-1} M_{⊙} yr^{-1}. Subject headings: gravitational lensing — galaxies: high-redshift

astro-ph/0611138
GZ - the Memory Game!
2. Overlapping galaxies (PI: Bill Keel, U. of Alabama)

“I've kept track of the promising ones seen on galaxy zoo forum so far .... I knew intellectually that the number of superposed pairs was a strong function of survey depth, but this is breathtaking.”

5 nights of follow-up time with the WIYN 3.5m in April 2008. Three more scheduled in November. Finding list now >1000
Dust extinction map
3. Blue ellipticals: ~250 galaxies at z<0.05

SFR between 0.5 and 50 (!) solar masses per year
4. Galaxy Morphology

(MNRAS submitted)

Red does not necessarily mean elliptical

The colour bimodality is not identically the same as the morphology one

Morphology-density function for 100733 galaxies at 0.03 < z < 0.085
Hanny’s Voorwerp: a quasar light echo?
Hello NGC3314

Show unread posts since last visit.
Show new replies to your posts.
Total time logged in: 8 days, 19 hours and 59 minutes.

News: New Galaxy Zoo Forum is launched! (Note: this requires a separate registration)

Galaxy Zoo Forum > The objects > Weird and wonderful (Moderators: Alice, Idd, StuartA, bamford) > The Hanny's Voorwerp.

Pages: [1] 2 3 ... 19

Author: The Hanny's Voorwerp. (Read 6426 times)

Hanny
Hero Member
Posts: 7205

The Hanny's Voorwerp.
« at: August 13, 2007, 06:15:40 AM »

What's the blue stuff below?

Anyone?


"Voorwerp kid"
Hanny van Arkel

IC 2497

Voorwerp
Large-scale, highly ionized narrow-line region

Completely inadequate AGN
Hα on-band  λ_06260 continuum  Emission
Armchair astronomer finds 'cosmic ghost'

Hanry van Arkel was poking over photos of galaxies on the Internet last August when she stumbled across a strange object: a bright, glowing mass with a gaping hole in its middle. Van Arkel is a schoolteacher in the Netherlands, not an astrophysicist. But her find — what some are calling a “cosmic ghost” — has captivated astronomers. Full story
All asteroids larger than 1km and most larger than 300m (Up to 10 million asteroids catalogued, + 100s of comets)

Binary stars, and extrasolar planets

3d catalogue of our solar neighbourhood (100pc)

Supernovae, microquasars, GRB, AGN...

Ultradeep galaxy survey

& Galaxy Zoo 3
Large Synoptic Survey Telescope (LSST)

- 8.4m mirror
- 2-degree field
- 3.2 Gpix imager
- 30 Terabytes/night
- Cerro Pachon, Chile
- Sky/three nights
- Depth: mag 26.5
- OTF transient IDs

GZ 4?
It’s a big sky out there but all together we can grok more of it.
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Special thanks to...
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Al Jenkins ▪ Matt Johnson ▪ Allen Mole
Martin Nicholls ▪ Gregory Ruderman
Philip Howie
and 150,000 other participants worldwide.

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