

Discovery of runaway mini-galaxies

a VO-powered publication in Science magazine

ADASS, Urbana, Nov 2012



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- Step-by-step tutorial to look for rare mini-galaxies in SDSS / GALEX / UKIDSS data
- Played for the first time
- Dozens of mini-galaxies discovered right online in front of the ADASS audience
- In total, 195 new mini-galaxies discovered (only 30 known before)
- Original instructions: goo.gl/zU7B4

VO components

- TOPCAT
- Aladin (SDSS HiPS)
- TAP to SDSS @ VizieR (beta)
- DaCHS with SSA to SDSS spectra
- VOSpec (though buggy :-\)
- Octopus
- NED (though non-VO :-/)

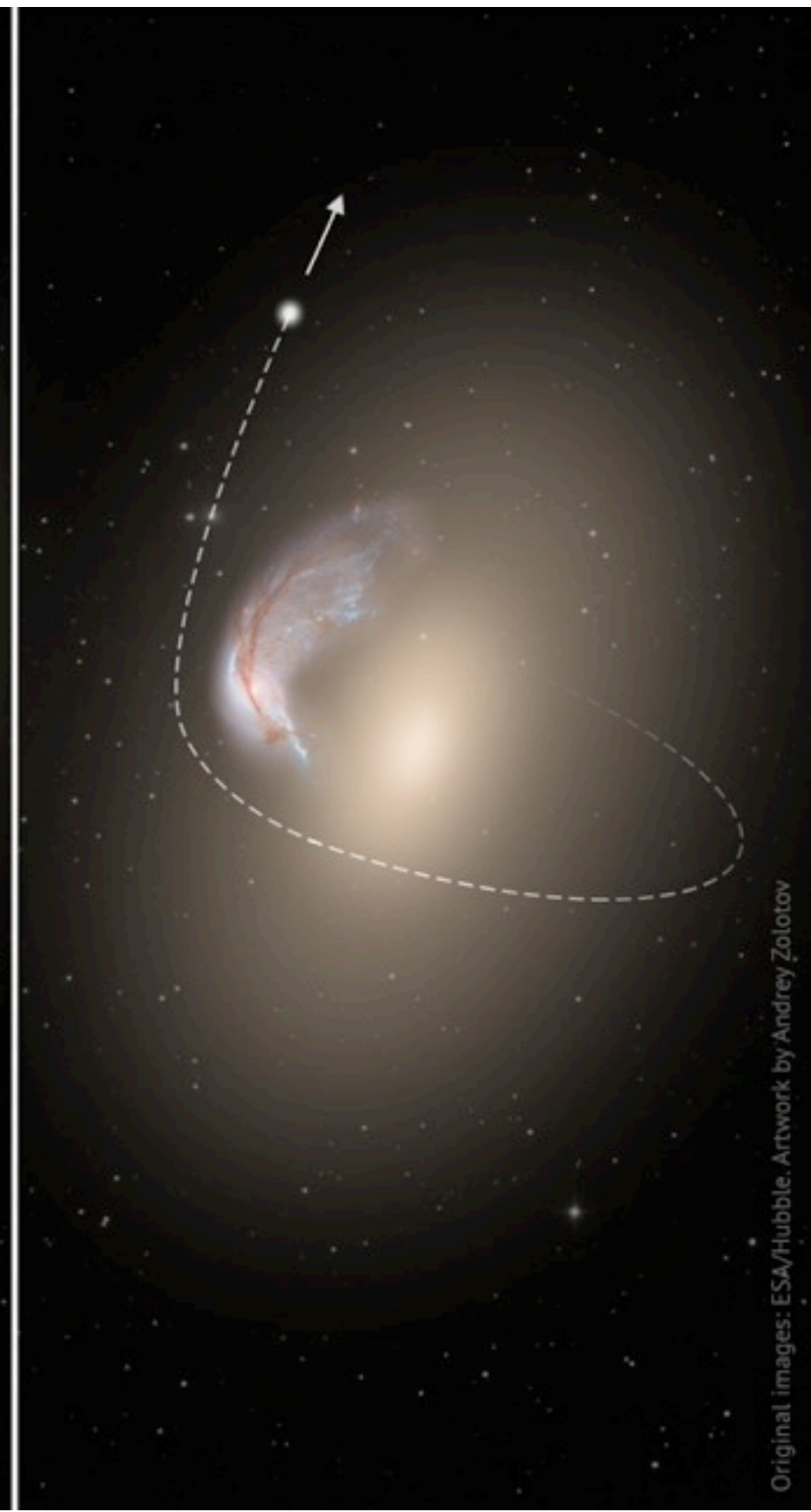
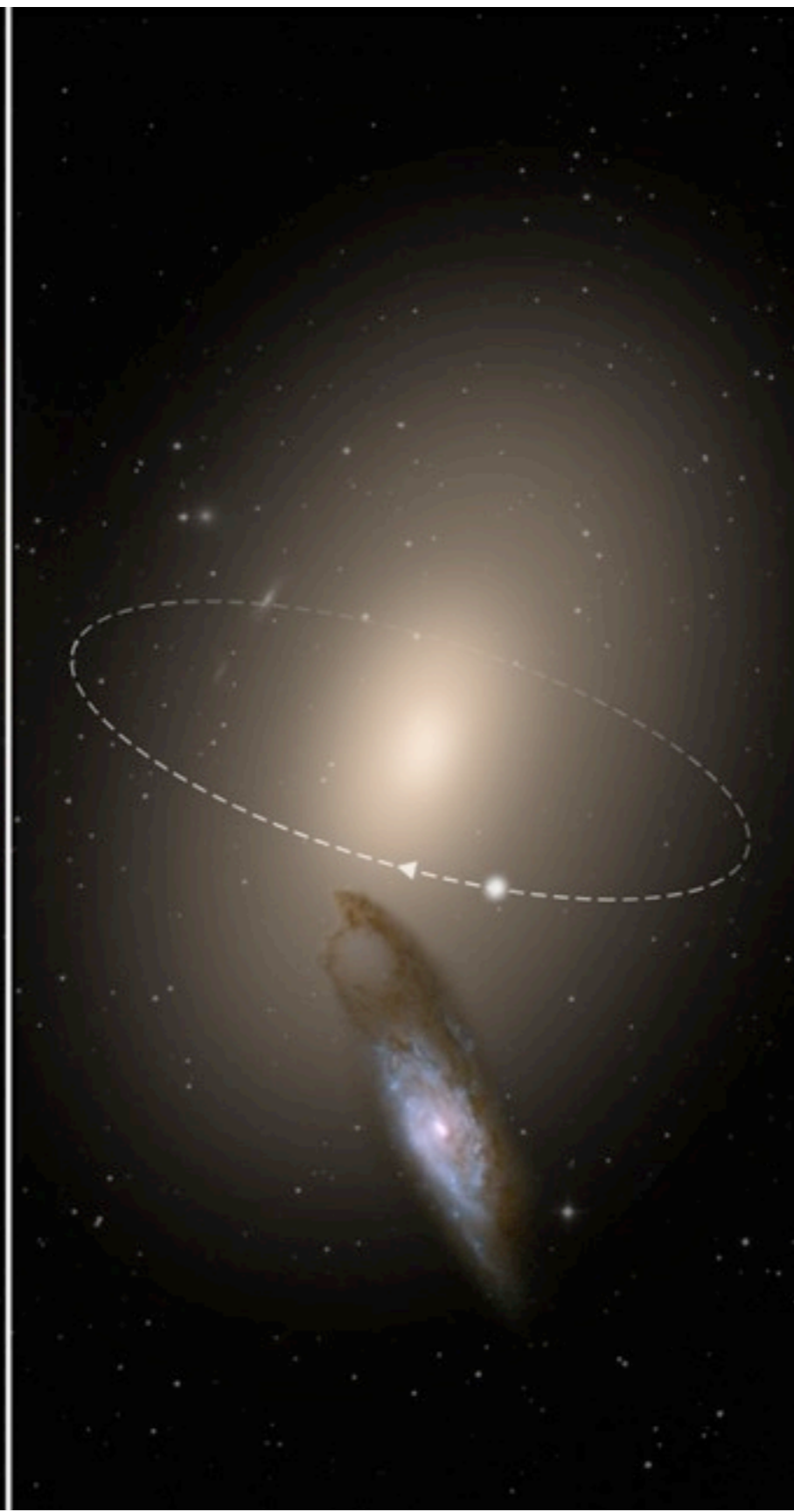
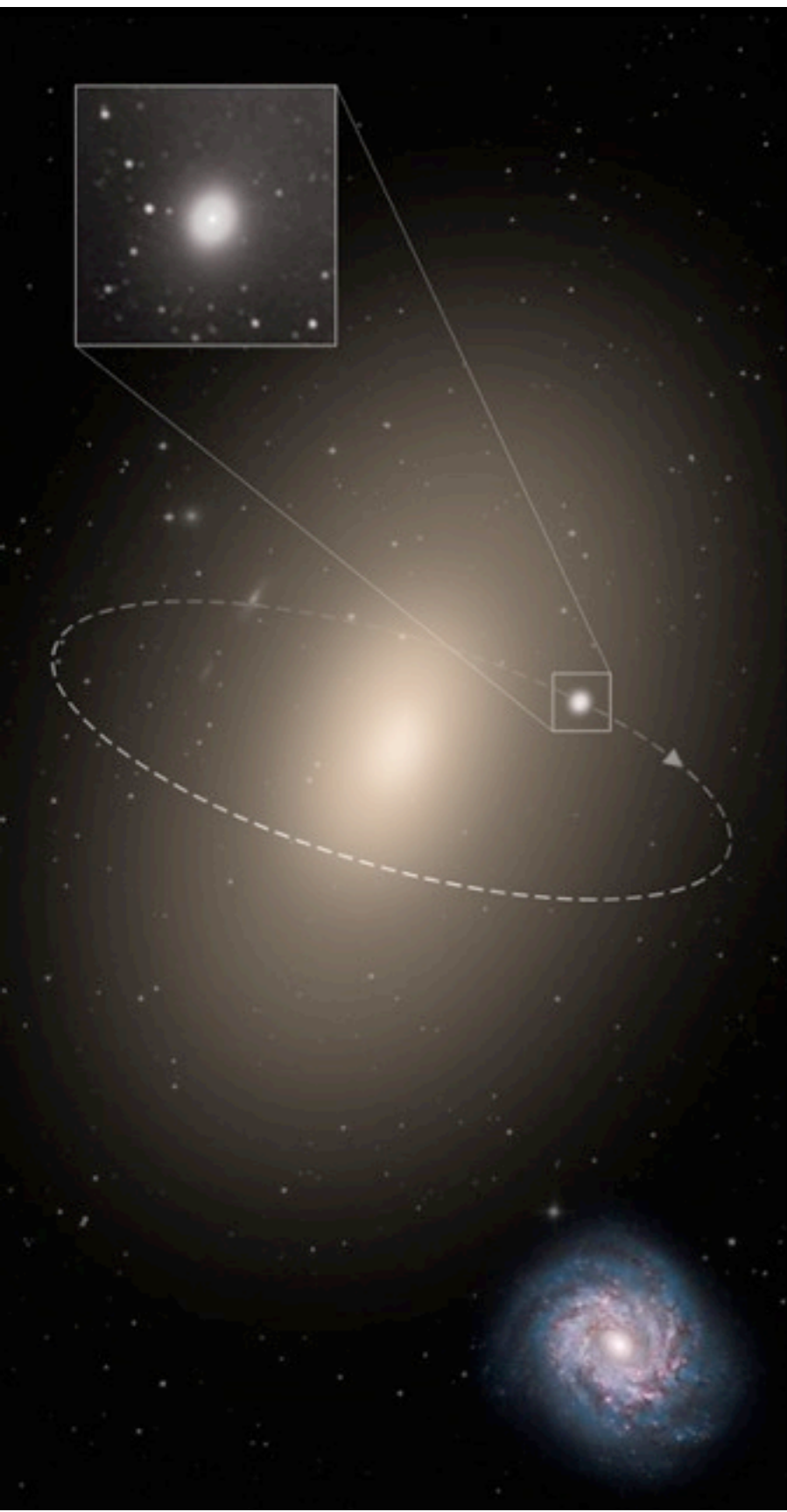
Isolated compact elliptical galaxies: Stellar systems that run away

- Apr 23, 2015
- First publication in interdisciplinary journal which did not use a single photon of new observations, only public data
- Pure VO
- Intensive science vs. extensive science
- ADS record



Downloaded from www.sciencemag.org on April 23, 2015

TL;DR



Wide media coverage in several countries

- National Geographic
- Discovery
- Space.com
- Engadget
- Slashdot
- Gizmodo
- ...
- radio interviews



газета.ru

GIZMODO



ScienceNews

LENTA.RU





...even TV shows

العناوين

بالتيمور.. خارج السيطرة وإعلان حالة الطوارئ (فيديو)



بن عمر: اليمن كان قريبا من اتفاق سياسي عشية "عاصفة الحزم"

بوتين: روسيا قلصت سلاحها النووي الى ادىنى مستوى

دي ميستورا يوجه دعوة رسمية لإيران لحضور (جنيفا-3)

الأكثر قراءة

بمناسبة ذكرى النصر: من أبرز الأسلحة الروسية.. القاذفة المعاتلة "سو- 27"



العاهل السعودي: عاصفة



عالمنا فلك روسيان يفسران نشوء مجرات صغيرة فارة من مجرات أكبر منها

تاريخ النشر: GMT 08:58 | 25.04.2015 | الفضاء



hubblesite.org

المجرات المتبادلة

Изгнанники во Вселенной

Горизонты

Российские астрономы назвали голубику, вышедшую из редкого дома.



Эта голубику... (Text describing the discovery of a blue planet, likely Kepler-90b, and the astronomers involved.)

«Появление этой голубику... (Continuation of the article text from the main page.)

Сегодня астрономы назвали голубику... (Further details about the discovery and the scientists involved.)

На игор... (Partial text from an adjacent article on the right side of the page.)

News headlines

- “Tiny and speedy homeless galaxies”
- “The Universe’s loneliest galaxies”
- “*Russian* astronomers discover stripped and cast out galaxies”
- “*American* astronomers spot runaway galaxies screaming across the Universe”
- “Cosmic threesomes make some galaxies run away”

Lessons learned from massive media campaign

- Few are excited about galaxies...
- ...but everyone is excited about the VO and a possibility to make a discovery from a home computer
- VO saves taxpayer's money!
- Why so few authors?

Science / Nature papers

- Median number of authors: 6
- We're only 2 in this study
- The contribution of 'missing' collaborators has been done by YOU (the VO)

Lessons learned from massive media campaign

- When accompanied with a scientific discovery, VO is incredibly appealing to the general public
- Democratic aspect of the VO-Science
- VO-Science: real competition of skills and ideas but not access levels to very expensive instruments

Lessons learned from massive media campaign

- Philanthropists are not against the idea of supporting “cost-efficient” fundamental science as it has virtually no spending on infrastructure
- Internet companies are excited to apply their technologies to something VO-like

**Thank you all for the
VO:**

**small research teams
can now do big things**