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 minigalaxies 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



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GALAXY EVOLUTIO

Isolated compact elliptical galaxies: Stellar systems that ran away

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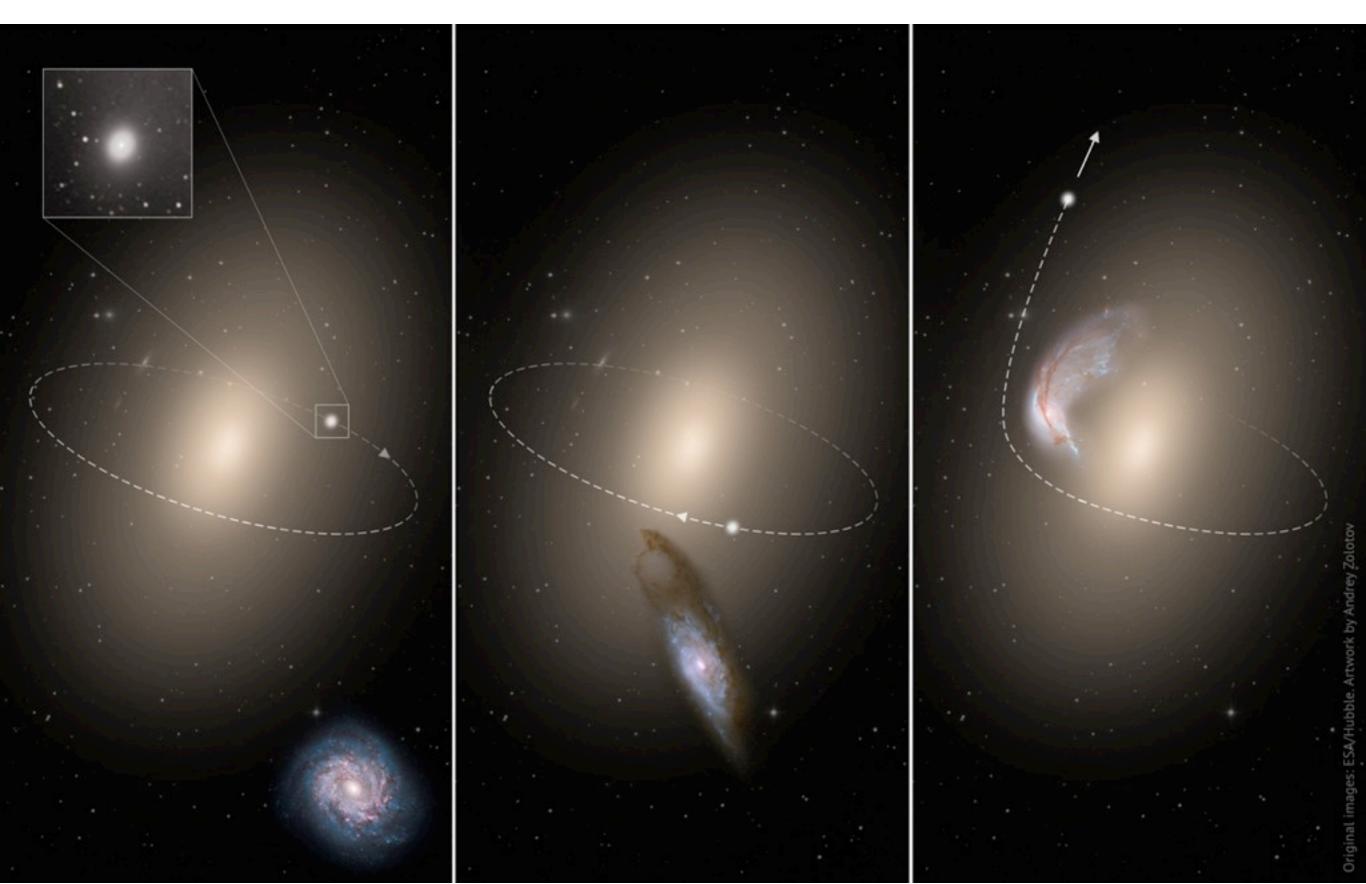
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ADS <u>record</u>

TL;DR



Wide media coverage in several countries

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





газета.ru







ScienceNews











...even TV shows

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

تاريخ النشر: 25.04.2015 | GMT 08:58 | الفضاء



الأكثر قراءة

العناوين

بمناسبة ذكرى النصر: من أبرز الأسلحة الروسية.. القائفة المقاتلة "سو- 27 "



العاهل السعودي: عملية عاصفة

بالتيمور ..خارج السيطرة وإعلان حالة الطوارئ (فيديو)

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

بوئين: روسيا قلصت سلاحها النووي الى أدنى مستوى

دي ميستور ا يوجه دعوة رسمية لإيران لحضور (جنيف-3)



المجرات المتباعدة



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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

- Philantropists 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