



WP2: Outreach & advocacy

Ilse van Bemmelen (JIVE)

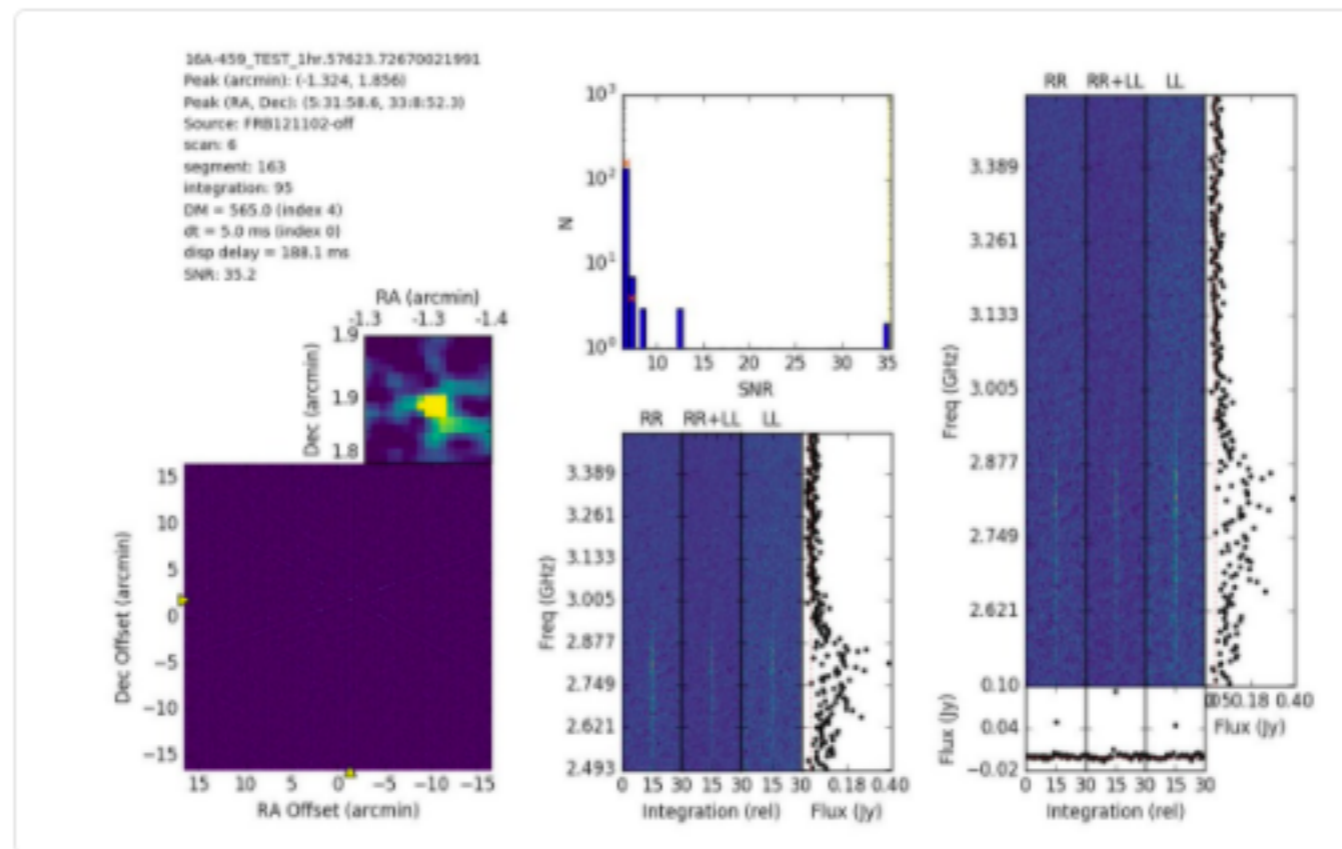


Earlier this year...



Casey Law @caseylaw · Jan 4

After 5 hours of processing, the realfast pipeline popped out the first interferometric localization of an FRB! #aas229 #fastradioburst



1 18 17

Current situation



Current situation



THE ASTROPHYSICAL JOURNAL LETTERS

FREE ARTICLE

The Host Galaxy and Redshift of the Repeating Fast Radio Burst FRB 121102

S. P. Tendulkar¹, C. G. Bassa², J. M. Cordes³, G. C. Bower⁴, C. E. A. K. Adams², S. Bogdanov⁵, S. Burke-Spolaor^{7,8,9}, B. J. Burrows⁶
Published 2017 January 4 • © 2017. The American Astronomical Society
The Astrophysical Journal Letters, Volume 834, Number 2

Article PDF

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+ Article information

Abstract

The precise localization of the repeating fast radio burst (FRB) 121102 to an unambiguous association (chance coincidence probability $< 10^{-6}$) and persistent radio counterpart. We report on optical imaging and find that it is an extended ($0''.6-0''.8$) object displaying emission lines. Based on the spectrum and emission line ratios, we identify the host galaxy as a metallicity, star-forming, $m_r = 25.1$ AB mag dwarf galaxy at a distance corresponding to a luminosity distance of 972 Mpc. From the angular size, the redshift, and luminosity, we estimate the host galaxy to have a diameter $\lesssim 4$ kpc and a stellar mass of $M_* \sim (4-7) \times 10^7 M_\odot$, assuming a mass-to-light ratio between 2 to $3 M_\odot L_\odot^{-1}$. Based on the H α flux, we

THE ASTROPHYSICAL JOURNAL LETTERS

FREE ARTICLE

The Repeating Fast Radio Burst FRB 121102 as Seen on Milliarcsecond Angular Scales

B. Marcote¹, Z. Paragi¹, J. W. T. Hessels^{2,3}, A. Keimpema¹, H. J. van Langevelde^{1,4}, Y. Huang^{5,1}, C. G. Bassa², S. Bogdanov⁶, G. C. Bower⁷, S. Burke-Spolaor^{8,9,10} [Show full author list](#)
Published 2017 January 4 • © 2017. The American Astronomical Society. All rights reserved.
The Astrophysical Journal Letters, Volume 834, Number 2

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Abstract

The millisecond-duration radio flashes known as fast radio bursts (FRBs) represent an enigmatic astrophysical phenomenon. Recently, the sub-arcsecond localization (~ 100 mas precision) of FRB 121102 using the Very Large Array has led to its unambiguous association with persistent radio and optical counterparts, and to the identification of its host galaxy. However, an even more precise localization is needed in order to probe the direct physical relationship between the millisecond bursts themselves and the associated persistent emission. Here, we report very-long-baseline radio interferometric observations using the European VLBI Network and the 305 m Arecibo telescope, which simultaneously detect both the bursts and the persistent radio emission at milliarcsecond angular scales and show that they are co-located to within a projected linear separation of ≤ 40 pc (

Current situation



JIVE partners

EUROPEAN

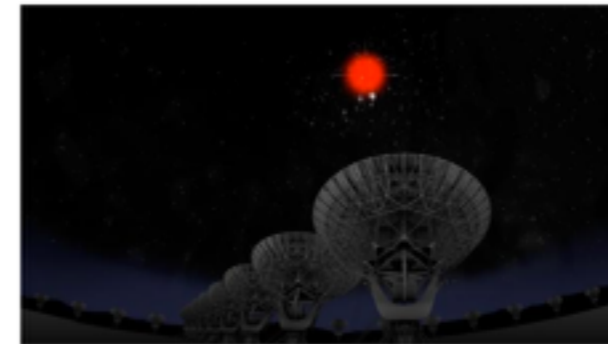
NETWORK



- Pick-up through US sources

Strange Radio Bursts Seen Coming From a Galaxy Far, Far Away

Astronomers have at last pinpointed the home galaxy of an extremely powerful radio blast, offering clues to what caused the enigmatic event.



The discovery of a faint radio burst in a dwarf galaxy three billion light-years away may provide scientists with a new window into the early universe, while also offering vital clues to a mystery that continues to challenge our perceptions of the cosmos.

ILLUSTRATION BY BILL SAXTON, NRAO, AUI, NSF; HUBBLE LEGACY ARCHIVE, ESA, NASA

By Mark Strauss

Current situation



- Pick-up through US sources

AD Nieuws Regio Sport Show

Binnenland Buitenland Economie Gezond Bizar Wetenschap Auto Digitaal Lifestyle

FRB 121102 host galaxy

De locatie van FRB121102. © Cornell University/Nature

Buitenaards bliepje blijkt afkomstig van extreem ver dwergstelsel

Wetenschappers hebben na intensief onderzoek eindelijk de herkomst achterhaald van een mysterieus radiosignaal uit de ruimte dat 10 jaar geleden voor de eerste keer werd opgevangen. Het buitenaardse bliepje blijkt, zo heeft een team

internationale aanpak vastgesteld: afkomstig van een dwergsterrenstelsel dat 3

NATIONAL GEOGRAPHIC | LATEST STORIES | PHOTO OF THE DAY | GENDER REVOLUTION

Strange Radio Bursts Seen Coming From a Galaxy Far, Far Away

ABO SHOP AKADEMIE JOBS MEHR

E-PAPER AUDIO APPS ARCHIV ANMELDEN

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ZEITmagazin

Astrofysik

Ferne Galaxie schickt grelle Blitze zur Erde

Mal eben nicht aufgepasst, Radioblitzwellen sind zwar hell, aber nur sehr kurz. Forscher haben sie gefunden.

Von Alina Schadwinkel

4. Januar 2017, 19:21 Uhr / 60 Kommentare

BBC Sign in News Sport Weather Shop Earth Travel

NEWS

Home Video World UK Business Tech Science Magazine Entertainment & Arts

Science & Environment

Mystery cosmic radio bursts pinpointed

By Paul Rincon
Science editor, BBC News website

4 January 2017 Science & Environment

BILL SAXTON, NRAO, AUI, NSF, HUBBLE

Dwingeloo: we have a problem!

- Outreach

- enormous potential to engage general public in the EU
- did not reach sufficient people and policy makers
- coordination and follow-up is needed

- Advocacy

- we lack a European platform (like AAS)
- social media exploitation insufficient

Resources in JUMPING JIVE



Tasks in WP2



1. Outreach

- webpage with EVN results, materials
- brochure
- coordinate EVN press releases
- visibility at events
- visibility amongst partners and with SKA



2. Advocacy

- EVN webpage: proposal, archives
- visibility of research opportunities
- target new communities
- visibility at conferences (astronomy, geodesy, space applications)



D2.1 [MS4, 14m]: brochure

principles of VLBI, website, reports, public access level

D2.2 [MS5, 24m]: display

large display to use for conferences, website, reports, at peer access level

D2.3 [MS6, 18m]: Report on advocating EVN

advocating EVN outside regular circles (strategy & actions)

D2.4 [MS7, 47m]: Report on attracting new users for EVN

final report on attracting new users
shared with EVN-CBD



- WP3: new partnerships
- WP6: geodesy
- WP7: future of VLBI
- WP9: VLBI in Africa



- JIVE efforts should not outpace EVN efforts
- Carefully balance between target groups
- Expectation management on what VLBI can do



- JIVE efforts should not outpace EVN efforts
- Carefully balance between target groups
- Expectation management on what VLBI can do



- WP-leader: TBD
- Project manager: Francisco (Paco) Colomer
- Communications officer: Gina Maffey
- Project scientist: Ilse van Bemmelen
- All working from JIVE HQ



- Hired communications officer
- PARI2017: communication strategies
- Scientific meetings: EWASS, NAC, SKA-day, ...
- More press releases
- EVN website: public and peers
- 50 years of VLBI
- Social media presence
- ...



"George reckons he has solved our communication problem."

