



UvA-DARE (Digital Academic Repository)

Detection of a bright burst from FRB 121102 with Apertif at the Westerbork Synthesis Radio Telescope.

Oostrum, L.C.; van Leeuwen, J.; Attema, J.; van Cappellen, W.; Connor, L.; Hut, B.; Maan, Y.; Oosterloo, T.A.; Petroff, E.; van der Schuur, D.; Sclocco, A.; Verheijen, M.A.W.

Publication date

2017

Document Version

Final published version

Published in

The astronomer's telegram

License

Unspecified

[Link to publication](#)

Citation for published version (APA):

Oostrum, L. C., van Leeuwen, J., Attema, J., van Cappellen, W., Connor, L., Hut, B., Maan, Y., Oosterloo, T. A., Petroff, E., van der Schuur, D., Sclocco, A., & Verheijen, M. A. W. (2017). Detection of a bright burst from FRB 121102 with Apertif at the Westerbork Synthesis Radio Telescope. *The astronomer's telegram*, 0693.
<http://www.astronomerstelegam.org/?read=10693>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)

The Astronomer's Telegram

[Post](#) | [Search](#) | [Policies](#)
[Credential](#) | [Feeds](#) | [Email](#)

30 Oct 2018; 11:26 UT

This space for free for your conference.

Outside

GCN
IAUCs

Other

ATel on [Twitter](#) and [Facebook](#)
ATELstream
ATel Community Site

This space for free for your conference.

[[Previous](#) | [Next](#) | [ADS](#)]

Detection of a bright burst from FRB 121102 with Apertif at the Westerbork Synthesis Radio Telescope.

ATel #10693; *L. C. Oostrum (ASTRON/UvA), J. van Leeuwen (ASTRON/UvA), J. Attema (NLeSC), W. van Cappellen (ASTRON), L. Connor (UvA/ASTRON), B. Hut (ASTRON), Y. Maan (ASTRON), T. A. Oosterloo (ASTRON), E. Petroff (ASTRON/UvA), D. van der Schuur (ASTRON), A. Sclocco (NLeSC) and M. A. W. Verheijen (RuG) report on behalf of the ARTS and Apertif Teams*

on 1 Sep 2017; 15:17 UT

Credential Certification: [Joeri van Leeuwen \(leeuwen@astron.nl\)](mailto:leeuwen@astron.nl)

Subjects: Radio, Transient, Fast Radio Burst

[Tweet](#)

We observed the repeating FRB 121102 (Spitler et al. 2016) while commissioning the Apertif Radio Transient System (ARTS; van Leeuwen 2014) on the Westerbork Synthesis Radio Telescope. Starting at UTC 2017-08-31 06:23:37, we recorded 300 MHz of bandwidth around 1.4 GHz from the central set of dipoles in the Apertif phased array feeds, from a single dish. The observation was the first with ARTS towards this source and lasted for 2 hours.

Data were coherently dedispersed at the known DM of 557 pc/cc, and channelised. Next, these filterbank data were searched offline for radio bursts, both in time and over a limited dispersion-measure range. At barycentric MJD 57996.2656372 ARTS detected a bright FRB, its first, with a fluence of 35 +/- 10 Jy ms, a peak flux of 24 +/- 7 Jy, and a FWHM of 1.3 +/- 0.2 ms, at an optimized DM of 555 pc/cc. No further bursts were discovered in the observing session.

Following the detection of multiple bright pulses from FRB 121102 at higher frequencies with the Green Bank Telescope (ATel #10675) on 26 August, this detection indicates the FRB source may be in a phase of outburst.

Further details and plots are available at http://www.alert.eu/FRB121102_20170831/

- Related**
- 11438 [FRB180301: Xinglong GWAC_F60 optical upper limit](#)
 - 11417 [FRB180311: AstroSat CZTI upper limits and correction to FRB180301 upper limits](#)
 - 11413 [FRB180301: AstroSat CZTI upper limits](#)
 - 11386 [INTEGRAL serendipitous upper limits on FRB180301](#)
 - 11376 [Detection of a new fast radio burst during Breakthrough Listen observations](#)
 - 10693 [Detection of a bright burst from FRB 121102 with Apertif at the Westerbork Synthesis Radio Telescope.](#)
 - 10675 [FRB 121102: Detection at 4 - 8 GHz band with Breakthrough Listen backend at Green Bank](#)

Free Surface-Image Viewer

Use Cloud-based ProfilmOnline to View, Analyze, Store, and Share AFM & 3D Profiler Images profilmonline.com

[OPEN](#)

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

Derek Fox, Editor

Mansi M. Kasliwal, Co-Editor

`rrutledge@astronomerstelegam.org`

`dfox@astronomerstelegam.org`

`mansi@astronomerstelegam.org`