

# An AIPS-based, distributed processing method for large radio interferometric datasets

Stephen Bourke · Huib Jan van Langevelde ·  
Karl Torstensson · Aaron Golden

Received: 20 February 2012 / Accepted: 3 September 2012 / Published online: 17 April 2013  
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**Abstract** The data output rates of modern radio interferometric telescopes make the traditional data reduction process impractical in many cases. We report on the implementation of a lightweight infrastructure, named AIPSLite, that enables the deployment of AIPS interferometric processing routines on distributed systems in an autonomous and fault tolerant manner. We discuss how this approach was used to search for sources of 6.7 GHz methanol maser emission in the Cep A region with the European VLBI Network (EVN). The field was searched out to a radius of  $1.25 \text{ min}^{-1}$  at milli-arcsecond spatial resolution and 1024 frequency channels with  $0.088 \text{ km s}^{-1}$  velocity resolution. The imaged data was on the order of 30 TB. Processing was performed on 128 processors of the Irish Centre for High End Computing (ICHEC) linux cluster with a run time of 42 h, and a total of 212 CPU days.

**Keywords** Interferometry data processing · Distributed processing · AIPS · ParselTongue · AIPSLite

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S. Bourke (✉) · H.J. van Langevelde · K. Torstensson  
Joint Institute for VLBI in Europe, Postbus 2, 7990AA Dwingeloo, The Netherlands  
e-mail: sb@astro.caltech.edu

S. Bourke · A. Golden  
Centre for Astronomy, National University of Ireland, Galway, Ireland

H.J. van Langevelde · K. Torstensson  
Leiden Observatory, Leiden University, PO Box 9513, 2300RA Leiden, The Netherlands

*Present Address:*

S. Bourke  
Department of Astronomy, California Institute of Technology, MC 249-17, 1200 East  
California Blvd, Pasadena, CA 91125, USA

*Present Address:*

A. Golden  
Department of Genetics, Albert Einstein College of Medicine, Bronx, NY 10461, USA