LOFAR und MPIfR Pulsare (LuMP) Software

Introduction

LuMP is a software package for recording beamformed data from LOFAR stations in single-station mode. As of 2013 Sep 22, LuMP v2.0 is in preparation to be released to the LOFAR community. A Git hosting site is being selected, and within approximately 1 week the LuMP v2.0 code should be available.

Please remember that although the software is technically free (BSD license), the main LuMP developer (James M Anderson) requests that you offer co-authorship of all scientific papers produced that make direct use of data recorded using the LuMP software during the initial period of LuMP usage. At this time (2013 Sep 22), it is expected that this request will remin in effect for observatiosn recored with LuMP through the end of 2014. (For those of you that have been using a copy of the LuMP v1.0 software, you should have received a similar note from James M Anderson when he sent you the v1.0 tarball. This usage notice has also been displayed during presentations covering the LuMP software at the past LOFAR Single Station Meetings.)

README

Here is a copy of the LuMP v2.0 README file

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# README
# README file for LuMP software

INTRODUCTION
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This directory contains version 2.0 of the LuMP recording package.

LuMP (LOFAR und MPIfR Pulsare) is a software package for recording
beamformed data from LOFAR station in single-station mode.  The LuMP
recording software is intended to be a minimalistic software package
to handle basic reformatting and recording of LOFAR beamformed data.
At the moment, the only significant processing incorporated in LuMP is
the option to channelize and/or integrate data for some output
formats.  As data processing is kept to a minimum, LuMP has relatively
low requirements on CPU capacity.  However, recording the output data
from a LOFAR station (approximately 100 MB/s per RSP lane) may require
significant sustained throughput capacity from the computer and
storage device.

LuMP v2.0 includes several new recording formats:
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LuMP1: pulsar recording format for processing with dspsr that can output multiple beamlets per file
FFT0, PFB0: discrete Fourier transform and polyphase filterbank channelization of the LOFAR beamlet data
P_FFT0, P_PFB0: power (as opposed to raw voltage) recording formats using Fourier transform and polyphase filterbank channelization

LuMP v2.0 also includes a number of bugfixes from the v1.0 release.

Downloading

See the LuMP website at
https://deki.mpifr-bonn.mpg.de/Cooperations/LOFAR/Software/LuMP

Documentation

For information on how to use LuMP, there is no significant documentation yet outside of the --help options to the Python programs. Check the LuMP webpage or contact the developer.

For more information on LuMP, please visit the LuMP website at
https://deki.mpifr-bonn.mpg.de/Cooperations/LOFAR/Software/LuMP

For information about LOFAR, please visit
http://www.astron.nl/radio-observatory/astronomers/lofar-astronomers

For more information about the MPIfR, please visit
http://www.mpifr-bonn.mpg.de/

Installation

Please see the INSTALL file for detailed information.

Using LuMP

Please see the LuMP website at
https://deki.mpifr-bonn.mpg.de/Cooperations/LOFAR/Software/LuMP

Licensing

Please see the file COPYING for detailed copyright information.

LuMP is free software (see the file COPYING), *BUT*, users are requested to offer co-authorship of any scientific publications using data that were recorded using the LuMP software in the first few years of the existence of LuMP to the principal author of the LuMP software (James M Anderson). Although the principle of free software is great, the author needs to put bread on the table too, if you know what I mean. This request is made on an honor system. No legal actions will be taken if co-authorship of scientific publications is not made --- I will just publicly shame you at scientific meetings for using my software without helping to give me credit for the work I have put in. At this time, the period of co-authorship request is expected to continue until the end of 2014.

Contacts

To contact the LuMP development team, send an e-mail to anderson@mpifr-bonn.mpg.de

Bugs

For a list of known bugs, or for information on how to report suspected bugs, see the file BUGS.

News

See the file NEWS.

ChangeLog

See the file ChangeLog.

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#############################################################################
#_HIST  DATE NAME PLACE INFO
# 2013 Sep 22  James M. Anderson  --- MPIfR start


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