



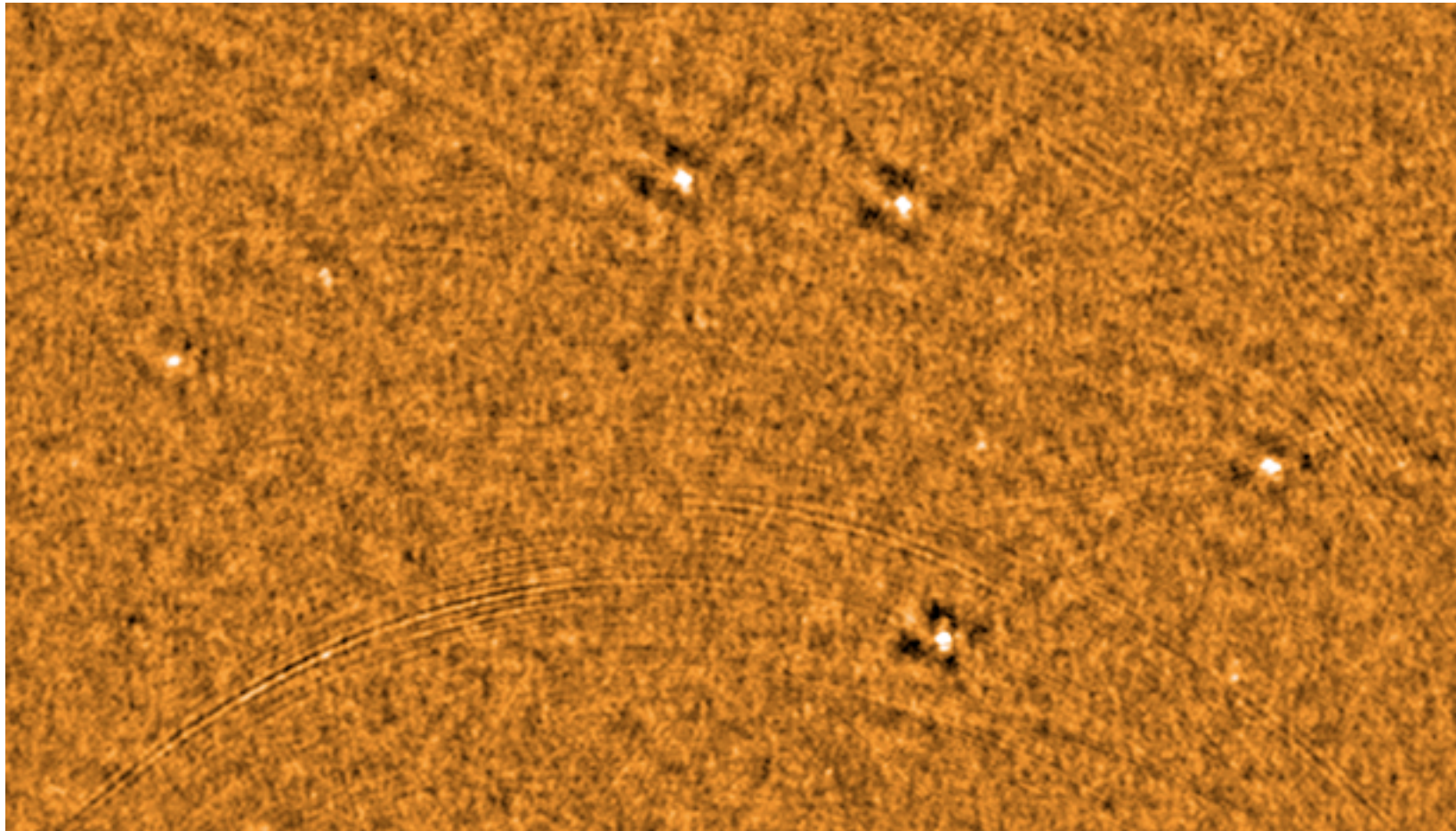
**Imaging Busy Week 2
- Surveys KSP**

**John McKean (and behalf of
the imaging BW team)**

Previously

Follows on from the 1st imaging busy week (19--23 August; see talks from George and Michael)

Full 72 sub-band dataset of 3C196 was imaged with the imaging pipeline.



This week

AIM: Make a fully calibrated (flux, bandpass) image of the sky (aim-high)

Further testing of the imaging pipeline

Test the new processing cluster, storage nodes

Test low frequencies for survey capabilities (10--30 MHz)

New set of busy weekers (future commissioners)

Learning the image processing steps of the pipeline (DPPP, BBS, Imaging) - know the process, spot the problems!

After day 1: First single band images created.

Testing DPPP.

First analysis of low-frequency dataset.

New datasets

Dataset I

13 hour observation of 3C196
30--80 MHz
5 Dutch stations and Effelsberg
24 MHz bandwidth (non-continuous)
120 subbands (256 channels)
3 second visibility integrations
300 Gb size

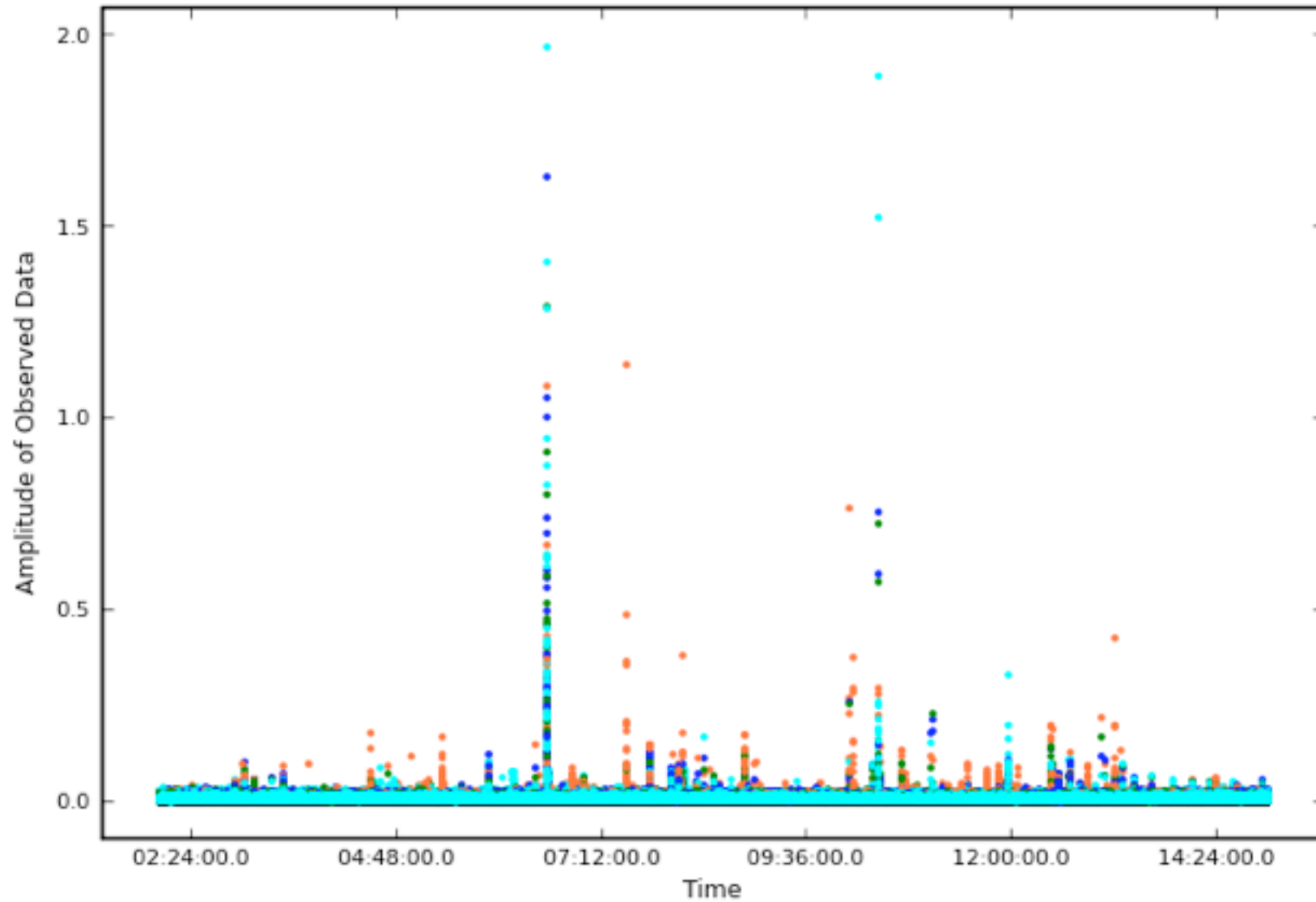
Being processed with the imaging pipeline on the new offline processing cluster (Evert Rol is on the case).

Issues with the new cluster causing a few problems - still processing

Playing around with DPPP, testing flagging parameters.

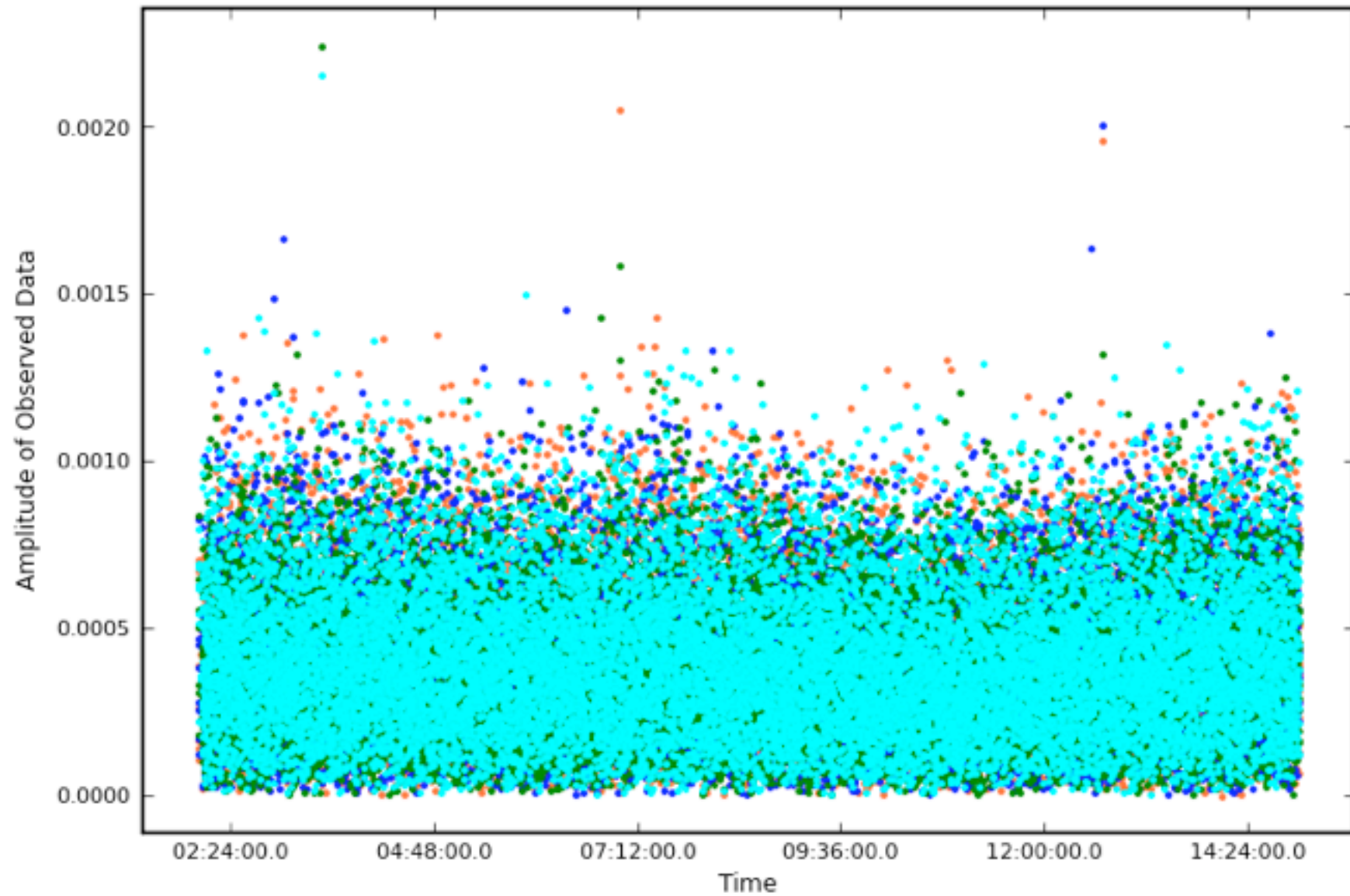
See Olaf's talk for some great new results.

RFI



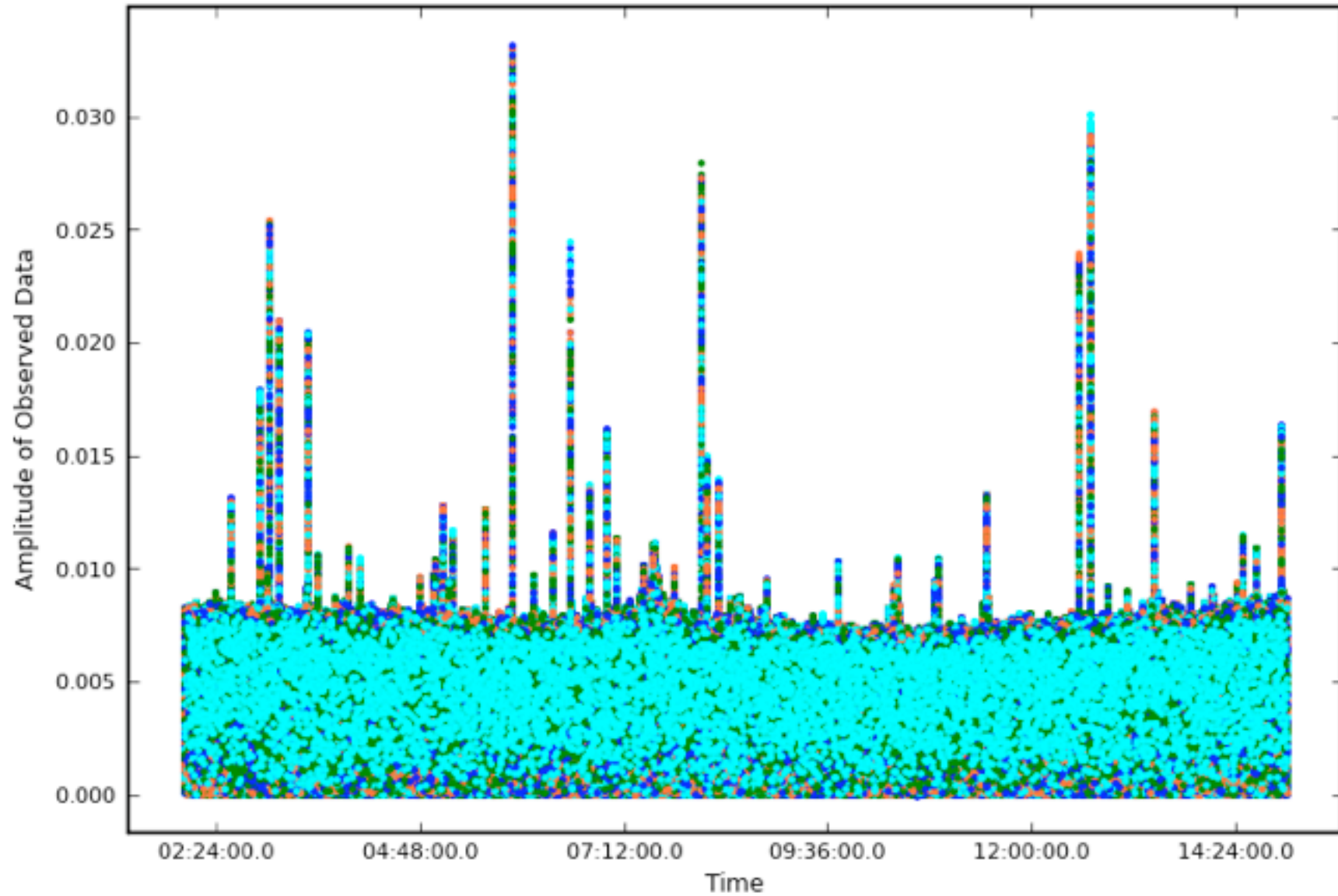
(by Chiara Ferrari, Emanuela Orru, Roberto Pizzo)

RFI



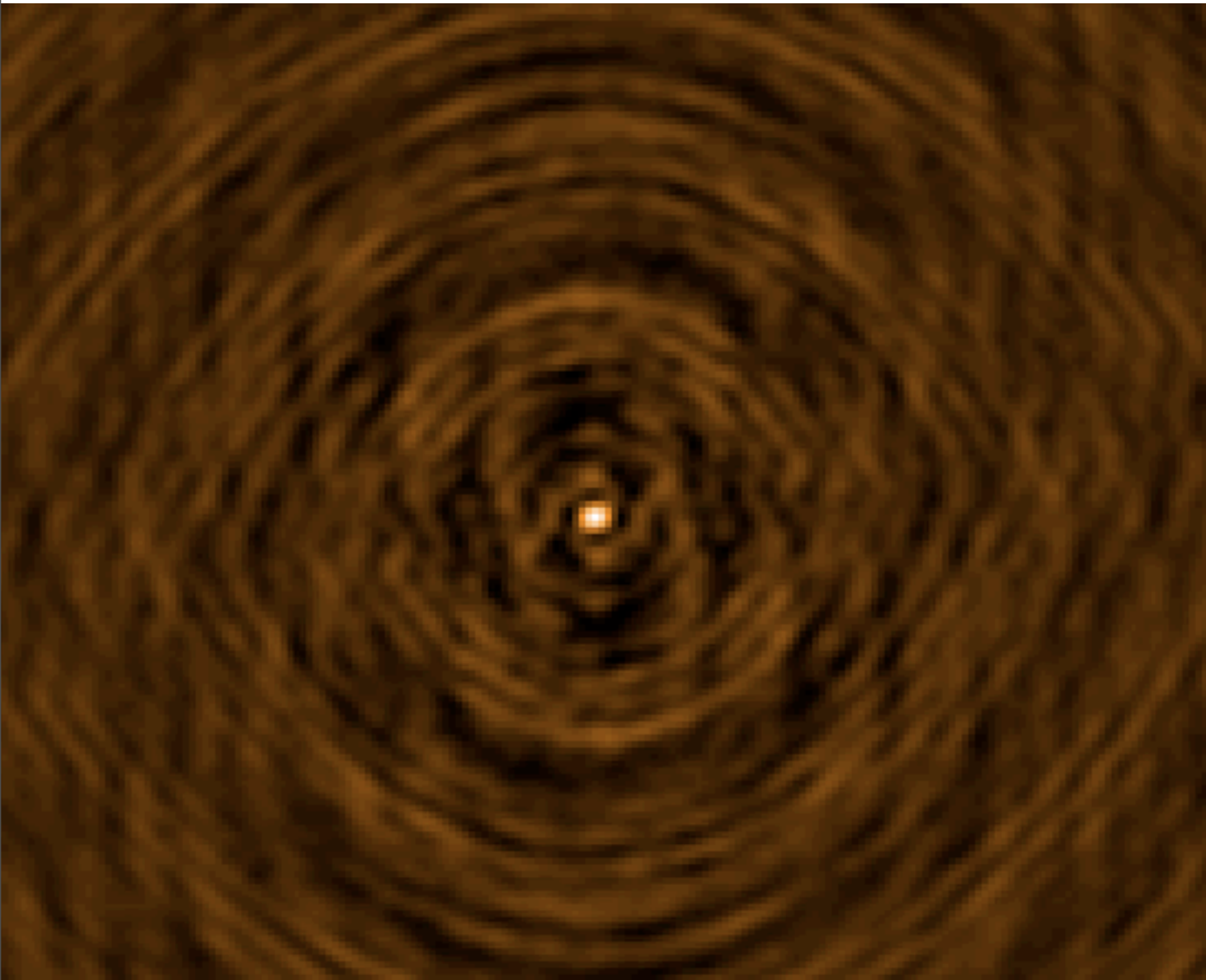
(by Chiara Ferrari, Emanuela Orru, Roberto Pizzo)

RFI



(by Chiara Ferrari, Emanuela Orru, Roberto Pizzo)

Example images of 3C196



Issues with displaying 3--30 Gb subbands.

Single sub band dataset.

Need to produce a small cookbook for future BW.

(by Annalisa Bonafede, Judith Croston, Timothy Garn, Isabella Prandoni)

New datasets

Dataset 2

48 hour observation of Cygnus A (day and night)

10--35 MHz

5 Dutch stations and Effelsberg

24 MHz bandwidth (continuous)

120 subbands (256 channels)

1 second visibility integrations

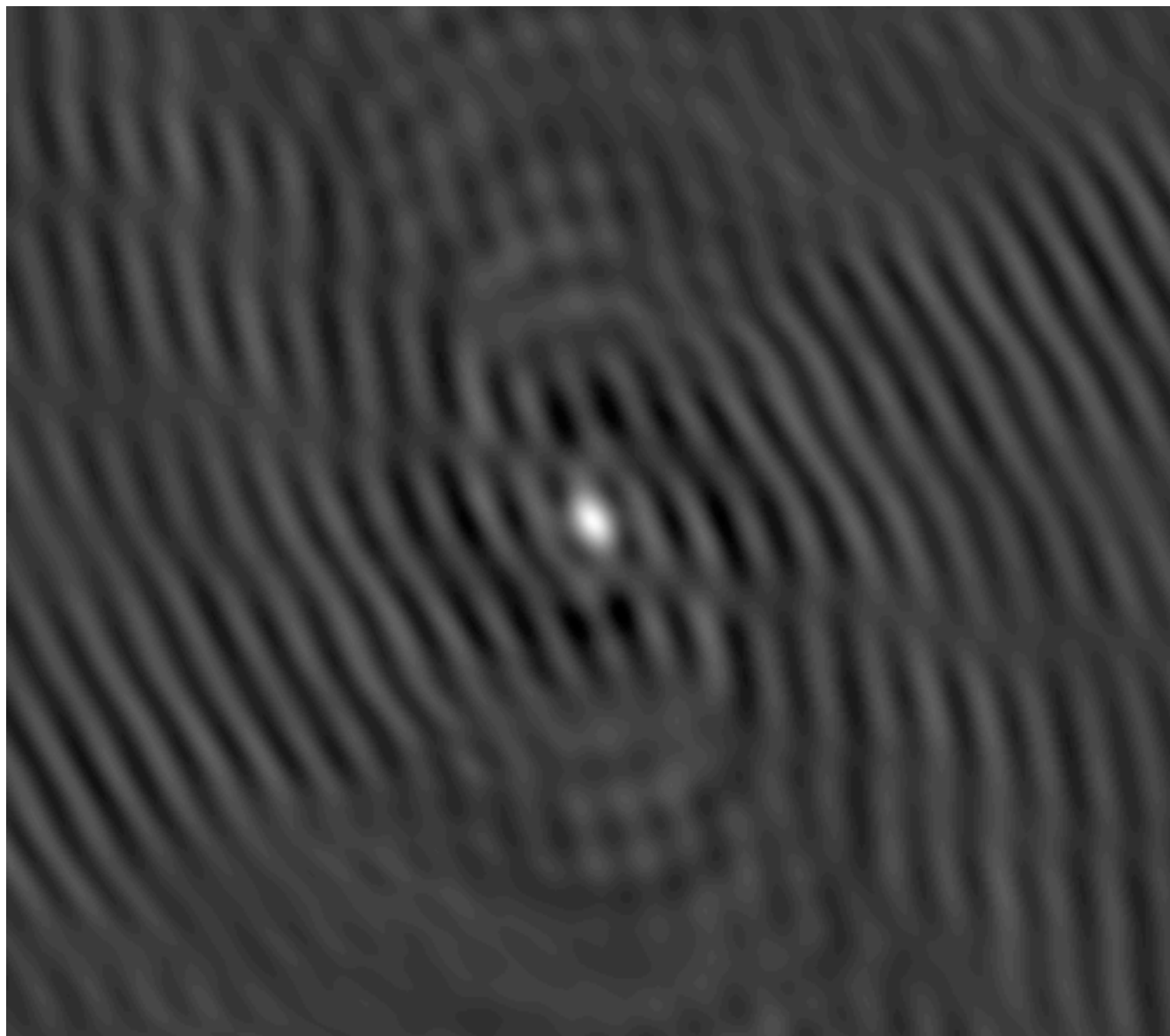
3.5 Tb size!!

We want to carryout an all-sky survey at very low frequencies to find e.g. Ultra-steep spectrum sources (high-z radio sources).

Want to find best sub-bands (rfi free) for the survey.

Huge dataset! Inspecting the individual subbands has been difficult.

Images of Cygnus A at 15 MHz



First images with
the LOFAR
software.

Single sub-band.

(by Judith Croston)

New datasets

Dataset 3

2 hour observation of Cygnus A 10--35 MHz

5 Dutch stations and Effelsberg

48 MHz bandwidth (continuous)

240 subbands (256 channels)

1 second visibility integrations

To be observed today.

First observations with the increased bandwidth from Effelsberg.

Testing the new data storage cluster.

Testing the imaging pipeline.

LSM++

Useful to develop data-viewing, data products.

Possibly interact with the developers at the beginning of the week.

It took around 4 weeks to produce an image of the BW I dataset with the pipeline.

Hopefully, see some results for these three new datasets over the next few days/weeks.

Next imaging busy week will be in two weeks; concentrating on imaging and long baseline issues (see Olaf's talk).