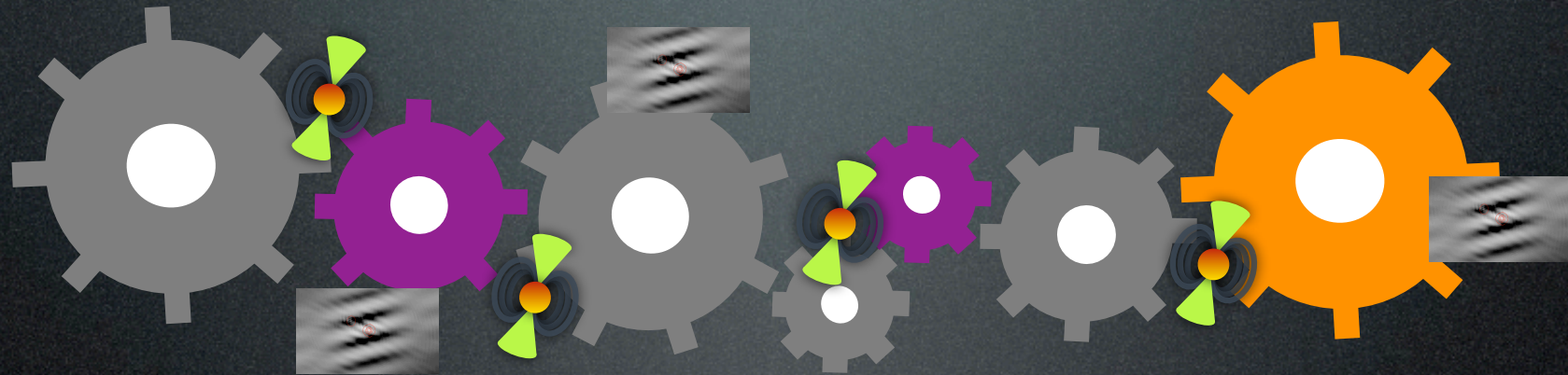


# Simultaneous LOFAR Pulsar + Imaging Observations... a Work in Progress



Jason Hessels

on behalf of

Anastasia Alexov, George Heald, John Swinbank, Evert Rol,  
Ben Stappers, Ashish Asgekar, Pulsar Working Group

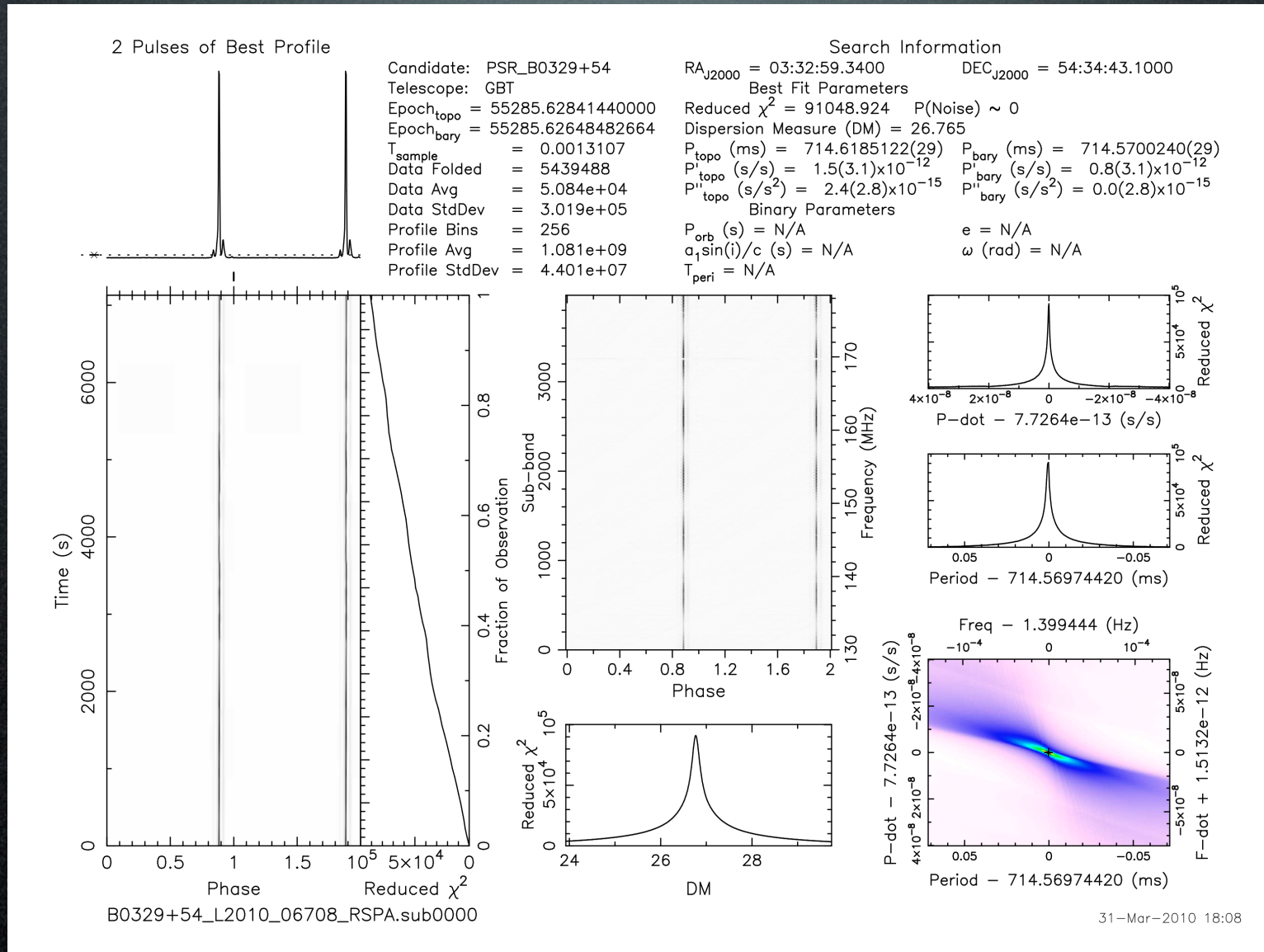
# Simultaneous BF + Imaging

- Make an incoherent sum of the station beams simultaneous with normal correlation products.
- Piggy-backing opens up the high-time-resolution regime.
- Not a large extra computational burden online.
- We need to be able to run in this mode for MSSS.

# 2-hr Simultaneous Data L2010\_06708

- Simultaneous pulsar and imaging data.
- HBA: 130-178MHz.
- Used stations: CS032, CS302, RS106, RS208, RS307, and RS503.
- New 12-hr simultaneous data (L2010\_06928), using 7 core and 3 remote stations. Only pulsar data reduced so far.

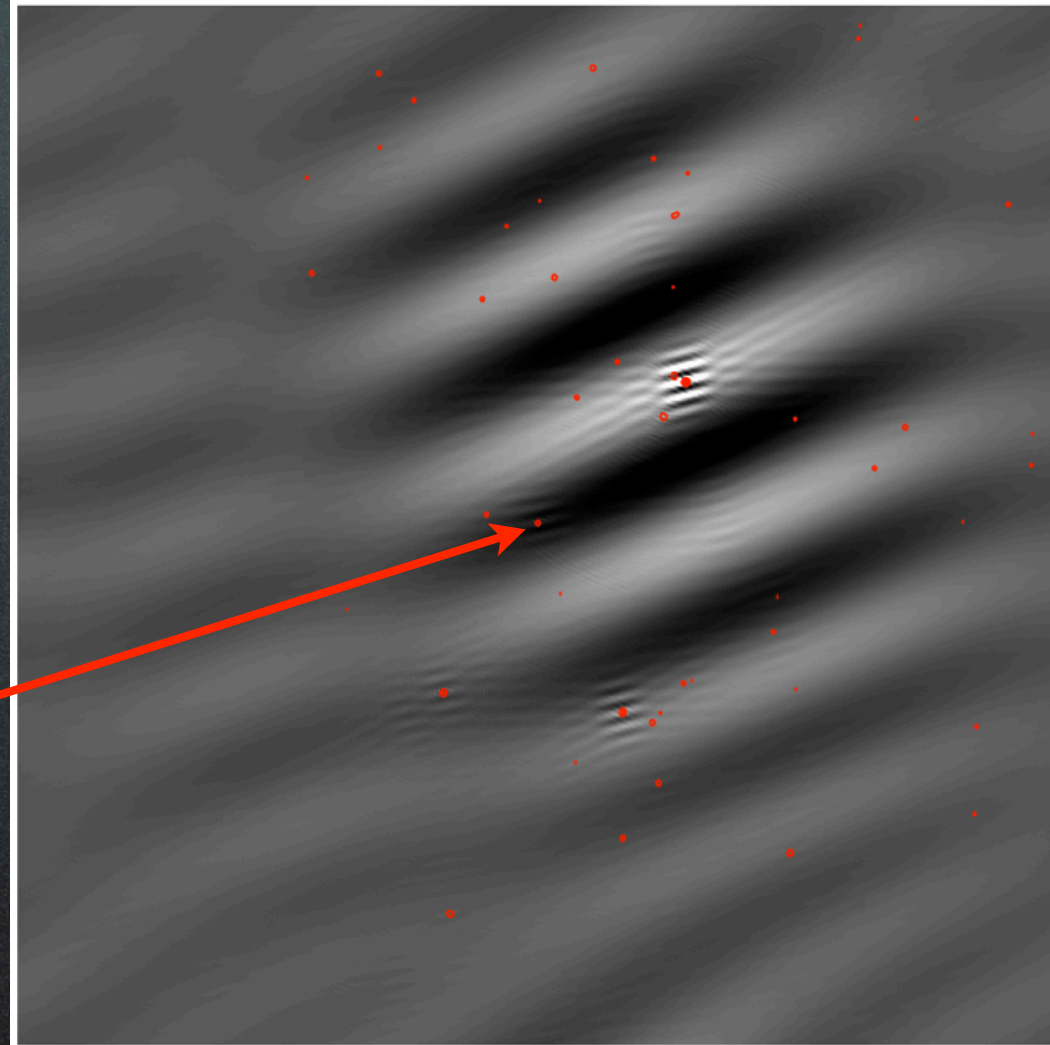
# 2-hr Simultaneous Data L2010\_06708



31-Mar-2010 18:08

# 2-hr Simultaneous Data L2010\_06708

PSR B0329+54  
1Jy



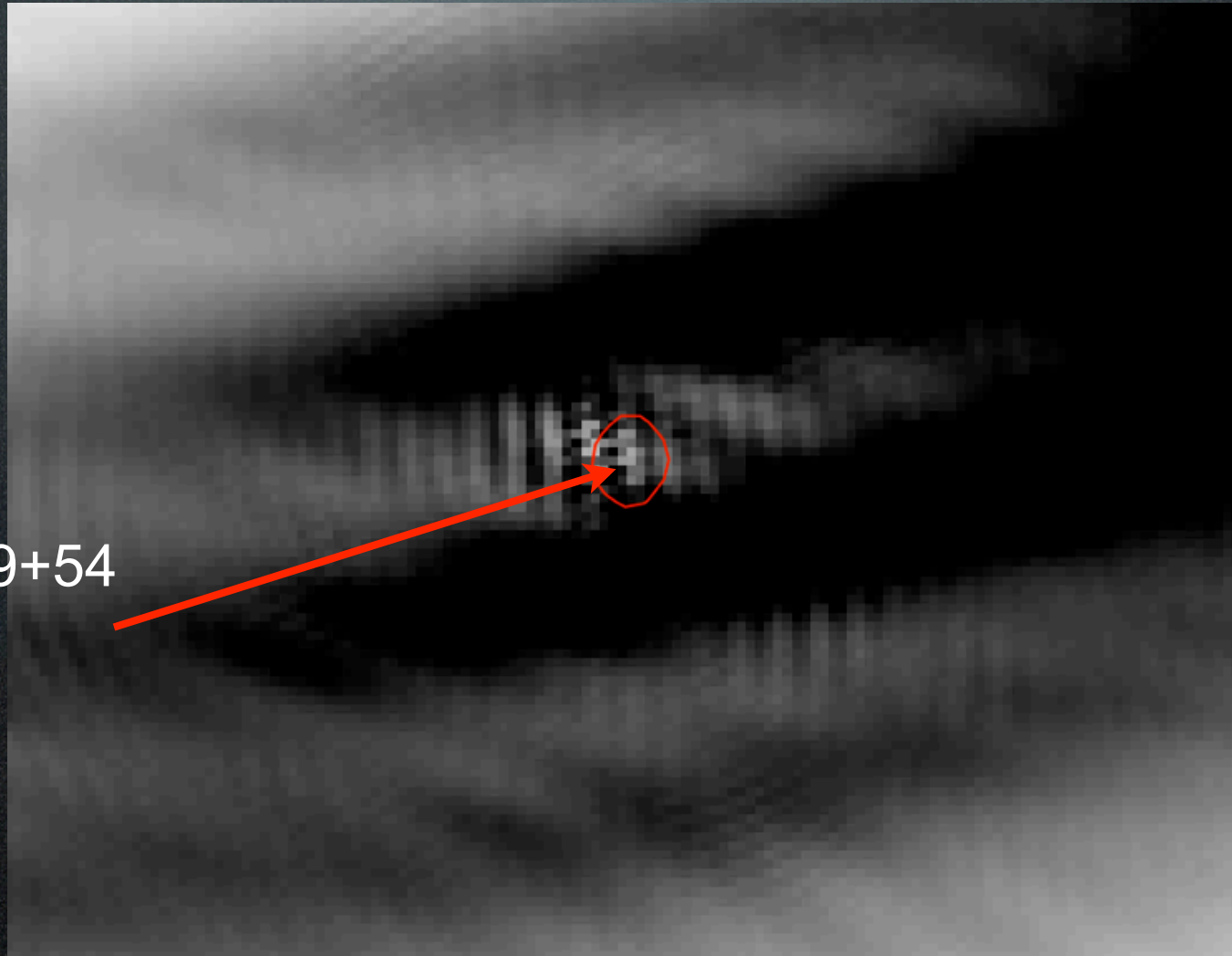
Full 5x5deg FoV with WENSS contours  
Different imaging regime... no bright source

# 2-hr Simultaneous Data L2010\_06708



3 sources in BBS sky model

# 2-hr Simultaneous Data L2010\_06708

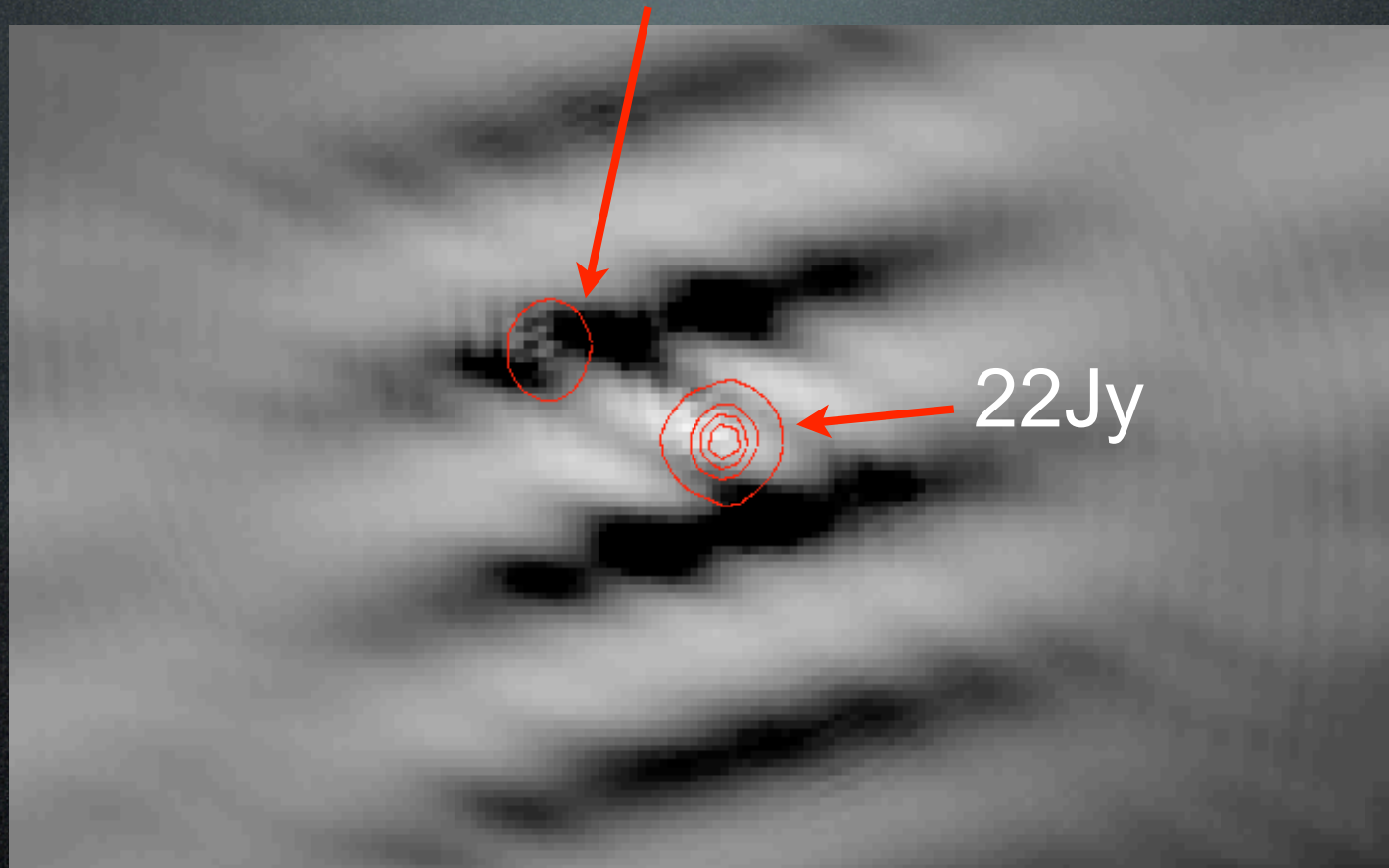


PSR B0329+54  
1Jy

PSR B0329+54 detected?

# 2-hr Simultaneous Data L2010\_06708

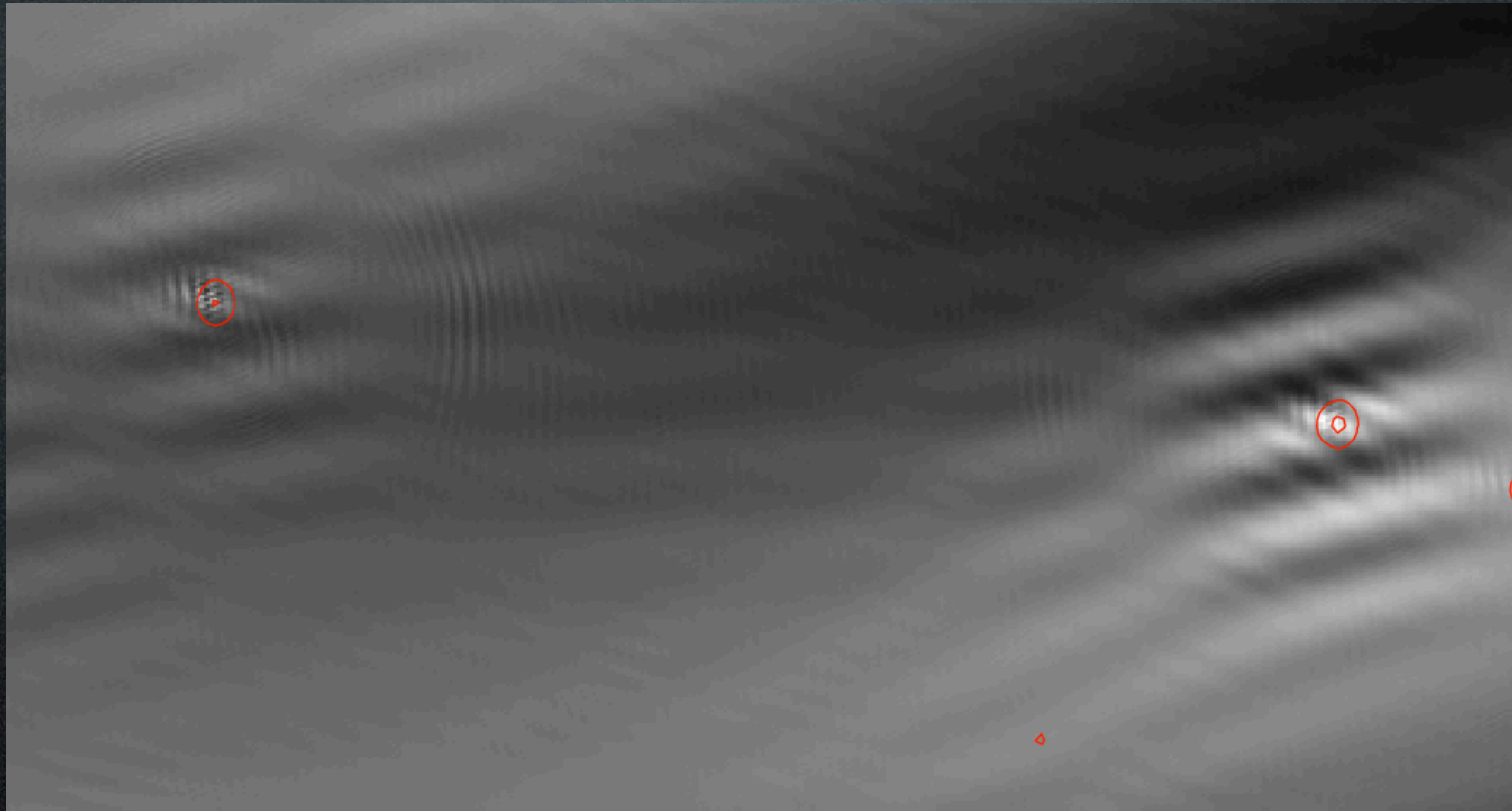
Other source detected?



Brightest source in the field



# 2-hr Simultaneous Data L2010\_06708



2nd and 3rd brightest sources  
~10'' pointing offset???

Now Anastasia will go into  
much more detail about the  
pipeline pitfalls and  
progress...