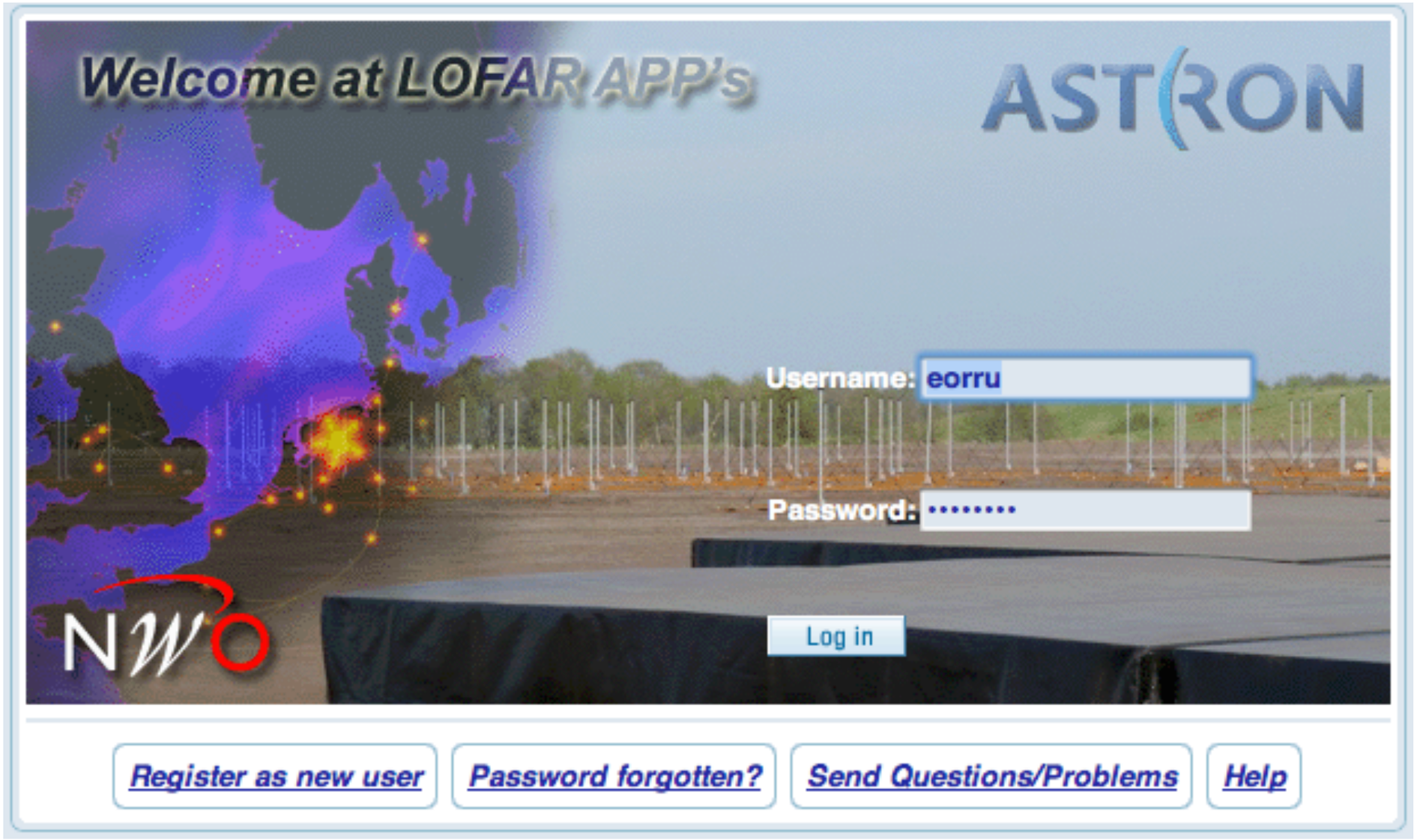
Status of MSSS "automatic" processing

Emanuela Orru' & RO



Automatic pipeline

- based on a script runcalibrate (Swinbank) and ued for the software characterization
- Calibrator pipeline: demix and calibrate the calibrator (3rd beam)
- Target pipeline: demix and transfer solutions from calibrator to the targets (1st and 2nd beam)
- Imaging pipeline: concatenate the SBs into Bands and the timeslices, run a phase only calibration, imaging and produces a source catalogue

LBA MSSS: Dec 2011 Jan-Feb-Mar-Apr 2012

9_Slices_Dec24_20:18	Add	Details			Dec24 20:18 MSSS LBA 9-slices
Slice 1	Add	Details			MSSS - Slice 1
Pos 123.400216667 48	Add	Details		finished	[40309] Pos 123.400216667 48.217295 (LBA) at 2011-12-24T21:15:00 for 2 min
Pos 126.818181667 46	Add	Details		finished	[40310] Pos 126.818181667 46.16 (LBA) Multi-Beam at 2011-12-24T21:18:00 for 11 min
Pos 126.818181667 46		Details		finished	Pos 126.818181667 46.16 (LBA) Multi-Beam #1 at 2011-12-24T21:18:00 for 11 min
Pos 133.84615375 51.		Details		finished	Pos 133.84615375 51.93 (LBA) Multi-Beam #2 at 2011-12-24T21:18:00 for 11 min
Pos 123.400216667 48		Details		finished	Pos 123.400216667 48.217295 (LBA) Multi-Beam #3 at 2011-12-24T21:18:00 for 11 min
Pos 123.75 90.0		Details		finished	Pos 123.75 90.0 (LBA) Multi-Beam #4 at 2011-12-24T21:18:00 for 11 min
Target Pipeline 1.1	DPS	Details		opened	Target Pipeline 1.1
Target Pipeline 1.2	DPS	Details		opened	Target Pipeline 1.2
Calibrator Pipeline	DPS	Details		opened	Calibrator Pipeline
Slice 2	Add	Details			MSSS - Slice 2
Slice 3	Add	Details			MSSS - Slice 3
Slice 4	Add	Details			MSSS - Slice 4
Slice 5	Add	Details			MSSS - Slice 5
Slice 6	Add	Details			MSSS - Slice 6
Slice 7	Add	Details			MSSS - Slice 7
Slice 8	Add	Details			MSSS - Slice 8
Slice 9	Add	Details			MSSS - Slice 9
Pos 123.400216667 48	Add	Details		finished	[40373] Pos 123.400216667 48.217295 (LBA) at 2011-12-25T05:15:00 for 2 min
Pos 126.818181667 46	Add	Details		finished	[40374] Pos 126.818181667 46.16 (LBA) Multi-Beam at 2011-12-25T05:18:00 for 11 min
Pos 126.818181667 46		Details		finished	Pos 126.818181667 46.16 (LBA) Multi-Beam #1 at 2011-12-25T05:18:00 for 11 min
Pos 133.84615375 51.		Details		finished	Pos 133.84615375 51.93 (LBA) Multi-Beam #2 at 2011-12-25T05:18:00 for 11 min
Pos 123.400216667 48		Details		finished	Pos 123.400216667 48.217295 (LBA) Multi-Beam #3 at 2011-12-25T05:18:00 for 11 min
Pos 123.75 90.0		Details		finished	Pos 123.75 90.0 (LBA) Multi-Beam #4 at 2011-12-25T05:18:00 for 11 min
Target Pipeline 9.1	DPS	Details		opened	Target Pipeline 9.1
Target Pipeline 9.2	DPS	Details		opened	Target Pipeline 9.2
Calibrator Pipeline	DPS	Details		opened	Calibrator Pipeline 9
Imaging Pipeline X	DPS	Details		opened	Imaging Pipeline [0.PX]
Imaging Pipeline Y	DPS	Details		opened	Imaging Pipeline [0.PY]

Old Runs to restart

File Edit View Insert Format Data Tools Help All changes saved in Drive

9_Slices_Jan28_20:48 h

	A	B	C	D	E	F	G	H	I
1	9_Slices_Jan28_20:48 h	10/11/2012	rimandata xche mom bug				L68868 L68867 no images	ndppp failed: non of the input ms were copied	Complete timeslice missing: ndppp failed to create subband group.
2	9_Slices_Feb03_20.03	9/28/2012		21367.896938	5.93552692722222	L66402			
3	9_Slices_Feb03_20.03	9/28/2012		34580.909338	9.60580814944444	L66403 ok			
4	9_Slices_Feb03_20:18 h	10 1710/2012		29237.848075	8.12162446527778	L68795 ok	L68794 no images		
5	9_Slices_Mar09_13:13	10/31/2012	rimandata xche mom bug	21574.275375	5.99285427083333	L65321 ok			
6	9_Slices_Mar09_13:28	10/31/2012			0	L66212 ok			
7	9_Slices_Mar09_13:28	10/31/2012		33950.838713	9.43078853138889	L66211 ok			
8	9_Slices_Mar09_13:43	10/31/2012		31769.21965	8.82478323611111	L66243 ok	L66244 no images		
9					0				
10	9_Slices_Mar10_12:23	10/2/2012			0	L66963 ok			
11	9_Slices_Mar10_12:23	10/2/2012		28425.7926	7.8960535	L66964 ok			
12	9_Slices_Mar10_12:38	10/2/2012		40790.57635	11.3307156527778	L67034 ok	L67033 no images		
13	9_Slices_Mar10_12:53	19/09-02/10 /2012			0		L67129 L67128 no images		no possible to RESTART issue in mom status
14	9_Slices_Mar10_19:13	19/09-03/10 /2012			0		L67245 L67244 no images		no possible to RESTART issue in mom status
15	9_Slices_Mar10_19:28	19/09-03/10 /2012			0		L67242 L67243 no images		no possible to RESTART issue in mom status
16	?????	9/27/2012	MSSS_pipelines_27 09-2012		0				
17	9_Slices_Mar10_19:43	12/10/2012			0		L69060 L69059 no images		no possible to RESTART issue in mom status
18	9_Slices_Mar10_19:58	12/10/2012			0		69142 69141 no images		
19	9_Slices_Mar11_20:18	12-13/10/2012			0		69200 69199 no images		
20	9_Slices_Mar11_20:33	13/10/2012			0		69261 69262 no images		
21	9_Slices_Mar11_20:48	13/10/2012			0		69328 69327 no images		
22	9_Slices_Mar17_11:33	issues in mom			0		67396 no images		
23	9_Slices_Mar17_11:48	13-14/10/2012			0		69390 69389 no images		no possible to RESTART issue in mom status
24	9_Slices_Mar17_12:03	14/10/2012			0		69448 69448 no images		no possible to RESTART issue in mom status
25	9_Slices_Mar17_12.18 h	10/9/2012			0		L68566 L68567 no images		no possible to RESTART issue in mom status

	A	B	C	D	E	F
1	**MSSS mom folder**	h= done by hand by MSSS commissioners	**remarks**	**result img pipeline(create products**	**NO result img pipeline crashed**	**problems / errors**
2	MARCH					
3	9_Slices_Mar09_13:28		tared	66212 ok		also BDSM catalogue
4	9_Slices_Mar09_13:28		tared	66211 ok		image horrible
5	9_Slices_Mar09_13:43	31/10/2012	restared	66244 ok		image horrible
6	9_Slices_Mar09_13:43	31/10/2012	restared	66243 ok		also BDSM catalogue
7	9_Slices_Mar18_09:18	19/10/2012	status no update	70183 ok		pixel issue in parset
8						
9	9_Slices_Mar18_09:18	19/10/2012	status no update	70182 ok		pixel issue in parset
10	9_Slices_Mar18_09:33	mom folder issue				
11	9_Slices_Mar18_13:33	mom folder issue				
12	9_Slices_Mar18_19.18 h					
13	9_Slices_Mar18_19.18 h					
14	9_Slices_Mar18_19:33	19/10/2012	status mom ok	L70181 ok		
15	9_Slices_Mar18_19:33	19/10/2012	status mom ok	L70180 ok		
16	9_Slices_Mar18_19:48	19/10/2012	status mom ok	L70179 ok		
17	9_Slices_Mar18_19:48	19/10/2012	status mom ok	L70178 ok		
18	9_Slices_Mar21_18:33	20/10/2012	status mom ok	L70177 ok		
19	9_Slices_Mar21_18:33	20/10/2012	status mom ok	L70176 ok		
20	9_Slices_Mar21_18:48	20/10/2012	status mom ok	L70175 ok		
21	9_Slices_Mar21_18:48	20/10/2012	status mom ok	L70174 ok		
22	9_Slices_Mar21_19:03	20/10/2012	status mom ok	L70241 ok		
23	9_Slices_Mar21_19:03	20/10/2012	status mom ok	L70240 ok		
24	9_Slices_Mar30_16:23	21/10/2012	status mom ok	L70298 ok		
25	9_Slices_Mar30_16:23	21/10/2012	status mom ok	L70299 ok		
26	9_Slices_Mar30_16:38	21/10/2012	status mom not update	L70357 ok		
27	9_Slices_Mar30_16:38	21/10/2012	status mom no update	L70356 ok		
28	9_Slices_Mar30_16:53	21/10/2012	status mom no update	L70415 ok		
29	9_Slices_Mar30_16:53	21/10/2012	status mom no update	L70415 ok		
30	9_Slices_Mar30_17:08	23/10/2012	new pybdsm patch	L70873 ok		also BDSM catalogue
31	9_Slices_Mar30_17:08	23/10/2012	new pybdsm patch	L70872 ok		also BDSM catalogue
32	9_Slices_Mar31_01:48	26/10/2012	no img pipel			
33	9_Slices_Mar31_02:03	25/10/2012	no img pipel			
34	9_Slices_Mar31_02:18	25/10/2012	no img pipel			
35	9_Slices_Mar31_08:33	25/10/2012	no img pipel			
36	9_Slices_Mar31_08:48	25-26/10/2012	no img pipel			
37	9_Slices_Mar31_09:03	26/10/2012	no img pipel			
38	9_Slices_Mar31_09:18	26/10/2012	no img pipel			
39	9_Slices_Mar31_20:43	26/10/2012	no img pipel			
40	9_Slices_Mar31_20:58	26/10/2012				
41	9_Slices_Mar31_21:13	1/11/2012			**72873 failed**	solved bug this week (DPPP selection of baselines): need to rerun starting at calibrator pipeline (don't forget to remove statefiles and scratch data
42	9_Slices_Mar31_21:13	1/11/2012			**72872 failed**	idem
43	9_Slices_Mar31_21:28	1/11/2012			**72933 failed**	idem
44	9_Slices_Mar31_21:28	1/11/2012			**72932 failed**	idem
46						
47						
48	FEBRUARY					
49	9_Slices_Feb03_20:33	1/11/2012			**73023 failed**	idem
50	9_Slices_Feb03_20:33	1/11/2012			**73022 failed**	idem
51	9_Slices_Feb04_03:03	7/11/2012		73971 ok		image horrible amp 2500 Jy
52	9_Slices_Feb04_03:03	7/11/2012		73971 ok		image horrible amp 6000 Jy
53	9_Slices_Feb04_03:18	8/11/2012		74055 ok		
54	9_Slices_Feb04_03:18	8/11/2012		74054 ok		
55						
56						
57	DECEMBER					
58						
59	9_Slices_Dec24_20:33	9/11/2012				
60						
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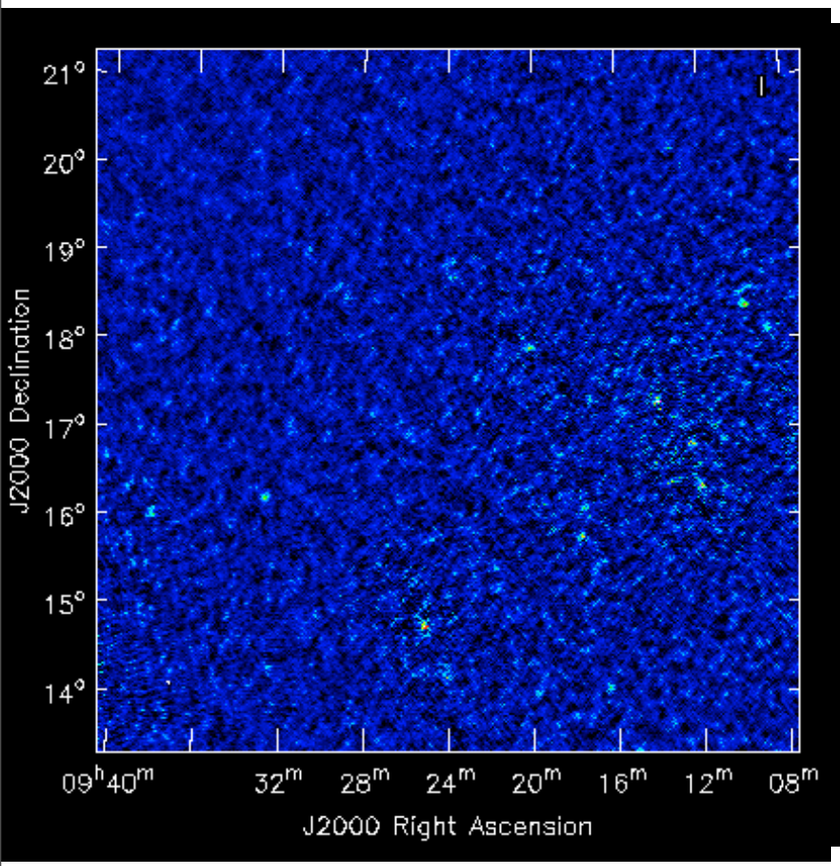
images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17°
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28m
24m
20m
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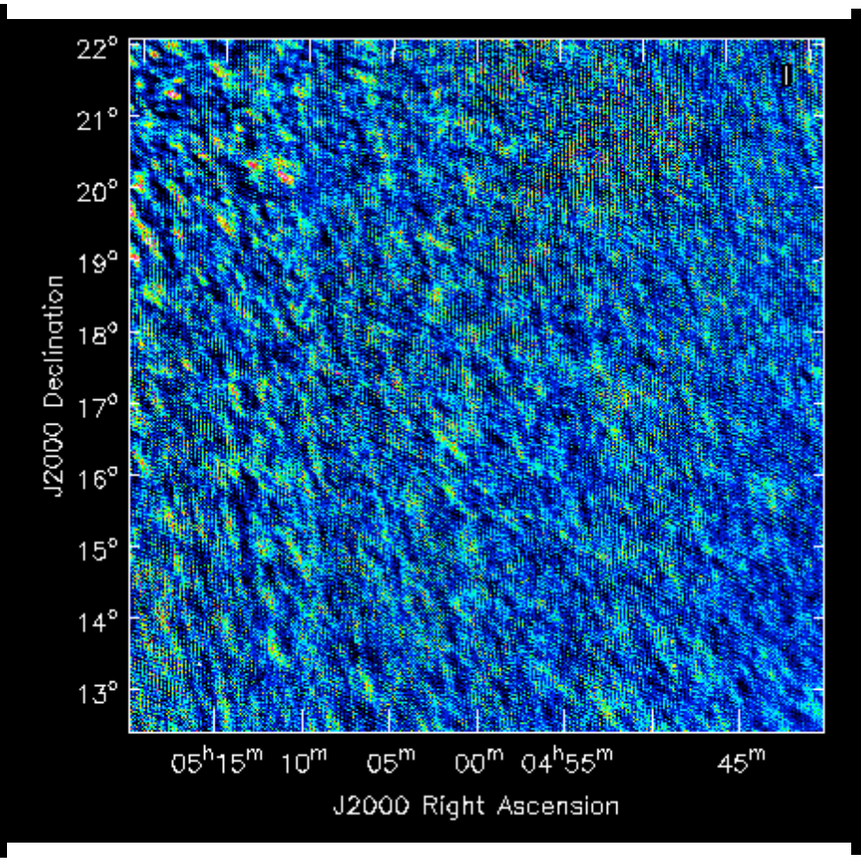
12m
08m
J2000 Right Ascension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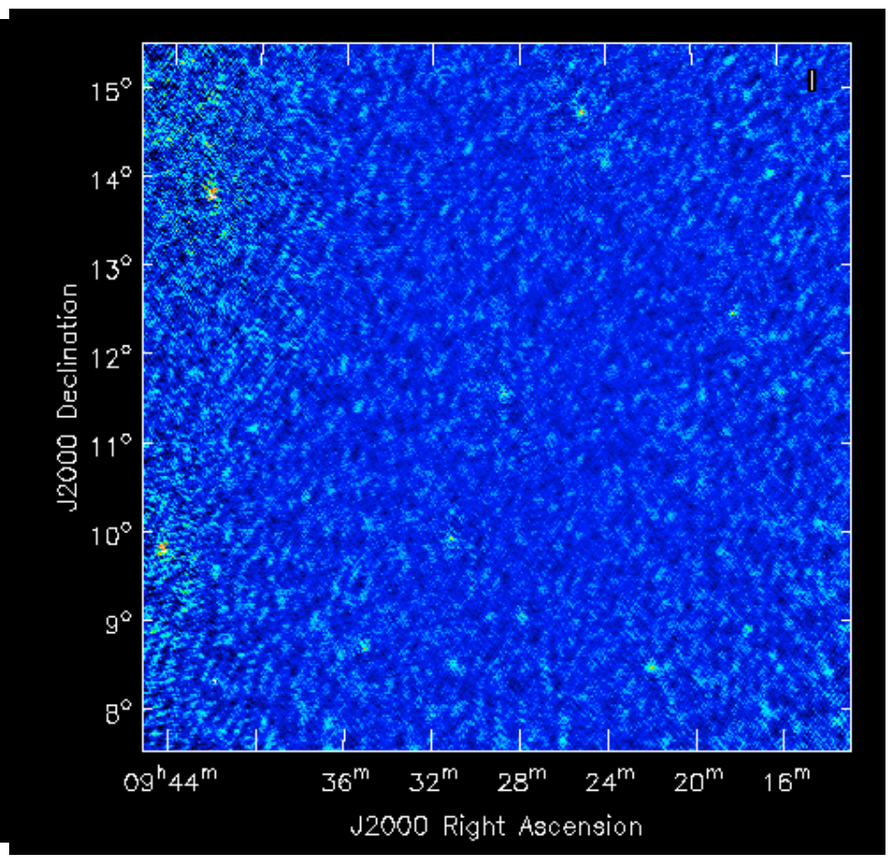
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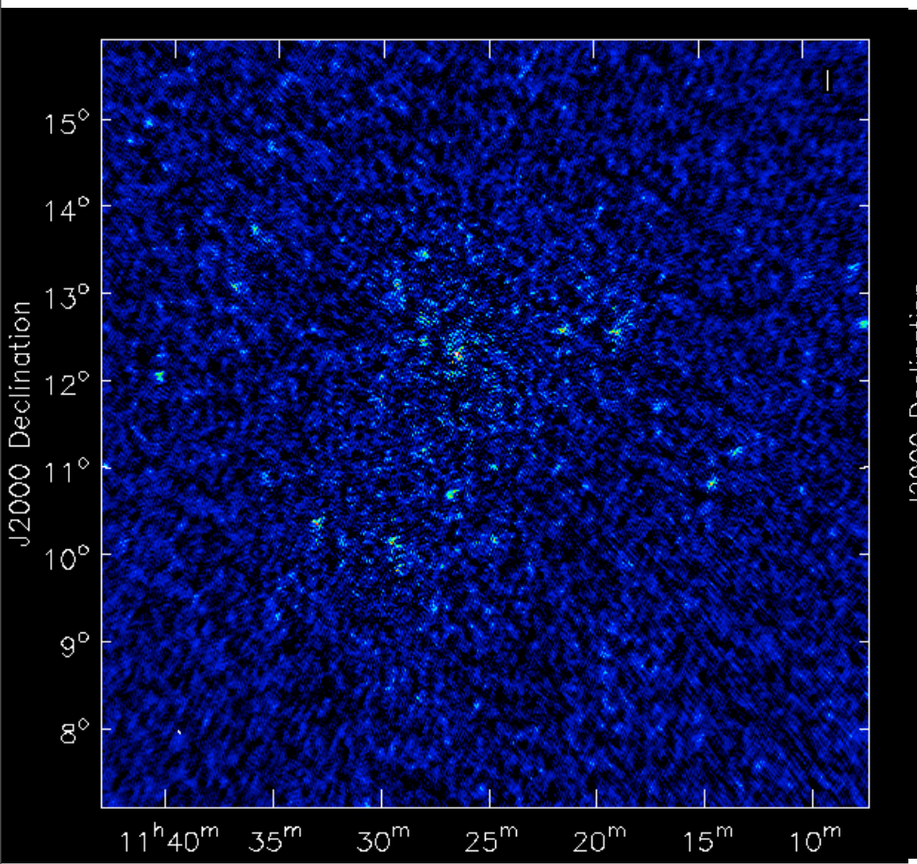
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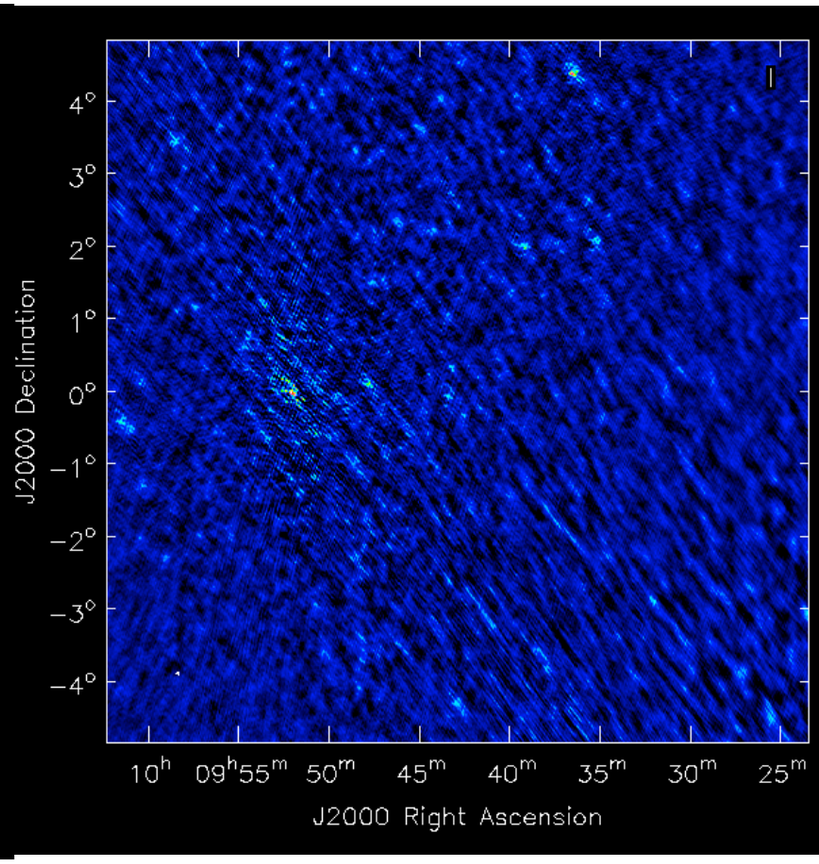
I
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J2000 Declination
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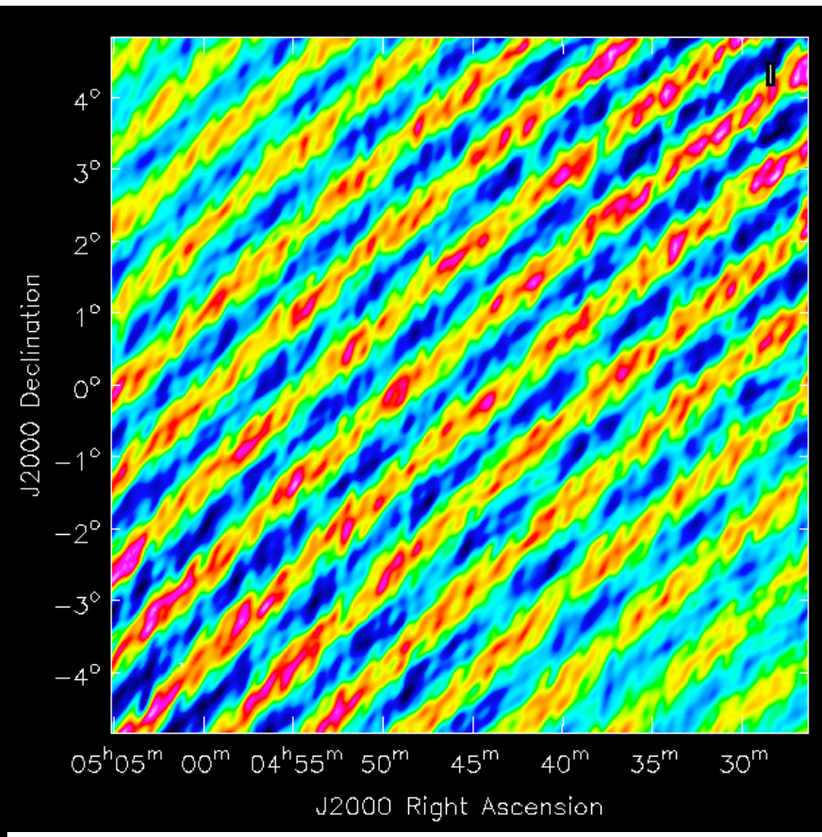
J2000 Right Ascension


II
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J2000 Declination
05h05m
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50m
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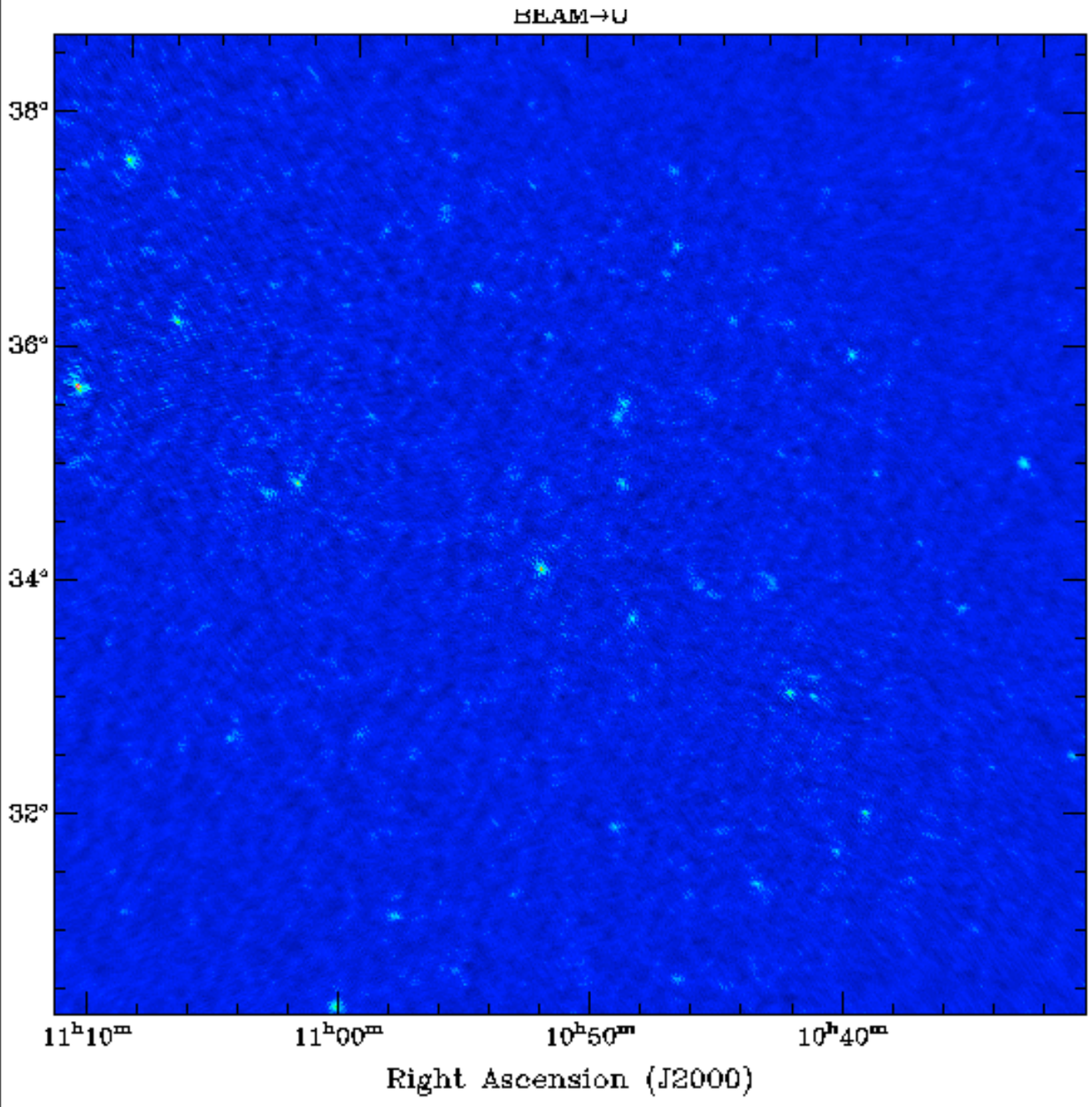
J2000 Right Ascension

Results and plans

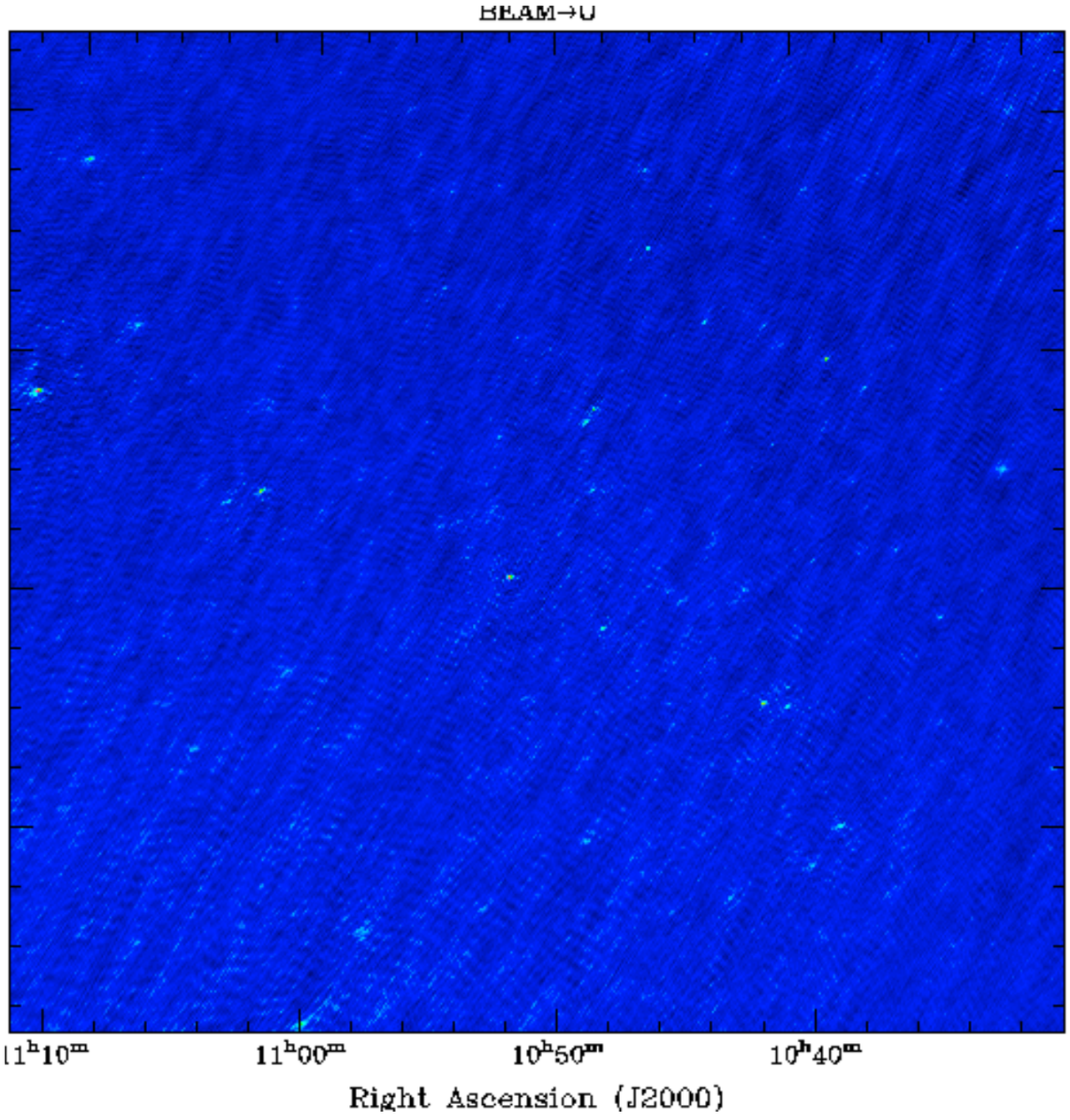
- automatic pipeline run for a sub set of MSSS (March)
- a substantial number will be restarted
- we are learning a lot and tuning the pipeline software on the fly
- calibrator and target pipelines are quite stable, imaging pipeline needs “decision maker” for cleaning parameters and discarding bad timeslices and new parameters for source finder (George et al. during MSSS weeks)
- next steps: remove raw data of cal-tar for blocks processed successfully

MSSS old vs new system

Field observed 30-03-2011 repeated 3-11-2012



rms=155 mJy/beam



rms=90 mJy/beam