

List of topics for Plan meet of 10th August 2011 (follow-up of some pending topics from different areas) :

1. Documentation on Plan website : some new updates are visible -- follow-up is still required from all concerned.
2. FE & OF related :
 - 2.1 Cone-dipole feed : (i) follow-up on repeat beam shape measurements by JNC & NK : at least 2 control antennas + C6 (cone-dipole) + C8 (modified Kildal) to be compared, with more points on freq axis.
(ii) update from Hanumanth Rao on testing of antenna base dump program : problem of constant CW source not showing completely flat level resolved?
 - 2.2 Updated on Common Box design work, if FE group is ready with the same?
 - 2.3 Updates on Eleven feed tests with modified LNAA
 - 2.4 Update on delivery of new lasers : received or not? Any other missing components in the system?
 - 2.5 W04 broadband link : update on full testing and characterisation by OF group.
3. RFI related : (topics not discussed last week due to shortage of time)
 - 3.1 Follow-up action based on work by Ue-Li Pen's group : (i) to see if clear list of candidate RFI sources identified which can be followed up (PAR/SSK) (ii) to see if the GSB based set-up can be used for further studies (NK)
 - 3.2 Follow-up on BSNL matter (due from meeting of 20 July)
 - 3.3 Current status of 150 MHz related RFI problems
4. Operations : (topics not discussed last week due to shortage of time)
 - 4.1 Quick update on Miltec and Advantec items for testing at NCRA
 - 4.2 Update on testing of MCM card with patch card : ready for final PCB? ready for RFI testing?
 - 4.3 Update on purchase of serial port laptops
5. Back-ends :
 - 5.1 Update on packetized correlator testing with new corr_package : now working or not?
 - 5.2 ADC board input levels : to take fresh data with corrected GPU code (pending from 22 June meeting)
 - 5.3 Digital noise source : current status and final documentation etc.
 - 5.4 BE to try with notch filter for rejecting left-over mobile signals in L-band wideband data (pending from May-June meetings) -- any updates on this?

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Minutes of the Plan meeting held on 3 Aug 2011

1. Documentation on Plan website : some new updates are visible -- follow-up is still required from all concerned : item not discussed due to shortage of time.
2. FE & OF related :
 - 2.1 Cone-dipole feed : (i) follow-up on repeat beam shape measurements by JNC :
4 points across 250 to 500 MHz, control antennas (C0, C2 -- always at same frequency) show reasonably constant beamwidth; confusion of C6 vs C8 having cone dipole and modified Kildall (!) ==> results are not for correct antenna; to be repeated by JNC and NK and taken up next week; to include more frequency points in the results.
(ii) update from Hanumanth Rao on testing of antenna base dump program : constant CW source not showing completely flat level; could be problem of loss correction applied by 30to1 code -- to check and report next week (iii) identify possible date for bringing down FE box and replacing with full BW filter -- wait till results from present round of testing are available.

2.2 CSIRO feed : update from 2nd round of testing by JNC ; identify possible next slot for putting both feeds? : reanalysis of 2nd round still pending; meanwhile, it is clear that the cherry picker is having difficulty with the weight of this feed; conclusion : to try and get light-weight version (2 units) done with Godrej (drawings have been vetted by mechanical, Tapde and Godrej). To follow-up after one month (early Sep).

2.3 Update on test range work (GSS) : location finalisation : one end at Lecture Hall terrace (receiving equipment, incl feed), one end at Type III ceiling (transmit equipment); there are some concerns about strength of foundation (on the terrace) which needs to be taken care of. Suggest an update after two weeks (17th Aug).

2.4 Update on study / report on cross-dipole noise radiation scheme -- reminder for short update document from APK. : simulation results -- to change the location of the radiator above the plane and test to see if the simulation is realistic or not; long discussion on where this is going -- to try and converge in a reasonable time scale. Review after 2 weeks (17th Aug)

2.5 W04 broadband link : update on current status of testing and clearing -- RF problems solved; OF group to take over and complete the characterisation till BE input and compare with document. Report next week (10th Aug)

2.6 Update on status of other broadband links, including modifications and tunings -- new attenuators not being put in all antennas; temporary control set-up to be worked out with RBS and team. To check after one month (early Sep).

2.7 Update on purchase of environmental chamber -- inspection done; modified interface plate has been designed in w'shop, likely to go to vendor next week, delivery one-two weeks after that. Follow-up after 3 weeks (24th Aug)

3. RFI related : (topics not discussed due to shortage of time)

3.1 Follow-up action based on work by Ue-Li Pen's group : (i) to see if clear list of candidate RFI sources identified which can be followed up (PAR/SSK) (ii) to see if the GSB based set-up can be used for further studies (NK)

3.2 Follow-up on BSNL matter (due from meeting of 20 July)

3.3 Current status of 150 MHz related RFI problems

4. Operations : (topics not discussed due to shortage of time)

4.1 Quick update on Miltec and Advantec items for testing at NCRA

4.2 Update on testing of MCM card with patch card : ready for final PCB? ready for RFI testing?

4.3 Update on purchase of serial port laptops

5. Back-ends :

5.1 Reminder : note from BAK on proposed scheme for LO in new analog system : still pending, TBC 2 weeks later (17th Aug).

5.2 Update on pocket correlator fringe setting problems : changes made to delay_cal routine in both GPU and FPGA checked and corrected by Sanjay; ramp in phase as function of time in FPGA correlator is still seen; GPU corr also shows small ramp now -- this needs to be checked and understood. Follow-up meeting next week.

5.3 Update on packetized correlator testing with corr_package : new corr_package script still had problem in delay update part; now fixed and ready to try again. Update next week, if possible (10th Aug).

5.4 Update on status of SFP converter circuit design with MTE : PCB layout started by MTE; one week for getting PCBs, one week for wiring ; 1st week of Sep : initial testing to be done at MTE and then brought to GMRT. Follow-up in beginning of Sep.

5.5 Update on delivery of new Rb units : party says they can ship early by end of Aug if we relax the specs to 100 ns, else end of Sep; latest : to stick to 20 ns spec and take delivery by end of Sep; LC opening to be synchronised accordingly. Follow-up in mid-Sep.

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List of topics for Plan meet of 17th August 2011 (follow-up of some pending topics from different areas) :

1. Documentation on Plan website : some new updates are visible -- follow-up is still required from all concerned; servo has been reminded; need to reiterate with mech, civil & electrical also.

2. FE & OF related :

2.1 Cone-dipole feed : (i) follow-up on repeat beam shape measurements by NK & Hanumanth : C6 (cone-dipole) + C8 (modified Kildal feed)

(ii) update from Hanumanth Rao on independent version of the program that can be used at antenna base (iii) initiate discussion between FE and mechanical groups for work on version of feed that offers minimum wind loading (iv) to plan a date for putting up new FE box with modified filter : 250 to 500 MHz, for 2nd round of testing.

2.2. Update on test range work : concerns on strength of foundation on the terrace : any update on this (and other matters related to test range)?

2.3 Update on study / report on cross-dipole noise radiation scheme : any progress since discussion of 3rd Aug?

2.4 W04 broadband link : update on full testing and characterisation by OF group.

3. RFI related :

nothing this week.

4. Operations :

4.1 Quick update on Miltec and Advantec items for testing at NCRA : Update on Advantec report : ready or not? Update on follow-up items : line near 324 and cable leakage; Palm size units (2 nos) enquiry sent to Quanmax and Miltec?

5. Back-ends :

5.1 Reminder : note from BAK on proposed scheme for LO in new analog system : update by 17th Aug was agreed upon.

5.2 Update on packetized correlator design with increased delay range?

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Minutes of the Plan meeting held on 10 Aug 2011

1. Documentation on Plan website : some new updates are visible -- follow-up is still required from all concerned : YG to follow-up with individuals (done so with servo)

2. FE & OF related :

2.1 Cone-dipole feed : (i) follow-up on repeat beam shape measurements by JNC & NK : at least 2 control antennas + C6 (cone-dipole) + C8 (modified Kildal) to be compared, with more points on freq axis : no clear update, may be next meeting.

(ii) update from Hanumanth Rao on testing of antenna base dump program : problem of constant CW source not showing completely flat level resolved? -- now working, with dummy gain table of same values for all antennas! action items : to do test on C06 (and C08) and to develop a version that can do this independently at antenna base.

2.2 Update on Common Box design work from FE group : broadband amplifier is finalised -- sample pieces to be obtained; Bhalerao is making the PCB; tentative time scale for prototype to be ready : one month. Also to add final version of temp monitoring scheme; replacements of old boxes with the upgraded units can be done seamlessly.

2.3 Updates on Eleven feed tests with modified LNA : YG to discuss offline with SSK.

2.4 Update on delivery of new lasers : received or not? Any other missing components in the system? Delivery extended to mid-Sep, vendor appears to be working on it; mux-demux corresponding to DWDM lasers for 10 ants can now be processed; rack OK, space OK, power supply homemade OK -- mass production to be done; some extra cables needed -- to be ordered; transfer of transmitter from old racks to new racks has started. Next update one month later,

mid-Sep.

2.5 W04 broadband link : update on full testing and characterisation by OF group -- 2 dB diff in FE o/ps; OF group to test the chain today with sig gen.

Update after one week, in next week's meeting.

3. RFI related : (topics not discussed last week due to shortage of time)

3.1 Follow-up action based on work by Ue-Li Pen's group : (i) to see if clear list of candidate RFI sources can be identified which can be followed up (PAR/SSK) (ii) to see if the GSB based set-up can be used for further studies (NK) : update from Nissim -- Ue-Li's pipeline, two different modes : antennas pointing to pulsar; antennas pointing to zenith (latter to be finalised as the mode to be used); prelimin list of candidates, only one may have been actually confirmed (pomegranate farm); to improve and provide a final, clean list (with some improvements in the analysis such as error bar, cadence of sources); additional tool of radiating with noise source close to inferred source coordinates -- tested ok for pomegranate farm ; manual switch and s4-s6 changeover OK; automating of switch to be done by BAK and team soon ; next phase development : point feeds to horizon instead of focus (NK to coordinate with Ue-Li) ; to have a reasonably stable, working version of the code (NK to coordinate with Ue-Li). List of top few 3-4 candidates (with GPS coordinates) to be discussed for RFI follow-up in next few days. Final report from Canadian group expected in two weeks. Equipment used can be in safe custody with RFI group. One member of RFI team can be trained to use the analysis software. Next follow-up after 2 weeks, i.e. 24th Aug.

3.2 Follow-up on BSNL matter (due from meeting of 20 July) : changing of one sector in each of two towers pending; antenna coordinates given to them for future reference; generic issue : is current filtering adequate or not? to be taken up for separate discussion.

3.3 Current status of 150 MHz related RFI problems : solar attenuator shown to solve the problem; E06 filter retuning; SOP kind of thing to be tried; to follow-up with police about wireless activities.

4. Operations : (topics not discussed last week due to shortage of time)

4.1 Quick update on Miltec and Advantec items for testing at NCRA : Advantec arrived and tested : report getting ready, couple of problem issues : line near 324 and cable leakage; follow-up required; Miltec : to call them to see if matter can be resolved (YG et al.); palm size unit (2 nos) order to be placed on Quanmax (can send enquiry separately to Miltec also). Follow-up next week, 17 Aug.

4.2 Update on testing of MCM card with patch card : ready for final PCB? ready for RFI testing? : not quite ready for final PCB -- lab tests going on; to test with ABR lab after at antenna; RFI testing done : box gives good shielding; normal cables show radiation; filtered cables show improvement; need to search for filtered ethernet connectors (Amphenol via Miltec); to compare with results from testing of older card. Next update after 2 weeks, 24th Aug.

4.3 Update on purchase of serial port laptops : HP was the only party responded; but hard to follow-up for sending demo pieces; to send formal enquiry; alternative USB to serial port converter device has been found and bought; Raju is looking at it. Update again after 2 weeks, 24th Aug.

5. Back-ends :

5.1 Update on packetized correlator testing with new corr_package : now working or not? Tested with noise source and working OK; now need to increase delay range and test on short baselines -- one to two weeks.

5.2 ADC board input levels : to take fresh data with corrected GPU code (pending from 22 June meeting) : can be taken up now. Can look for results in about two weeks, 24th Aug.

5.3 Digital noise source : current status and final documentation etc. : variable correlator version tested OK. Need to produce appropriate report and documentation for submission/release to Casper and for internal use. Review after 2 weeks (24th Aug).

5.4 BE to try with notch filter for rejecting left-over mobile signals in L-band wideband data (pending from May-June meetings) -- any updates on this? : can be integrated with present round of testing. To report after one month, mid-Sep.

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Minutes of the Plan meeting of 17-Aug-2011
[BAK, GSS, SKG]

List of topics for Plan meet of 17th August 2011
(follow-up of some pending topics from different areas) :

1. Documentation on Plan website : some new updates are visible
-- follow-up is still required from all concerned;
servo has been reminded; need to reiterate with mech, civil & electrical also.

[No progress reported.]

2. FE & OF related :

2.1 Cone-dipole feed :

- (i) follow-up on repeat beam shape measurements by NK & Hanumanth :
C6 (cone-dipole) + C8 (modified Kildal feed)
- (ii) update from Hanumanth Rao on independent version of the program that
can be used at antenna base
- (iii) initiate discussion between FE and mechanical groups for work on version
of feed that offers minimum wind loading
- (iv) to plan a date for putting up new FE box with modified filter : 250 to 500 MHz,
for 2nd round of testing.

[While updates were available from Nissim & Hanumanth, discussion was postponed to a
later date as many members of the FE group including Hanumanth were absent]

- 2.2. Update on test range work : concerns on strength of foundation on the terrace :
any update on this (and other matters related to test range)?

[GSS summarized the current status - CSIRO feed is being set up at
Pune workshop backyard for checking the structural integrity &
motorized movements. It was suggested that the help of the civil engineer
(Abhishek) could be taken to assess suitability of the terrace location
/ plan adequate load distribution interface (if needed).]

- 2.3 Update on study / report on cross-dipole noise radiation scheme :
any progress since discussion of 3rd Aug?

[No progress reported.]

2.4 W04 broadband link :

update on full testing and characterisation by OF group.

[Work is being carried out today.]

3. RFI related :

nothing this week.

[RFI test report of the newly shielded office room was available by
email, which was reviewed. Improvements in shielding are required.]

4. Operations :

4.1 Quick update on Miltec and Advantec items for testing at NCRA :

Update on Advantec report : ready or not?

Update on follow-up items : line near 324 and cable leakage;

Palm size units (2 nos) enquiry sent to Quanmax and Miltec?

[No update available.]

5. Back-ends :

5.1 Reminder : note from BAK on proposed scheme for LO in new analog system : update by 17th Aug was agreed upon.

[Not yet done.]

5.2 Update on packetized correlator design with increased delay range?

[Delay range now extended to the maximum value possible in the current configuration, i.e. without major changes. This covers all baselines except for the farthest 6 antennas (among themselves).]

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Minutes of the Plan meeting held on 24 Aug 2011

1. Documentation on Plan website : some new updates are visible -- follow-up is still required from all concerned; servo has been reminded; need to reiterate with mech, civil & electrical also. No updates last week; no updates this week also !

2. FE & OF related :

2.1 Cone-dipole feed : (i) follow-up on repeat beam shape measurements by NK & Hanumanth : C6 (cone-dipole) + C8 (modified Kildal feed) : beamwidth as a function freq from 300 to 500 MHz obtained for C06, C08 + couple of control antennas -- results look sensible.

(ii) update from Hanumanth Rao on independent version of the program that can be used at antenna base : plots show expected change of width with freq (qualitatively); fitting algorithm getting ready for quantitative comparison -- check one week later. General conclusion : feed appears to be working as expected/desired. (iii) initiate discussion between FE and mechanical groups for work on version of feed that offers minimum wind loading : agreed to the following : thickness of Al sheet \ll 1.6 mm ; hole size and pitch as per existing 235/610 feed; appropriate back-up structure by mech group ; mounting arrangements, for dipole and stool, as per present version ; work requisition given for the job (iv) to plan a date for upgrading FE box with modified filter (250 to 500 MHz), for 2nd round of testing : to put up with in 10 days or so and repeat tests for low freq performance and RFI.

2.2 Update on study / report on cross-dipole noise radiation scheme : any progress since discussion of 3rd Aug? : no updates; TDB one-two weeks later.

2.3 W04 broadband link : update on full testing and characterisation by OF group -- this should be ready now ? : OF group still working on it to check dynamic range etc; switchable attn with temporary control being done today; results by next week, with CW and L-band 400 MHz signals.

2.4 Update on Environmental Chamber purchase (also, is 2nd option also being pursued?) : end plates remaining to be finished -- will go to vendor by end of next week; 2 nos will come (0 vs 10 deg min); no other options being explored; to check 2 weeks from now.

3. RFI related :

3.1 Follow-up the case of identifying target sources from Ue-Li Pen's survey (e.g. Pomegranate farm) : RFI team has gone and done measurements / checks for a list of sources given by Ue-Li Pen's group : some confusion about green, cyan and red symbols : real objects found against many green points (mostly 11 kV & 33 kV line problems); open areas found against cyan points -- more clarification needed from Ue-Li Pen; meanwhile, Pomegranate farm (original candidate #1) to be followed up by RFI team.

3.2 RFI from DG synchro panel : to check earlier reports from RFI team.

4. Operations :

4.1 Quick update on Miltec and Advantec items for testing at NCRA : Update on Advantec report : ready or not? Update on follow-up items : line near 324 and cable leakage; Palm size units (2 nos) enquiry sent to Quanmax and Miltec? No updates last week. : Advantec draft report circulated; Miltec person coming to Pune this week-end with improved PC; Palm size units quote rcvd and ordering with Quanmax ONLY.

5. Back-ends : (not discussed on 24th Aug)

5.1 Reminder : note from BAK on proposed scheme for LO in new analog system : update by 17th Aug was agreed upon. No updates last week.

5.2 Update on debugging of pending issues in Pocket Correlator.

5.3 Update on test results from Packetized Correlator design

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