Minutes of CDR at ISAC, 7th August, 2008

1. 5 satellites in 20 years are too low. ISRO makes 3 satellites per year. Increase this figure to atleast 1 in 2 years. (SE)
2. Move 100% success of the mission when TEC is measured over IITB. Coordination between institutes countrywide shouldn't be ur job. (SE)
3. Name the stages as Modes of operation. That's the lingo used in ISRO. (SE)
4. We might get a 21^0 equatorial orbit in Feb 2009. But as of now, stick to 10:30 polar sun-synchronous orbit. Make the mission independent of the orbit to have flexibility in launch. (SE)
5. For TEC Payload, contact SPL – VSSC, Dr Sudha Ravindran. Ask about TEC accuracy needed, etc. (Pay)
6. Check up the method used to remove the angle ambiguity with some expert. (Pay)
7. How accurately can we determine the TEC once we get the readings on ground. Do we need to model clouds? timesteps? (Pay)
8. Measurement of polarization error cant be 0.03deg. It will be about 0.1deg at its best. (Pay)
9. If we want to do tomography, what ground stations do we need? Very important and should be done asap. (Pay)
10. Data validation can be done by comparing our data with other satellite's data in the same orbit and doing the same job. (Pay)
11. TEC models over India donot exist. (Pay)
12. Faraday rotation simplest hence best. That's its only advantage. (Pay)
13. Detumbling rate of 0.1rad/sec OK. Worst case is 6deg/sec (Con)
14. Use of 2 axis sun-sensors was suggested but not approved by everyone. (Con)
15. U can get accurate attitude from magnetometer only, except at the poles. (Con)
16. Thermal drift of calibration of magnetometer needed. (Con)
17. Meet Subha Laxmi Madam. (Con)
18. Error budget must be made which adds all errors from sensors, gyros. (Con)
19. Meet Natrajan Sir (Con)
20. Keep Kalman filters on all the time, since it takes a lot of time to initialize. Manipulate gains depending on the mode. (Con)

21. Don’t need to meet static stability. (Con)
22. Albedo model not required. (Con)
23. Next time, visit RISAT also. Subha Laxmi Madam. (SE)
24. how many DC-DC? also where is unregulated coming from? (Pow)
25. High currents for short time must be ensured. (Pow)
26. Solar panel expert discussions. (Pow)
27. For polar sun-synchronous orbit, time quoted is on the descending node. Hence in the figure, C’ is correct. (Pow)
28. Battery should be able to sustain coming to 3axis stabilization. (Pow)
29. Document on Component and their Heritage. (SE)
30. 8-10krad will be sufficient. (Pow, OBC)
31. Meet Prof Madhusudhan (Pow)
32. Try to use linear regulators for 3.3V. (Pow)
33. Processing is done on the voltage signals for HM. (OBC)
34. Ruggedize the hard interrupt against spurious alarms. (OBC)
35. Running timer and aborting codes is OK. (OBC)
36. Proper methodology of testing/debugging softwares has to be there. (OBC)
37. 3 banks of NVRAM may not be required. (OBC)
38. Implement EDAC for NVRAM. (OBC)
39. HM is for next mission. We should not be totally blind at times of mistakes/failures. We can improve them in the next mission. (OBC)
40. Radius of monopoles not important. Make it as thin as possible. Effect of radius not much. (Comm)
41. Don’t worry about position of monopoles, it looks correct. (Comm)
42. 1^0 tracking not required. (Comm)
43. Drive profiles of rotors must evolve. (Comm)
44. VSWR can be matched, match it as best as possible. (Comm)
45. freq choice depends on: payload/sub-system harmonics should not fall on this band, band allotted. (Comm)
46. License much more time than 1 month. File it asap. (SE)
47. 1 experimental work for Comm should be done asap. (Comm)

48. Operational temperature range should be given by SE to thermals. (SE)
49. Meet Mutuvelan, Prabhakar. (Str)
50. heating by thermal (Str)
51. proper/correct boundary conditions (Str)
52. Deployment mechanism have to be PERFECT. no redundancy. (Str)
53. After deployment from LV, timer and OBC has to deploy the monopoles. (Str)
54. Don't worry about bringing in other univs, they wont come in time. (SE)

Last Day (during photo sessions)

55. Don't do bad in acads. (Team)
56. September 08 end for PDR is good target. (SE)

MoU meeting

57. MoU draft will me made by Raghava Murthy. We will have to fill it up after he sends it to us. We will fill it in and give it back.
58. 1 person from ISAC and 1 from Head Quarters will sign in the MoU from ISRO's side. From IITB side, we have to decide accordingly.
59. The actually money we want from ISRO must be around 30 lacks. He was satisfied with our 'TEC only Budget.xls' as many of the costs come down drastically once they supply us with the components.

Profs to meet Sub-System wise

Payload- SAID: Dr Sreekumar (3702), Dr Mrs Seetha (3729)

Comm- Mahadevan

Con- Natrajan (2629)

OBC- Mrs Vanita (3252, 3243)

Power- Venugopal (2454, 3523)

Str- Prabhakar and Muthuvelan (2458)

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