Feb 4, 2009

Respon.	Item	Date	Notes
	1. Project		
Chrzanowski	• Designer Priorities		Updated 2/11-Begin DC Power design in March. Paul working on bus designs. Will be looking on new design concepts for the centerstack bundle. WIll be bringing in a new designer to support the Electrical Work. Rich Upcavage to be free at the end of the month to start on the OH work.
Egebo	• Progress on the Primivera entry of the plan	Feb 28, 2009	Updated 2/11-In Progress
	2. Design Requirements		
Neumeyer	• General Requirements Document - DRAFT (Signed off by?)	Feb 28, 2009	Updated 2/11-Waiting for comments from menard and Ono. Need PFC heat loads which will come from scheduled meeting Raj. Still on track.
Perry	• General arrangement drawings for test cell	Ongoing	Erik is the space czar any changes should be run through him.
Neumeyer	• A more limited OH and PF operating envelope needs to be developed for the design basis assumption	GRD updte: 2/28 Menard equilibria: TBD	Updated 2/11-Developing a graded approach to design first for worst case and then relax requirements if that doesn't work. Will be added to the GRD. Menard to provide more information on the "expected envelop".
Neumeyer	• A coil protection system needs to be incorporated into the project plans to ensure that the envelope is suitably constrained.	Plan by 2/28	Not included in the current plans, but will be estimated into the CDR plan. RIS replacement? Initiated Neumeyer to come up with a plan Action:Neumeyer
	3. TF Bundle		
Hatcher	• Disruption loads have not yet been factored in. The application of a dynamic load factor less than 1.0 seems appropriate due to the impulse nature of the disruption loading.	Mar 15, 2009	Ron using opera to develop model

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Woolley	• Preliminary results suggest that the turn-turn insulation shear in the TF bundle is within the allowable stress limit even without the implementation of a torque collar below the TF joint, above the OH coil. • Further analysis is needed to confirm this finding • *Additional analysis should be performed to determine if the same is true without any torsional restraint at the ends of the TF bundle, i.e. if the spline/umbrella load path is eliminated*	Feb 18, 2009	Memo documenting results in a couple weeks.
	4. TF Bundle Joint Connection		
Woolley	• Whether bolting below the flex is feasible or not depends on what the allowable current density is and the area lost to bolting? Analysis should be performed to assess this as soon as possible	**Feb 11, 2009**	Memo documenting results issued on 2/11
Woolley	• Are bolts below the flex accessible?	TBD	
	• What design and fabrication method is appropriate for the flex connector, providing the necessary IP and OOP flexibility, while being able to withstand the forces without fatigue failure?		Requires concept to determine
	• *braid connection*		
	• *cable connection*		
	• *water-jet connection*		
Woolley	• What joint/flag flexibility is appropriate, in-plane (IP)?	**Feb 11, 2009**	
Woolley	• What joint/flag flexibility is appropriate, out-of-plane (OOP)?	**Feb 11, 2009**	
Woolley	• How does the OOP of flexibility relate to the gap between the flex connector and the OOP support structure?	**Feb 11, 2009**	

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woolley	• Options for the female side of the bolting need to be assessed, including use of inserts versus the use of bolting plates embedded in the copper		
woolley	• *It would be desirable for the bolts to provide both contact pressure and a reaction against shear loading due to the vertical force on the flex*		
Woolley	• Document OOP and IP loading	Feb 18, 2009	
	5. Umbrella Structure & Outer TF Leg		
Heitzenroeder	• Need to develop a plan to deal with the items below	**Feb 11, 2009**	
Heitzenroeder	• Enhance the umbrella structure to reduce stresses due to twist and bulge by adding welded or bolted material in configuration TBD.		Updated 2/11-Sri is finishing up a model of the umbrella with mechanical enhancements.
Heitzenroeder	• Enhance the umbrella structure to reduce loading on the cast aluminum clamps		
Heitzenroeder	• Enhance the existing turnbuckle system to improve its strength and stiffness but without relocation or modification which would exceed the present physical envelope		
Heitzenroeder	• Preliminary results suggest that the umbrella lids, if made of the appropriate thickness, could provide their torque restraint function without the implementation of a spline gear for thermal expansion. This needs to be confirmed by further analysis including buckling of the center column. If deployed symmetrically on top and bottom, would allow the thermal expansion to be equalized about the midplane, which is advantageous		Updated 2/11-Heitzenroeder has developed a concept that incorporates the thin umbrella lid. When B. Paul is available (next week) he will layout the concept.
	6. Vacuum Vessel Structure		

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Fan	• Consider measurements on NSTX using accelerometers may shed light on what what factor is appropriate.	TBD	HM to come up with locations for accelerometers. Titus analysis also indicating there may be some excitation. Only disruption needs to be considered, factor should be less than one (1). Sensors should only need to be on passive and divertor plates. Rise time and flat top are 1 and 5 second respectively which is much less than 12 hz resonant frequency. Low priority at this time.
Perry	• Look at inside of Vessel and determine where reinforcement can be added.	**Feb 11, 2009**	Midplane in RF region is cluttered Erik to provide link to for photos of internal hardware
Heitzenroeder	• The most appropriate way forward appears to include the following actions which require further study, development, and analysis:		Need to run model with the RF ports incorporated to see if the that section of the vessel is strong enough without reinforcement
Heitzenroeder	• Enhance the VV midplane strength by welding a band of material around the inner surface of the midplane, where interferences are relatively minor.	Progress report next week 2/18	Updated 2/11- HM is modifying the NB port model by removing the midsection and replacing with the RF port openings. Sri working on a 360 degree model. Han will help asm the 360 model. Han will look at removing turnbuckles and replacing with a cross bracing and 2 “hoop” reinforcement.
	7. Cooling Water		
Dudek	• Need to assign engineer to perform this work	Feb 28, 2009	
	8. New 2/11		
Chrzanowski	• Sent out request for interest for the copper TF bundle conductor both in and extruded and in a machined configuration	Feb 11, 2009	Jim received a response from a vendor that the conductor can be made with a side groove. Can’t be made with and extruded hole. Will request a price to fabricate.
Neumeyer	How do we downselect the concepts to just a few.		Plan on meeting end of the month to decide