

Meeting Notes

	Item	Respon.	Due Date	Status Date	Status / Notes
▼ 0. New					
	New May 6th				
	<ul style="list-style-type: none"> Titus next week to return to PPPL to work on developing a plan to bring all of the models together. 			May 6, 2009	
	<ul style="list-style-type: none"> HAN needs to run confirmation of hoop tension by adding in the vertical field from Hatcher once he gets the coil dimensions from Bruce Paul (Jim C. to take action) 	Chrzanowski		May 6, 2009	Han to run stress pass to compare with Titus's results in same area
	<ul style="list-style-type: none"> SRI reran the VV stresses using the gusset. Shows little change in stresses. Will try to rerun. 			May 6, 2009	
	<ul style="list-style-type: none"> SRI ran the OH Hoop stress model. Stresses are high at more than 160 Mpa. 			May 6, 2009	
	<ul style="list-style-type: none"> Titus reran the TF Bundle shear stress due to thermal with the top trimmed to see if stresses improved. They improved but not enough. 			May 6, 2009	Need to rerun with the conductor trimmed more to minimize stresses
	<ul style="list-style-type: none"> Meighan working on Keystone tests of the OH conductor to verify as extruded shape 			May 6, 2009	
	<ul style="list-style-type: none"> SOFE paper (Neumeyer) being submitted 			May 6, 2009	
▼ 1. Project					
	<ul style="list-style-type: none"> Statement of Work for power systems PSCAD simulation tool outsourcing 	Neumeyer		Apr 29, 2009	
▼ 2. Design Requirements					
	<ul style="list-style-type: none"> A more limited OH and PF operating envelope needs to be developed for the design basis assumption 	Neumeyer	Apr 15, 2009	May 6, 2009	Made a lot of progress need one more meeting.
	<ul style="list-style-type: none"> A coil protection system needs to be incorporated into the project plans to ensure that the envelope is suitably constrained. 	Neumeyer	Plan by 5/1	Apr 8, 2009	In progress. 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					
	<ul style="list-style-type: none"> OH Coil designer is ready to proceed with concept. 			Apr 29, 2009	
	<ul style="list-style-type: none"> HAN has developed a model of the TF Turn with cooling 			Apr 29, 2009	Need to have Neumeyer verify the currents that HAN is using in the model
	<ul style="list-style-type: none"> JIM- Conductor drawing has been changed to make it easier to mfr. Shorten pointed section to simplify extrusion. Will be sent out for quotes. 	Chrzanowski	May 5, 2009	Apr 15, 2009	Lavada can Manufacture the conductor. Cost is \$5/#. Still need to machine the final dimensions. Also have another vendor that can machine conductor.
	<ul style="list-style-type: none"> OH Coil Cooling/Conductor needs to be optimized 	Dudek	May 15, 2009	Mar 18, 2009	Can cooling time be reduced from 20 minutes to 15 minutes or 10 minutes? (Brooks)
	<ul style="list-style-type: none"> 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. 	Hatcher	Apr 2, 2009	May 6, 2009	Rerunning with new data, about half way through runs. Look pretty good. In the process of running the benchmarks against actual NSTX data.
	<ul style="list-style-type: none"> Titus to provide input data (R, z) along flex joints to Ron Hatcher for Opera runs 	Chrzanowski	May 1, 2009	Apr 23, 2009	Jim to get data from Bruce Paul.
▼ 4. TF Bundle Joint Connection					
	<ul style="list-style-type: none"> Pete working on a flexible version of the connection and look at wedge pressure in the hub. 	Titus		Apr 29, 2009	First iteration of analysis submitted in email on 4/20/09. Need to check HAN's model to see if the torque becomes an issue in the bundle with a slip plane in the insulation at the high stress region.
	<ul style="list-style-type: none"> Develop concept #4 including fastener details and design of outer loop with adequate cross section so that it can be analyzed using ANSYS 	Heitzenroeder		Apr 23, 2009	Pete to work out a plan for the global and detailed models and how they relate to each other. Assignments for the various pieces.
	<ul style="list-style-type: none"> Archetype (bolted joint consultant) will be contacted to review joint design 	Hetzenroeder	May 15, 2009	Apr 8, 2009	Need to complete joint detail
	<ul style="list-style-type: none"> Document OOP and IP loading 	Woolley	Feb 18, 2009		
▼ 5. Umbrella & Outer TF Leg					
	<ul style="list-style-type: none"> The first concept of the NSTX TF Outer Leg has no insulating breaks. Do we need to insulate?? 			Apr 29, 2009	Menard can calculate the impact once he gets the resistance of the structure
	<ul style="list-style-type: none"> Need to develop method to seal existing leaks in Outer TF Leg cooling passages 	Chrzanowski		May 6, 2009	SOW written, needs approval and JNCP written. Waiting for quote to place order to test samples
	<ul style="list-style-type: none"> Use borescope to view the inside of the leak in the TF Outer leg cooling passage (during the outage). 	Chrzanowski	TBD	Apr 8, 2009	Plan on doing this during an outage.
	<ul style="list-style-type: none"> Han presented the latest outer TF leg support analysis. Looks like cross bracing is only needed in four locations. 	Zhang	Mar 25, 2009	May 6, 2009	Mangra looking at space needs and has some ideas on how to minimize space impact of the structural design. (This analysis still needs to be checked) The latest analysis shows that with some simple "ring" reinforcement at the TB level and diagonal bracing at four bays we reduce the outer TF connection reactions to manageable levels. Han, just need loads in ring and cross brace members. Dudek provided cross section information of stainless steel members for next step analysis
▼ 6. VV Structure					
	<ul style="list-style-type: none"> New NBI duct: Winkleman needs to get model to CSU analysts (Sri) to incorporate VV modifications into the plan 	Priniski		May 6, 2009	SRI reran the VV stresses using the gusset. Shows little change in stresses. Will try to rerun.
	<ul style="list-style-type: none"> HM Has all of the structure modeled and ran a dynamic analysis with the old pulse data. Initial results indicate a damping of the forces. 			Apr 8, 2009	Working with Han on the one turn model. Making good progress on the analysis list. A 2 msec disruption yields factor of less than 0.5, a 5 msec disruption is about 1.0.
	<ul style="list-style-type: none"> Enhance the VV midplane strength by welding a band of material around the inner surface of the midplane, where interferences are relatively minor. 	Heitzenroeder	Ongoing	Mar 25, 2009	Need to look at the strength of the vv with ports (Global Model) Need to rerun with 360 degree model to refine the analysis.
▼ 8. Completed					
	<ul style="list-style-type: none"> Chrzanowski to ramp up designers to meet the project resource requirements 	Chrzanowski	Completed	May 6, 2009	Full complement of designers on board
	Martinez and Turek is interested in TF Bundle conductor fabrication (E-beam welding and Machining)	TBD		Apr 1, 2009	
	Pricing of the TF Bundle conductors	Chrzanowski	3/15/09 12:00 A	Apr 8, 2009	Cancelled contract see new path forward above
	EWI interested in doing a friction stir weld for the TF bundle. Have 3 FSW machines. Would be able to perform tests on the weld. Plan on sending out sample drawing with SOW to review legal boilerplate.	Hetzenroeder		Apr 23, 2009	RFQ is out to EWI.
	Get TF joint #4 ANSYS analysis underway	Heitzenroeder		Apr 6, 2009	Titus memo 4/7.
	Need analysis of current diffusion, temperature rise on bundle (Titus)	Titus	TBD (waiting for BOA)	Apr 1, 2009	Issued memo for in plane loads concludes heating, and stresses are not of concern. Needs to be checked.