

## MINUTES OF MEETING

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Subject: LBT672 Wind Protection Discusson 2

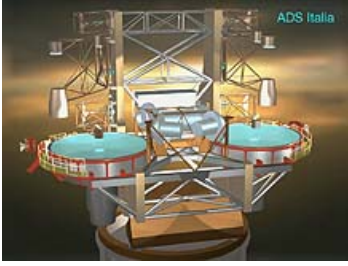
Date : 7-Feb-2007

By : Joar Brynnel

Participants	Org.	Participants	Org.	Additional distribution
Roberto Biasi	MG	Joar Brynnel	LBT	
Piero Salinari	OAA	John Hill	LBT	
Daniele Gallieni	ADS	Guido Brusa	LBT	
Roberto Ragazzoni	OAA			

**Type of action** : **A** = Action **D** = Decision **R** = Recommendation **S** = Statement **Q** = Question

Type	Responsible	Text	Comments
	Brynnel	Review of old action items	
S	Biasi	In response to AI #8, Roberto stated that shell removal must always be done using the DSP control system, so TSS configuration has no impact on shell handling procedures (AI #8 closed)	
S	Salinari	An algorithm for minimizing shell retention force is required, this algorithm shall compensate for dust particle contamination. As an example, if there is a 40um particle in the gap, we could apply 2G holding force, a 50um particle would only allow for 1.5G force	
S	Salinari	We need measurement of wind speed in dome, for SX and DX M2 locations and also external wind speed	
S	Hill	John estimated median wind speed at the LBT to 5 m/s, estimated peak wind speed is 100 mph, estimated dome attenuation factor is 2.	
S	Salinari	It is possible to allow for 22 m/s operational wind speed, but more analysis is required	
S	Biasi	Power dissipation for TSS is approximately 200W per side	
S	Biasi	Right now, the DSP boards have been modified for TSS, Power backplanes are also modified. Integration has been stopped pending input from this meeting. Need to know maximum required TSS force. Actual applied TSS force may be determined later, however can not exceed the maximum force	



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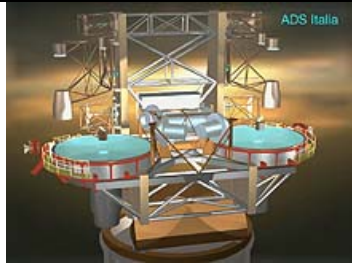
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S/D	Salinari	Maximal TSS force can be assumed to 0.5 N	
S	Biasi	TSS power dissipation is 109W @ 0.22N and 400W @ 0.5N	
Q	Biasi	Where shall power drivers be mounted?	
S/D	Salinari	Recommend to mount drivers in the hub	
S	Gallieni	It is feasible to mount drivers in hub	
S	Biasi	We need decision on UPS strategy on the 3-phase 208 VAC supply	
S	Brynnel	It is not reasonable to operate the unit in closed loop from 3-phase 208 VAC UPS. If we have a power failure the glycol cooling will also fail and the unit would overheat in short time.	
S	Biasi	The unit can operate max 10 minutes without glycol circulation	
D	All	3-phase 208 VAC UPS need short hold time. 10-15 minutes is sufficient. UPS for TSS shall have long hold time. UPS TSS may be 3-phase 208 VAC or single phase 120 VAC (TBD)	
A	All	<p>Action Items from Piero's document "Wind-Risk Mitigation Plan:</p> <p>AI #9 (LBTO): Investigate emergency closure procedure</p> <p>AI #10 (Biasi + Arcetri): Provide real time wind pressure data to TCS</p> <p>AI #11 (Brusa): Define scheme for TSS and Closed loop operation vs. Dome status and Power supply status</p> <p>AI #12 (Biasi): Define requirements for UPS supply to both AO units</p> <p>AI #13 (Salinari): Issue official Change Request to LBTPO for implementation of AO-UPS (after closure of AI #12)</p> <p>AI #14 (Gallieni): Design, construct and implement retention ring</p>	
	All	<i>Next meeting is tentatively scheduled for March 14</i>	



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End of minutes

### List of Action Items

AI#	Resp.	Text	Status	Deadline
AI #1	Brynnel	Distribute relevant document for LBT specified wind speed	Closed	Jan 31 2007
AI #2	Brynnel	Investigate clearance between LBT672 and LBC	Open	<del>Jan 31 2007</del> Mar 15 2007
AI #3	Group	Calculation of stress induced by dust and debris trapped between shell and reference body	Open	?
AI #4	Group	Risk analysis for telescope system failures	Open	?
AI #5	Gallieni	Preliminary design of retention ring	Closed	Jan 31 2007
AI #6	Brynnel	Study feasibility of UPS for LBT672 electronics	Closed	Jan 31 2007
AI #7	Brynnel	Analysis of single point failures that would prohibit closing observing doors	Open	June 2007
AI #8	Biasi	Make statement on impact on operational and handling procedures for TSS vs. inverted TSS	Closed	Jan 31 2007
AI #9	LBTO	Investigate emergency closure procedure	Open	Mar 15 2007
AI #10	Biasi Arcetri	Provide real time wind pressure data to TCS	Open	Apr 1 2007
AI #11	Brusa	Define scheme for TSS vs. Closed loop operation vs. Dome status and Power supply status	Open	Mar 15 2007
AI #12	Biasi	Define requirements for UPS supply to both AO units	Open	Mar 15 2007
AI #13	Salinari	Issue official Change Request to LBTPPO for implementation of AO-UPS (see also AI #12)	Open	Mar 15 2007
AI #14	Gallieni	Design, construct and implement retention ring	Open	Mar 15 2007