

MINUTES OF MEETING

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Subject: LBT672 Wind Protection Discusson 2

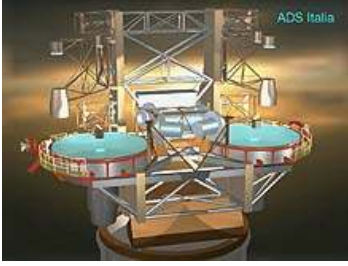
Date : 7-Feb-2007 (*Corrected on 26-Feb*)

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 | | | |
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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. <i>Note added by John Hill on 26-Feb: The 100 mph is the peak estimated wind speed for 1-year. It is part of a power-law distribution, so the decadal peak wind speed will be significantly higher.</i> | |
| 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 | |



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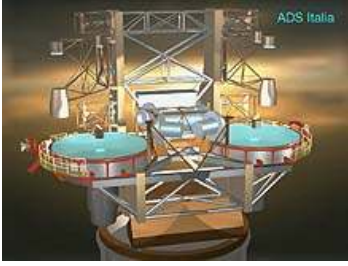
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| S | Biasi | Right now, the DSP boards have been modified for TSS, Power backplanes are also modified. Integration has been stopped pending input from this meeting. Need to know maximum required TSS force. Actual applied TSS force may be determined later, however can not exceed the maximum force | |
| 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) | |



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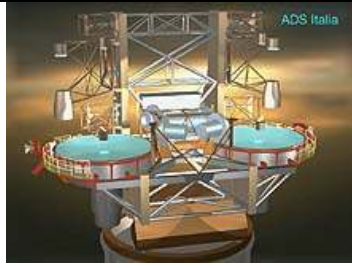
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| | | | |
|---|-----|--|--|
| A | All | <p>Action Items from Piero's document "Wind-Risk Mitigation Plan:</p> <p>AI #9 (LBTO): Investigate emergency closure procedure</p> <p>AI #10 (Biasi + Arcetri): Provide real time wind pressure data to TCS</p> <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 | <p><i>Next meeting is tentatively scheduled for March 14</i></p> | |

End of minutes



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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 | Jan 31 2007 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 emergeny 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 LBTPO 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 |
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