CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / TELECONFERENZA *MINUTES OF MEETING / TELECONFERENCE*	N° RICSYS-MI-CGS-024 FOGLIO *SHEET* 1 DI *OF* 1 ANNEX —

DATA - *DATE*	LOCALITA - *LOCATION*	COMMESSA - *JOB*	RIF - *REF*
10-10-07	INTA - MADRID	RICHSYS	01913A

IMPIANTO *PROJECT*	DESCRIZIONE *DESCRIPTION*: RICH VIBRATION TEST FACILITY READINESS	CLIENTE - *CUSTOMER*
	LOCALITA' *LOCATION*: INTA (MADRID)	ORDINE - CONTRACT
SCOPO RIUNIONE *PURPOSE OF MEETING*	RICH VIBRATION TEST FACILITY READINESS	REDATTO - *WRITTEN BY*: M. Olivier
PRESENTI - *ATTENDED BY*	NOMI - *NAMES*: M. Olivier (CGS) Adolfo Hurtado (INTA)	LISTA DI DISTRIBUZIONE *DISTRIBUTION LIST*: L. CREMONESI (CGS) A. BURSI (CGS) G. Laurenti (INFN) J. Berdugo (CIEMAT)

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
1.	INTA facility shows to CGS test conductor the certificates of proper calibration and maintenance status for the equipment used on the test: -Shake, esxpander and sliding lable system LDS- V984 ls hd , PN:876401 last maintenance 08/10/07, next maintenance **07/10/08** -Controller DATAPHISICS D64C , SYST:70135-1,SN:04002135 and SYST.70135-2 SN:04002136 last maintenance 13/07/07, next maintenance **12/07/08** -Accelerometers and amplifiers calibration data are displayed. **All of them are in valid calibration status** (INTA Internal calibration dates for each accelerometer and amplifier shall be annexed to the test report) All the equipment is therefore in valid calibration period and the shaker is under regular maintenance after the special maintenance activities completed on 08/10/2007.	
2.	The facility is then considered ready for the RICH vibration test performance.	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / TELECONFERENZA *MINUTES OF MEETING / TELECONFERENCE*	N°RICSYS-MI-CGS-025 FOGLIO *SHEET* 1 DI *OF* 1 ANNEX —

DATA – *DATE*	LOCALITA' – *LOCATION*	COMMESSA – *JOB*	RIF - *REF.*
09-10-07	INTA - MADRID	RICHSYS	01913A

IMPIANTO *PROJECT*	DESCRIZIONE *DESCRIPTION*: RICH DETECTOR READINESS FOR VIBRATION TEST	CLIENTE - *CUSTOMER*
	LOCALITA' *LOCATION*: INTA (MADRID)	ORDINE - CONTRACT
SCOPO RIUNIONE *PURPOSE OF MEETING*	RICH DETECTOR READINESS FOR VIBRATION TEST	REDATTO – *WRITTEN BY*: M. Olivier
		LISTA DI DISTRIBUZIONE *DISTRIBUTION LIST*: E. Russo (ASI) R. Carpentiero (ASI) L. CREMONESI (CGS) A. BURSI (CGS)

PRESENTI - *ATTENDED BY*	NOMI - *NAMES*	
	M. Olivier (CGS)	Olivier 10/10/07
	G. Laurenti (INFN)	
	J. Berdugo (CIEMAT)	
	C. Diaz (Ciemat)	

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
1.	**RICH functional test before vibration:** A functional test has been perfomed by the RICH team right before the installation of the RICH on shaker with succesfull results: • HV lines continuity: 160 lines checked. 160 lines OK • Read-out channels: 89 failures/9808 read (0,9%)	
2.	**RICH installation on shaker:** The RICH detector has been completely assembled by the RICH team and is now ready for vibration test. Details of the used torques and procedure is provided in RICHSYS-RP-CGS-021 ISSUE 1 10/10/2007	
3.	The detector is therefore ready to be used for the vibration test	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA

RELAZIONE DI RIUNIONE / VISITA
MINUTES OF MEETING / VISIT

N° RICSYS-MI-CGS-026

FOGLIO *SHEET* 1 DI *OF* 4 ANNEX

DATA – *DATE*	LOCALITA – *LOCATION*	COMMESSA – *JOB*	RIF – *REF.*
07/11/2007	CERN	RICH-SYS	

IMPIANTO *PROJECT*

DESCRIZIONE *DESCRIPTION*: RICH Bottom MLI FM Integration
ECAL bracket, upper blanket, template fit-check

LOCALITA' *LOCATION*:

CLIENTE - *CUSTOMER*:

ORDINE - *CONTRACT*:

SCOPO RIUNIONE *PURPOSE OF MEETING*

- RICH Bottom MLI FM Integration
- Design integration
- Storage
- ECAL bracket upper blanket template fit check

REDATTO – *WRITTEN BY*: M. Giacomazzo

LISTA DI DISTRIBUZIONE *DISTRIBUTION LIST*:
C. Vellone (CGS)
M. Molina (CGS)
C. Gargello (CERN)
~~[illegible] (CERN)~~
M. Oliveri (CGS)
L. Cerlanesi (CGS)

PRESENTI - *ATTENDED BY*

NOMI - *NAMES*	POSIZIONE - *POSITION*
Matteo Giacomazzo (TH/CGS)	
Elisabeth Wilmer (Int/AME)	Elisabeth Wilmer

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
1	RICH Bottom MLI	
1.1	The RICH Bottom MLI FM G4070-100-110-00/A01 (−X) G4070-100-115-00/A01 (+X) integration have been correctly perform. by AME	
1.2	All the attachment point have been installed by AME • L-USS 20 stand off { 2 x 4 corners ϕ3-8 + 3 x 2 box tube (±X) ϕ3-5 + 2 x 2 ϕ3-5 mm + 1 x 2 ϕ3-8 mm } ±Y = 20 • ECAL 8 Velcro Hook • except for RICH, because RICH is not available	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA	**RELAZIONE DI RIUNIONE / VISITA** ***MINUTES OF MEETING / VISIT***	N° RICSYS-MI-CGS-026 FOGLIO / SHEET 1 DI / OF 4 ANNEX

DATA - DATE	LOCALITA - LOCATION	COMMESSA - JOB	RIF - REF.
07/11/2007	CERN	RICH-SYS	

IMPIANTO / PROJECT	DESCRIZIONE / DESCRIPTION: RICH Bottom MLI FM Integration ECAL bracket upper blanket template fit-check	CLIENTE - CUSTOMER
	LOCALITA' / LOCATION	ORDINE - CONTRACT
SCOPO RIUNIONE / PURPOSE OF MEETING	• RICH Bottom MLI FM Integration • De-integration • Storage ▶ ECAL bracket upper blanket template fit check	REDATTO - WRITTEN BY: M. Giovanetto
		LISTA DI DISTRIBUZIONE / DISTRIBUTION LIST: C. Vellone (CGS) M. Molina (CGS) C. Gargello (CGS) ~~[illegible] (CGS)~~ M. Oliver (CGS) L. Cremonesi (CGS)

PRESENTI - ATTENDED BY	NOMI - NAMES	POSIZIONE - POSITION
	Matteo Giovanetto (TH/CGS)	
	Elisabeth Wilmer (Int/AAE)	Elisabeth Wilmer

PUNTI / ITEMS	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] / ACTION BY [1]
1	RICH Bottom MLI	
1.1	The RICH Bottom MLI FM G4070-100-110-00/A01 (−X) G4070-100-115-00/A01 (+X) integration have been correctly perfor. by AAE	
1.2	All the attachment point have been installed by AAE • L-USS 20 stand off { 2x 4 [illegible] φ3-8 + 3x 2 box tube (±x) φ3-5 + 2x2 φ3-5 mm + 1x2 φ3-8 mm } ±Y = 20 • ECAL 8 Velcro Hook • except for RICH, because RICH is not available	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / VISITA *MINUTES OF MEETING / VISIT*	N° RICSYS-MI-CGS-026 FOGLIO *SHEET* 2 DI *OF* 4 ANNEX

DATA – *DATE*	LOCALITA – *LOCATION*	COMMESSA – *JOB*	RIF. - *REF.*
07/11/2002	CORA	RICH-SYS	

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
1.3	The ATS (RICH 71005-1) has been followed and completed by CGS (*)	
1.4	The IF Washer (h=8.5mm) between RICH and CUSI fit with the blanket.	
1.5	The blanket have been removed and the historical record as been filled accordingly in order to trace the first cycle for the valves on ECAL to clip washer have been installed.	
1.6	The blankets have been stored according to AAE procedure in their Alum boxes The boxes have been left in clean room.	
1.7	AAE provide to CGS all the AAE procedure filled.	AI 1 CGS
1.8	CGS will check for any missing part Open points:	20/11/2007
1.8.1	Grounding: CGS to provide to AAE the correct length of the grounding wire (HW side). CHECK with F. Cadoux	
1.8.2	• Bonding the valves on RICH Bottom skin. • punch the hole for RICH Debris shield	AI 2 AAE 26/11/2007 inform pull down RICH
	~~[illegible]~~	
2	ECAL Bracket MLI template fit check	
2.1	Only the 4 Upper blanket template have been fit-checked.	
2.2	The lower blankets can not fit-checked	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / VISITA *MINUTES OF MEETING / VISIT*	N° RICSYS - MI - CGS - 026 FOGLIO *SHEET* 3 DI *OF* 4 ANNEX

DATA - DATE	LOCALITA - LOCATION	COMMESSA - JOB	RIF - REF
09/11/2007	(GEPH)	RICH-SYS	

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
	because the MGSE of the VJS.	
2.3	The cut-to-fit activities have been performed in order to adapt the template to: - cables - Terminal block - I/F to the lower blankets (ECAL-bracket) The modified template + pictures provide sufficient information to start the manufacturing.	
2.4	CGS to provide all the pictures (+video) of the activities performed - especially for the ECAL brackets.	AI 3 CGS 12/11/2007
2.5	Open points:	
2.5.1	AAE to confirm to CGS the delivery of the 4 Upper blanket FM at the end of November (instead of the 15/12/2007 when the plan includes 8 blankets). As anticipated by phone to Roman Oshrafer	AI 4 AAE 15/11/2007
2.5.2	CGS request to AAE to plan the next visit with at least the number of people foreseen in the order (RICH/System MLI) AAE to confirm	AI 5 AAE 15/11/2007

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / VISITA *MINUTES OF MEETING / VISIT*	N° RICSys-MI-CGS-026 FOGLIO / *SHEET* 4 DI / *OF* 4 ANNEX

DATA – *DATE*	LOCALITA' – *LOCATION*	COMMESSA – *JOB*	RIF – *REF*
07/11/2007	CERN	RICH-SYS	

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
2.5.3	CGS to provide the grounding FF (HW side) info.	AI 6 CGS 15/11/2007
2.5.4	AAE to ~~provide~~ confirm the number of grounding wire for the blankets (2 for each)	AI 7 AAE 15/11/2007
2.5.5	CGS propose to have the ARR on 15th / November / 2007 for these blankets (ECAL basket UPPER ML1) AAE to confirm.	AI 8 AAE 15/11/2007)
2.5.6	AAE to provide the procedure for the shed-off shaking test	AI 9 AAE 15/11/2007
3.1	AAE provide to CGS grounding wires (HW side): #2 Coli n° 2880 #2 Coli n° 2884 #4 Coli n° 2998	
3.2	CGS store these wires in the TRACKER Aluminum box	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

ANNEX 1 TO: RICSYS-MI-CGS-026

1. PROJECT CODE	2. JPIC CODE	AMS-02 TASK SHEET (ATS)
SA-AMS	AMS-02	

3. TYPE				4 ATS NO.	5 PAGE
A	CONFIGURATION CHANGE	☒		RICH071005-1	1 OF 7
PERMANENT	☒	TEMPORARY	☐	6 MOD SHEET(S) NUMBER(S)	
B	NONCONFIGURATION CHANGE		☐	M1	

10. PART NAME	11. Sub Detector Name	12. SERIAL/LOT NO.
RICH BOTTOM MLI		See box 21 for blanket S/N

14. APPLICABLE DOCUMENTS

RTEM-DP-0001-AAE iss2.pdf

18. ATS TITLE

RICH BOTTOM MLI Installation

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	23. QA/DV
	SERIAL /LOT No of RICH BOTTOM MLI: • Blanket Rich Bottom XN : G4070-100-110-00/A 01 • Blanket Rich Bottom XP : G4070-100-115-00/A 01 Se also for reference the deliverable item list in RTEM-DP-0001-AAE Used Acronyms: AAE Austrian AErospace ADP Acceptance Data Package CGS Carlo Gavazzi Space RAS Rotational Assembly Stand RICH Ring Image Cerencov ECAL Electromagnetic CALorimeter L-USS Lower-Unique Support Structure MLI Multi-Layer Insulation		

24. ORIGINATOR	DATE	25. FINAL ACCEPTANCE STAMP AND DATE
Austrian AErospace personnel (AAE)		

APPROVALS (Printed or Typed and Signed)

26. PROJECT ENGINEER	DATE	27. QUALITY ENGINEER	DATE
M. Gicomazzo (CGS)		CORRADO GARGIULO CG	
28.		29	
30.		31	

1. PROJECT CODE	2. JPIC CODE	AMS-02 TASK SHEET (ATS)
SA-AMS	AMS-02	

3. TYPE				4. ATS NO.	5 PAGE
A	CONFIGURATION CHANGE		☒	RICH071005-1	1 OF 7
	PERMANENT	☒ TEMPORARY	☐	6. MOD SHEET(S) NUMBER(S)	
B	NONCONFIGURATION CHANGE		☐	M1	

10. PART NAME	11. Sub Detector Name	12. SERIAL/LOT NO.
RICH BOTTOM MLI		See box 21 for blanket S/N

14. APPLICABLE DOCUMENTS

RTEM-DP-0001-AAE iss2.pdf

16. ATS TITLE

RICH BOTTOM MLI Installation

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	23. QA/DV
	SERIAL /LOT No of RICH BOTTOM MLI: • Blanket Rich Bottom XN : G4070-100-110-00/A 01 • Blanket Rich Bottom XP : G4070-100-115-00/A 01 Se also for reference the deliverable item list in RTEM-DP-0001-AAE Used Acronyms: AAE Austrian AErospace ADP Acceptance Data Package CGS Carlo Gavazzi Space RAS Rotational Assembly Stand RICH Ring Image Cerencov ECAL Electromagnetic CALorimeter L-USS Lower-Unique Support Structure MLI Multi-Layer Insulation		

24. ORIGINATOR	DATE	25. FINAL ACCEPTANCE STAMP AND DATE
Austrian AErospace personnel (AAE)		

APPROVALS (Printed or Typed and Signed)

26. PROJECT ENGINEER	DATE	27. QUALITY ENGINEER	DATE
M. Gicomazzo (CGS)		CORRADO GARGIULO CG	
28.		29.	
30.		31.	

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23. QA/DV
	The responsible engineer for the AMS RICH BOTTOM MLI installation decides about changes in the series of the installation sequences.		
	AMS-02 AMS RICH BOTTOM MLI Integration to RICH/ECAL/L-USS		
	NOTES:		
	• **RICH/ECAL AND L-USS and the cables /harness necessary are integrated together in the clean room and system test are stopped.**		
	• **RICH BOTTOM MLI blankets are in the clean room, outside from the Aluminum transportation box, but still sitting in their protective bags**		
	• **A responsible for AMS collaboration must be available. He/she will coordinate the personnel responsible (CGS/AAE) for the integration of the RICH BOTTOM MLI Blanket to the AMS hardware and discuss how the MLI Blanket will be attached to the hardware. After a safe plan of attachment/installation has been agreed on, begin the installation fit check and document the steps taken to perform each task so they can be used for developing a flight installation procedure.**		
	• **The AMS collaboration responsible is in charge to contact the sub-detectors responsible if necessary.**		
	Record the participants to the integration:		
	AMS collaboration Responsible name: CORRADO GARGIULO		
	CGS: M. GIACOMAZZO / C VETTORE 5/11/07		
	AAE: E. Wimmer.		
	NASA: B. Hengefeld		
1.	Open this ATS (CGS)		
2.	Preliminary activity		
2.1	Verify (CGS)that the applicable documents are present:		
	(AAE-Acceptance Data Package)RTEM-DP-0001-AAE iss2.0 that includes:	5/11/07 CGS	5/11/07 CL
	Section1) Shipping doc ✓		
	Section2) QSTD-MPRC-3031-AAE, iss1.0 ✓		

AMS-02 TASK SHEET (ATS)
CONTINUATION PAGE

4 ATS NO. RICH071005-1

6 MOD NO

20 OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23 QA/DV
	Section3) QSTD-MPRC-3054-AAE, iss1.0 + the following amendments:		
	Sec 3.2) General arrangement Drawing ✓		
	Sec 3.3) Bonding instruction ✓		
	Sec3.4) Integration Sign-off sheets ✓		
	Sec3.5) Open work ✓		
	Sec3.6) List of hardware to be integrated		
	Sec3.7) Reduced size template drawing		
	Section 4) Annex D of RTEM-DP-0001-AAE ✓		
	Section5) Historical record ✓		
	Section6) Other Information / Documents ✓		
2.2	Take Picture of the RICH (Not visible) ECAL and L-USS from many angles. In particular take picture of IF zone with blankets attachment points (Velcro stand-off ecc) (AAE)	5/11/07 CGS	5/11/07 CF
2.3	Verify the Clean room temperature and RH according to paragraph 4 of QSTD-MPRC-3054-AAE (AAE) and record the reading below: Reading: 21°C ; RH = 51% Air Conditioning System	5/11/07 CGS	5/11/07 CF
4	Verify that all tools for the integration are available according to paragraph 4 of QSTD-MPRC-3054-AAE (AAE)	5/11/07 CGS	5/11/07 CF
2.5	Verify the delivered item (blanket stand off clip-washer) with deliverables item list according to section1 of RTEM-DP-0001-AAE (AAE)	5/11/07 CGS	5/11/07 CF
2.6	Take pictures of the blanket inside the protective Mylar bags (AAE)	5/11/07	5/11/07
2.7	Prepare a clean surface for un-bagging the MLI Blanket. ✓	5/11/07 CGS	5/11/07 CF
2.8	The thermal hardware (MLI / SLI) have to be removed carefully from the polyethylene bag and the protective clear Mylar foil and perform the visual inspection of the blankets according to QSTD-MPRC-3031-AAE (AAE/CGS).	6/11/07 CGS	6/11/07 CF
	• Record the humidity indicator status: 40÷50 %		
	• Records any signs of damage: None		

AMS-02 TASK SHEET (ATS)
CONTINUATION PAGE

4 ATS NO: RICH071005-1

6 MOD NO.

20 OPER SEQ. NO	21 OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23. QA/QV
2.9	Verify that for each blanket a Vellum template copy is available (AAE)	5/11/02 CGS	5/11/07 CF
2.10	Compare FM MLI blankets with Vellum template (AAE)	5/11/07 CG	5/11/07 CF
2.11	Record here below the HW available and any missing part : i.e. grounding IF, cables, ecc. (AAE/CGS/Collaboration)		
	HW available: ECAL / ECAL cable / L-USS covered with silver FEP	5/11/07 CGS	
	Missing part: RICH / RICH Cables / Washer between L-USS and RICH		
3.	Integration according to paragraph 7 of QSTD-MPRC-3054-AAE. Use the proper procedure depending on the substrate (AAE)	6/11/07 CGS	6/11/07 CF
3.1	A fit check has to be done by using the manufacturing or the fit check template (AAE)	6/11/07 CGS	6/11/07 CF
3.2	A marking of the attachment (Stand-off / Velcro ecc) positions shall be done by using the bonding template or the bonding drawing according to paragraph 7.2.1 of QSTD-MPRC-3054-AAE (AAE)	5/11/07 CGS	6/11/07 CF
3.3	Red-mark on the IF drawing (section3.1 of RTEM-DP-0001-AAE) the final position of each attachment point (stand-off /Velcro ecc) (AAE)	6/11/07 CGS	6/11/07 CF
3.4	Remove the Silver FEP protective cover lay on L-USS where necessary for stand-off bonding (CGS)	6/11/07 CGS	6/11/07 CF
3.5	Prepare the epoxy glue for the stand-off bonding a fulfill the log-sheet (section3.2.5 of RTEM-DP-0001-AAE) with: the glue lot No, part no, expiration data ecc in the remark-box according to the instructions in Annex B of the QSTD-MPRC-3054-AAE (AAE)	6/11/07 CGS	6/11/07 CF
3.6	Use the proper procedure to prepare the surface for the stand-off /Velcro bonding according to the different AAE procedures and fulfill the table 8-1 in Annex B of the QSTD-MPRC-3054-AAE (AAE) as for the example taking into account the following notes: • The attachment bonding area shall be cleaned by using ONLY isopropyl alcohol Acetone is NOT allowed	See M1	

AMS-02 TASK SHEET (ATS) CONTINUATION PAGE	4. ATS NO	RICH071005-1
	5. MOD NO.	

20 OPER SEQ NO	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23 QA/DV
	• The attachment bonding area shall be abraded by using abrading fleece, sand paper or a glass fiber pen depending on the surface. A vacuum cleaner must be used in order to avoid any particle contamination. • Protect the silver FEP tape with the proper template • Abrade the stand-off base • After the abrading the attachment bonding area shall be cleaned by using ONLY isopropyl alcohol Acetone is NOT allowed • The bonding of the attachments shall start after a minimum of 10 minutes after the cleaning • The bonded attachments have to be fixed with flash braker tape during the curing if necessary. • The flash braker tape can not be used on Silver FEP (in order to avoid the damage) and it can not be used on the Silver FEP cover-lay (in order to avoid the cover-lay removal due to flash braker tape removal). • The sign-off sheets (section 3.3 RTEM-DP-0001-AAE) must be filled in according to the instruction in Annex C of the QSTD-MPRC-3054-AAE (AAE) • Include any open work in section 3.4 RTEM-DP-0001-AAE according to the instruction in Annex D of the QSTD-MPRC-3054-AAE (AAE)		
3.7	Provide a bonding test sample(AAE)	5-6/11/07 CGS	5/6-11-07 CF
3.8	Take picture of each bonding point and a general picture of the mounted stand-off and velcros (AAE)	See ML	
3.9	Punch the vellum template and/or verify the correct IF with the stand-off and velcros installed. The stand-off holes shall be punched according to paragraph 8.1.4 and 8.1.6 of QSTD-MPRC-3054-AAE in the FM MLI blanket according the positions of the fit check vellum template (AAE)	7/11/07 CGS	7/11/07 CF
3.10	Integrate the FM MLI blankets according to paragraph 8 of QSTD-MPRC-3054-AAE and the assembly sketch see section 3.1 RTEM-DP-0001-AAE (AAE)	7/11/07 CGS	7/11/07 CF
3.11	Install the clip-washer according to paragraph 8.1.7 of QSTD-MPRC-3054-AAE (AAE)	7/11/07 CGS	7/11/07 CF

AMS-02 TASK SHEET (ATS) CONTINUATION PAGE	4 ATS NO.	RICH071005-I
	6 MOD NO	

20 OPER SEQ NO	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	23. QA/DV
3.12	Verify that the bonding leads (part on blankets side) is routed and fixed by Kapton tape in order to make it accessible any time until the final AM02 integration (AAE)	7/11/07 [illegible]	7/11/07 OK
3.13	Record the bonding leads length (part on structure side) and connect to the part on blanket side according to the following picture (AAE):	[illegible]	

Austrian Aerospace

Document No.. QSTD-MPRC-3054-AAE Date: 26 Aug 2006 Issue: 1.0 Page: 22

8.1.11 Connection of Bonding Leads

One Bonding Lead set consists of two pieces. One part is riveted to the blanket while the other part is attached to the respective structural bonding point.

After performing the tasks of para. 8.1.5 the structural parts of the bonding leads are ready for mating of blanket part/structural part of the bonding lead. After connection of all bonding leads of the MLI blanket, the electrical resistance between the rivet of one bonding point and its structural reference shall be measured and recorded.

Note: Before flight, this Pin/Socket connection must be secured against accidental demeting with a piece of 1 mil plain Kapton 966 or 9460 PSA tape, wound around the connector (see Figure 8-7).

Securing of connectors with 1mil Kapton / PSA Tape (25,4 x 25,4 mm):

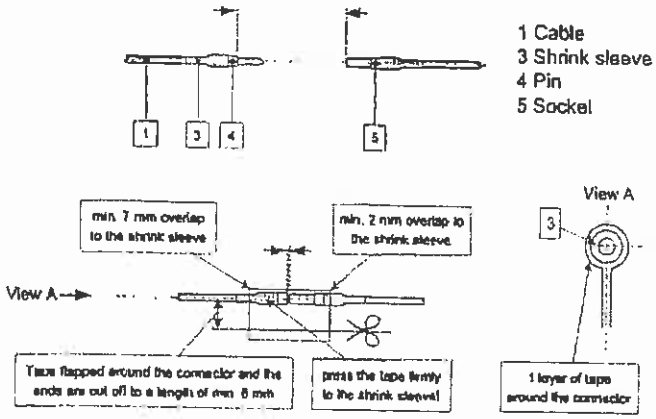


Figure 8-7: Securing of bonding lead connections

The RICH BOTTOM MLI (2blankets) have 4 leads (two for each blanket). The final grounding wire fixation and resistance measurement will be performed during the final AMS02 integration.

3.14	Record the bonding leads resistance(AAE) for reference purpose only:	See A 1	

AMS-02 TASK SHEET (ATS)
CONTINUATION PAGE

4. ATS NO: RICH071005-1

5. MOD NO.:

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23. QA/DV
3.15	Record locations of any possible future penetrations or IF between the MLI Blanket to the AMS hardware: RICH IF was not performed and the relative washer of IF with ECAL Bracket Upper Side. RICH DS IF was not performed.	7/11/07 CEJS	
4.	Record open points (grounding, impacts on harness, constraint, ...), relative actions and a responsible for the open point : 1) Holes for stand off on RICH DS have not punched (AAE) 2) Grounding IF of ~~ex~~ blankets to be discussed to (F. Cadox / C. Gaujinto)	see #1 7/11/07 CEJS	7/11/07
5.	Close this ATS		

1. PROJECT CODE	2. JPIC CODE	AMS-02 TASK SHEET (ATS)
SA-AMS	AMS-02	

3. TYPE				4. ATS NO.	5. PAGE
A	CONFIGURATION CHANGE		☒	RICH071005-1 M1	1 OF 2
	PERMANENT ☒	TEMPORARY	☐	6. MOD SHEET(S) NUMBER(S)	
B	NONCONFIGURATION CHANGE		☐		

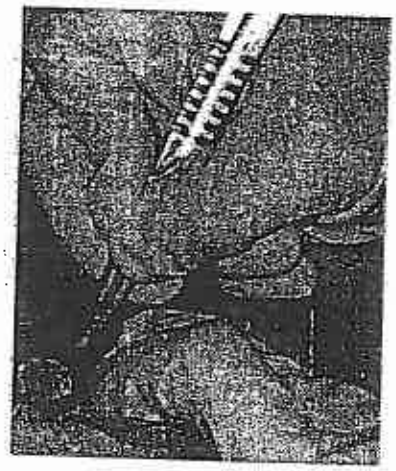
10. PART NAME	11. Sub Detector Name	12. SERIAL/LOT NO.
RICH BOTTOM MLI		See box 21 for blanket S/N

14. APPLICABLE DOCUMENTS

RTEM-DP-0001-AAE iss2.pdf

18. ATS TITLE

RICH BOTTOM MLI Installation

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	23. QA/QV
1.	Open this MOD		
2.	Replace step 3.6, Second point with: The attachment bonding area shall be abraded by using abrading fleece, sand paper, a glass fiber pen or a SCALPEL. A vacuum cleaner must be used in order to avoid any particle contamination. 	6/11/07 CGS	6/11/07 CZ
3.	Replace step 3.6, fourth point with: Abrade the stand-off base IF NEEDED	6/11/07 CGS	6/11/07 CZ

24. ORIGINATOR	DATE	25. FINAL ACCEPTANCE STAMP AND DATE
Austrian AErospace personnel (AAE)		

APPROVALS (Printed or Typed and Signed)

26. PROJECT ENGINEER	DATE	27. QUALITY ENGINEER	DATE
M. Gicomazzo (CGS)		CORRADO GARGIULO CZ	
28.		29.	
30.		31.	

AMS-02 TASK SHEET (ATS)
CONTINUATION PAGE

4. ATS NO: RICH071005-1 M1

6. MOD NO.:

20. OPER SEQ. NO.	21. OPERATIONS (Print, Type, or Write Legibly)	VERIFICATION 22. TECH	VERIFICATION 23. QA/DV
4.	Replace step 3.8 with: Take picture of REPRESENTATIVE bonding points and a general picture of the mounted stand-off and velcros (AAE)	7/11/07 [illegible]	7/11/07 CF
5.	Remove step 3.13 : This step shall be executed only during final integration.	7/11/07 [illegible]	7/11/07 CF
6.	Remove step 3.14 : This step shall be executed only during final integration.	7/11/07 [illegible]	7/11/07 CF
7.	Add the following STEP 3.16: Remove the blankets. Store the blankets in the original aluminum boxes (according with the AAE handling procedures: QSTD-MPRC-3031-AAE iss1.0 14/04/2000). Store the boxes in the clean room. Record the the step in the **historical record data sheet**, in attached document RTEM – DP0001-AAE-29-Oct2007	7/11/07 [illegible]	7/11/07 CF
8.	Close this MOD.		

3.4 INTEGRATION SIGN-OFF SHEETS

ID	Blanket Name Blanket No. / issue	S/N	INTEGRATION STEPS									REMARKS
-1	Blanket Rich Bottom XN G4070-100-110-00	01	§1 Attachments	S/O	C/W	floating S/O						
			Mounting	WM ✓								
			§2 Bonding leads	SGP ID	routed	Structure S/N	Blanket S/N	length	Connect	Secure	Resist.	
			Blanket BP1				1729					
			Blanket BP2				1788					
			§3 Blanket	fit-check	modified	holes	initial	overlap prelim.	overlap final	open work		
			Integration	WM ✓		WM ✓	WM	WM ✓				

This document is property of AUSTRIAN AEROSPACE GmbH

ID	Blanket Name Blanket No. / issue	S/N	INTEGRATION STEPS									REMARKS
-2	Blanket Rich Bottom XP G4070-100-115-00	01	§1 Attachments	S/O	C/W	floating S/O						
			Mounting	W/B								
			§2 Bonding leads	SGP ID	routed	Structure S/N	Blanket S/N	length	Connect	Secure	Resist.	
			Blanket BP1				1711					
			Blanket BP2				1730					
			§3 Blanket	fit-check	modified	holes	initial	overlap prelim.	overlap final	open work		
			Integration									

This document is property of AUSTRIAN AEROSPACE GmbH

ADHESIVE MIXTURE	No. (JJ / MM / DD / No.): 07 / 11 / 06 / 01
Adhesive (Part A): SCOTCH-WELD 2216 A	Color: grey
Adhesive (Part B): SCOTCH-WELD 2216 B	Color: white
AAE-Ref. (Part A): Colli: GRN 2285322616	EoL: 14.11.2008
AAE-Ref. (Part B): Colli: GRN 2285322616	EoL: 14.11.2008
Project Code: 717 700 RTEM	Reference Doc.: headline
Mixture Ratio (by weight):	Part A : Part B = 7 : 5
Used balance (IDNr.): KERN 3P0-1	; next cal.: 31.11.07
Part A: nominal (7 g ± 2g): 7 g	actual: 7 g
Part B: nominal: (A_{act} x 5 : 7 =) 5 g	actual: 5 g
Environment: Cleanroom ☐ / Non-Cleanroom ☐ Temp.: ° C / Humidity: % r. H.	
Time / Start: 16:10	Homogeneity of mixture: ☒ (mixture duration: >10 minutes)
Time of Last Bonding: 17:05	Pot Life: max. 90 min. ☒
Minimum Cure Time at room-temperature: 8 h	
Cure-Time before Loading (Cure at 25° C): 24 h	
Bonding Samples: prepared according to procedure ☒	2 S/O on sample together with Radiator
Structure samples available ☐ alternative Aluminium ☒	Teflon Tape, yellow, release liner and flash breaker „mask"
Samples and remaining adhesive mixture marked with Record No. and Proj. No.: performed by WIM	
Bonded Items (ref. to General Arrangement): 20 S/Os USS (RTEM) (= 10 S1, 10 S3)	
Remarks:	
Location: CERN - Geneva	Performed by: Wimmer AAE

Bonding-Verification with spring-balance (> 1kg) at 5% of bonded S/O	
Quantity of checked Stand-Offs:	Quantity of failed Stand-Offs:
Remaining Mixture got hard: ☒	Checked by: Date/Time:

ADHESIVE MIXTURE	No. (JJ / MM / DD / No.): 07 / 11 / 05 / 01
Adhesive (Part A): SCOTCH-WELD 2216 A	Color: grey
Adhesive (Part B): SCOTCH-WELD 2216 B	Color: white
AAE-Ref. (Part A): Colli: GrNNo 2285322616	EoL: 14.11.2008
AAE-Ref. (Part B): Colli: — " —	EoL: 14.11.2008
Project Code: 717700 RTEM Reference Doc.: "	
Mixture Ratio (by weight): Part A : Part B = 7 : 5	
Used balance (IDNr.): KERNCM 3P0-1	; next cal.: 30.11.07
Part A: nominal (7 g ± 2g): 7 g	actual: 7 g
Part B: nominal: (A_{act} x 5 : 7 =) 5 g	actual: 5 g
Environment: Cleanroom ☒ / Non-Cleanroom ☐ Temp.: °C / Humidity: % r. H.	
Time / Start: 19.00	Homogeneity of mixture: ☒ (mixture duration: >10 minutes)
Time of Last Bonding: 20.30	Pot Life: max. 90 min. ☒
Minimum Cure Time at room-temperature: 8 h	
Cure-Time before Loading (Cure at 25° C): 24 h	
Bonding Samples: prepared according to procedure ☒	
Structure samples available ☐ alternative Aluminium ☒ / Velcro	
Samples and remaining adhesive mixture marked with Record No. and Proj. No.: performed by WIM/AAE	
Bonded Items (ref. to General Arrangement): 8 Velcros (Hooks)	
Remarks:	
Location: CERN Genf	Performed by: WIM/AAE

Bonding-Verification with spring-balance (> 1kg) at 5% of bonded S/O	
Quantity of checked Stand-Offs: /	Quantity of failed Stand-Offs: /
Remaining Mixture got hard: ☒	Checked by: WIM Date/Time: 6.11.2007

This document is property of AUSTRIAN AEROSPACE GmbH

3.5 OPEN WORK

3.5.1 Removal of Silver FEP tape on LUSS

The LUSS is partially covered by Silver FEP tape. This tape has to be removed locally to bond the stand-offs by proceeding the following steps:

- Cut out the Silver FEP tape by using a scalpel. Positions acc. ANNEX 3.6; Diameter: 11mm
- Remove remainders of PSA by using a scalpel.
- Clean the open area by using isopropyl-alcohol.
- Abreading the surface of the open area by using(Scotchbrite or sandpaper) scalpel
- Clean the open area by using isopropyl-alcohol again and wait a minimum of 10 minutes before starting the bonding.
- Bonding the stand-offs and make sure that the glue covers the open area between the stand-off flange and the tape. but AVOID also the glue touches the surface of tapes in neighborhood. Done by a flashbreaker mask (→ photos, sample) and properly manufacturing (remark: Elisabeth Wimmer 6.11.2007)

3.5.2 Futher open work

Seq No.	Nomenclature	Drawing-/ Identification No.	Open Test	Open Work	Reference Documents	Close-Out Date	Close-Out Sign
1							
2							
3							

This document is property of AUSTRIAN AEROSPACE GmbH

HISTORICAL RECORD DATA SHEET

Item: Blanket Rich Bottom XN	Dwg.-No.: G4070-100-110-00	Issue: A	Model: PFM	Serial No.: 01

Company	Date	Event	Event Description	Remark / Report	Sign
AAE	Start: 09/2007 End: 09/2007	MANUFACTURE and INSPECTION	Manufacturing of Blanket and Blanket Inspection	acc. RTEM-TLS-0001-AAE /Iss. 1.0	see blanket inspection sheets
AAE	Start: 11/2007 End: 11/2007	INTEGRATION	Initial Integration of Blanket	acc. RTEM_DP_0001_A AE Section 3 /Iss. 1.0	see integration sign-off sheets
	Start: 11/2007 End: 11/2007	DEINTEGRATION	deintegration and packing of MLI stored in container	— " —	AAE/CAS
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				

This document is property of AUSTRIAN AEROSPACE Ges.m.b.H

HISTORICAL RECORD DATA SHEET

Item: Blanket Rich Bottom XP	Dwg.-No.: G4070-100-115-00	Issue: A	Model: PFM	Serial No.: 01

Company	Date	Event	Event Description	Remark / Report	Sign
AAE	Start: 09/2007 End: 09/2007	MANUFACTURE and INSPECTION	Manufacturing of Blanket and Blanket Inspection	acc. RTEM-TLS-0001-AAE /Iss. 1.0	see blanket inspection sheets
AAE	Start: 11/2007 End: 11/2007	INTEGRATION	Initial Integration of Blanket	acc. RTEM_DP_0001_AAE Section 3 /Iss. 1.0	see integration sign-off sheets
	Start: 11/2007 End: 11/2007	DEINTEGRATION	deintegration and packing of MLI stored in container	— " —	AAE
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				
	Start: End:				

5

CARLO GAVAZZI SPACE SpA

RELAZIONE DI RIUNIONE / TELECONFERENZA

MINUTES OF MEETING / TELECONFERENCE

N° RICH-MI-CGS-027

FOGLIO *SHEET* 1 DI *OF* 1

ANNEX: NCR RICSYS CGS C 020-rev3 draft 03/12/07

DATA - *DATE* 03/12/07	LOCALITA' - *LOCATION* TELECON	COMMESSA - *JOB* RICHSYS	RIF. - *REF.* 01913A
IMPIANTO *PROJECT* — DESCRIZIONE *DESCRIPTION*	RICH DETECTOR MRB FOR NCR-RICHSYS-CGS-C-020		CLIENTE - *CUSTOMER*
LOCALITA' *LOCATION*	TELECON (CGS)		ORDINE - *CONTRACT*
SCOPO RIUNIONE *PURPOSE OF MEETING*	RICH DETECTOR MRB FOR NCR-RICHSYS-CGS-C-020 RAISED DURING VIBRATION TEST		REDATTO – *WRITTEN BY* M. Olivier ✓
			LISTA DI DISTRIBUZIONE *DISTRIBUTION LIST* M. Molina(CGS) ✓ P. Lorenzi (CGS) ✓ + PARTECIPANTI + G. BORGHI ✓ F. FACCHIN ✓

PRESENTI - *ATTENDED BY*

NOMI - *NAMES*	
M. Olivier (CGS)	04/12/07
L. Cremonesi (CGS) ✓	04.12.07
A. Bursi (CGS) ✓	04/12/07
G. Laurenti (INFN)	
E. Marchetti (ASI)	
E. Russo (ASI)	
R. Carpentiero (ASI)	

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
1.	**COMMENTI a NCR-RICHSYS-CGS-C-020 rev 2 del 21.11.2007** A valle della lettura dell' NCR in oggetto ASI chiede chiarimenti sul criterio di notching basato su 6.8gRMS rispetto al criterio definito in procedura basato su predizione analitica. CGS e INFN riassumono e chiariscono i contenuti dell' annesso tecnico all'NCR, basato su valutazioni analitiche ,dati sperimentali ottenuti durante le prime prove sull'asse Z e sulle informazioni di dettaglio avute da NASA. In particolare queste ultime chiariscono le motivazioni per cui l'eccitazione alle interfacce del RICH durante il volo saranno meno critiche della situazione di test (MEFL) e che di 6.8gRMS (livello MWL) dell' SVP sono considerati l'inviluppo massimo di risposta in condizione di volo ai componenti del detector. Pertanto l'MWL è un limite di notching rappresentativo per i PMT, consentendo una adeguata verifca del mission success, responsabilità in carico a INFN. ASI richiede a CGS di riportare per chiarezza nello step 5 in modo esplicito il riferimento ai dati dell' SVP applicabili e alla Mail sul valutazione del notching fra NASA e INFN, da Annettere alla stessa. Si richiede inoltre di completare il campo (34) dell' NCR . CGS rimette la rev. 3 dell' NCR in annesso a questa minuta	RICEVUTO IL 16 GEN. 2008 Commessa 1913A Data copia a: UEB ELENCO. Al CGS (Closed)
2.	**CONCLUSIONI** A fronte dei chiarimenti forniti ASI autorizza la prosecuzione della prova sull'asse Z con le modalità di notching descritte nell' NCR. In base alle informazioni sulla disponibilità della facility di test l'esecuzione della prova in Z riprenderà il 10/12/2007 e le attività di test relative all'NCR saranno tracciate mediante PVS all'interno del test report	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / TELECONFERENZA *MINUTES OF MEETING / TELECONFERENCE*	N° RICH-MI-CGS-027 FOGLIO / SHEET 1 DI / OF 1 ANNEX NCR CGS C 020-rev3 RICSYS draft 03/12/07

DATA – DATE	LOCALITA' – LOCATION	COMMESSA – JOB	RIF. – REF
03/12/07	TELECON	RICHSYS	01912A

IMPIANTO / PROJECT	DESCRIZIONE / DESCRIPTION	RICH DETECTOR MRB FOR NCR-RICHSYS-CGS-C-020	CLIENTE – CUSTOMER
	LOCALITA' / LOCATION	TELECON (CGS)	ORDINE – CONTRACT
SCOPO RIUNIONE / PURPOSE OF MEETING		RICH DETECTOR MRB FOR NCR-RICHSYS-CGS-C-020 RAISED DURING VIBRATION TEST	REDATTO – WRITTEN BY: M. Olivier LISTA DI DISTRIBUZIONE / DISTRIBUTION LIST: M. Molina(CGS), P. Lorenzi (CGS)

PRESENTI – ATTENDED BY	NOMI – NAMES	
	M. Olivier (CGS)	M. Olivier 04/12/07
	L. Cremonesi (CGS)	L. Cremonesi 04.12.07
	A. Bursi (CGS)	Alessandro Bursi 04/12/07
	G. Laurenti (INFN)	[illegible] 14/01/08
	E. Marchetti (ASI)	[illegible]
	E. Russo (ASI)	[illegible]
	R. Carpentiero (ASI)	[illegible]

PUNTI / ITEMS	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] / ACTION BY [1]
1.	**COMMENTI a NCR-RICHSYS-CGS-C-020 rev 2 del 21.11.2007** A valle della lettura dell' NCR in oggetto ASI chiede chiarimenti sul criterio di notching basato su 6.8gRMS rispetto al criterio definito in procedura baseto su predizione analitica. CGS e INFN riassumono e chiariscono i contenuti dell' annesso tecnico all'NCR, basato su valutazioni analitiche ,dati sperimentali ottenuti durante le prime prove sull'asse Z e sulle informazioni di dettaglio avute da NASA. In particolare queste ultime chiariscono le motivazioni per cui l'eccitazione alle interfacce del RICH durante il volo saranno meno critiche della situazione di test (MEFL) e che di 6.8gRMS (livello MWL) dell' SVP sono considerati l'inviluppo massimo di risposta in condizione di volo ai componenti del detector. Pertanto l'MWL è un limite di notching rappresentativo per i PMT', consentendo una adeguata verifca del mission success, responsabilità in carico a INFN. ASI richiede a CGS di riportare per chiarezza nello step 5 in modo esplicito il riferimento ai dati dell' SVP applicabili e alla Mail sul valutazione del notching fra NASA e INFN, da Annettere alla stessa. Si richiede inoltre di completare il campo (34) dell' NCR . CGS rimette la rev. 3 dell' NCR in annesso a questa minuta	AI CGS (Closed)
2.	**CONCLUSIONI** A fronte dei chiarimenti forniti ASI autorizza la prosecuzione della prova sull'asse Z con le modalità di notching descritte nell' NCR. In base alle informazioni sulla disponibilità della facility di test l'esecuzione della prova in Z riprenderà il 10/12/2007 e le attività di test relative all'NCR saranno tracciate mediante PVS all'interno del test report	

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / TELECONFERENZA *MINUTES OF MEETING / TELECONFERENCE*	N° RICHSYS-MI-CGS-028 FOGLIO / *SHEET* 1 DI / *OF* 2 ANNEX

DATA - *DATE*	LOCALITA' - *LOCATION*	COMMESSA - *JOB*	RIF. - *REF*
14-12-07	INTA - MADRID	RICHSYS	1913-A

IMPIANTO / *PROJECT*	DESCRIZIONE / *DESCRIPTION*: MINUTE OF MEETING	CLIENTE - *CUSTOMER*
	LOCALITA' / *LOCATION*: INTA (MADRID)	ORDINE - CONTRACT
SCOPO RIUNIONE / *PURPOSE OF MEETING*	RICH SYSTEM VIBRATION TEST POST TEST REVIEW	REDATTO - *WRITTEN BY*: A. BURSI ✓

LISTA DI DISTRIBUZIONE / *DISTRIBUTION LIST*:
M. Olivier ✓
M. Molina ✓
L. Cremonesi ✓
P.Lorenzi ✓
R. Carpentiero
E. Russo
+
F. FACETTI ✓
G. BORGHI ✓

PRESENTI - *ATTENDED BY*

NOMI - *NAMES*	
A. BURSI (CGS) ✓	Alessandro Bursi 18/12/07
G. Laurenti (INFN)	
J. Berdugo (CIEMAT)	
C. Diaz Ginzo (CIEMAT)	

PUNTI / *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] / *ACTION BY* [1]
1.	CGS performed on 13/12/07 the RICH random vibration tesl in Z direction applying the following Notched Spectrum in agreement with INFN.	

Freq. [Hz]	PSD [g^2/Hz]
5	0.009
45	0.009
75	0.0145
95	0.003
120	0.003
140	0.025
180	0.025
200	0.0055
280	0.0055
300	0.025
900	0.001
2000	0.001
Overall grms	2.76

N° RICEVUTO IL
16 GEN. 2008
L.Z. Commessa 1913A
L.M. Cliente
Ufficio
R.A. Data copia a: VEDI SOPRA

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA

RELAZIONE DI RIUNIONE / TELECONFERENZA

MINUTES OF MEETING / TELECONFERENCE

N° RICHSYS-MI-CGS-028

FOGLIO / SHEET 1 DI / OF 2 ANNEX

DATA – DATE	LOCALITA' – LOCATION	COMMESSA – JOB	RIF. – REF.
14-12-07	INTA - MADRID	RICHSYS	1913-A

IMPIANTO / PROJECT

DESCRIZIONE / DESCRIPTION: MINUTE OF MEETING

LOCALITA' / LOCATION: INTA (MADRID)

CLIENTE - CUSTOMER:

ORDINE - CONTRACT:

SCOPO RIUNIONE / PURPOSE OF MEETING: RICH SYSTEM VIBRATION TEST POST TEST REVIEW

REDATTO – WRITTEN BY: A. BURSI

LISTA DI DISTRIBUZIONE / DISTRIBUTION LIST:
M. Olivier
M. Molina
L. Cremonesi
P.Lorenzi
R. Carpentiero
E. Russo

PRESENTI - ATTENDED BY

NOMI - NAMES		
A. BURSI (CGS)	A. Bursi	13/12/07
G. Laurenti (INFN)		14/01/06
J. Berdugo (CIEMAT)		14/01/06
C. Diaz Ginzo (CIEMAT)		14/01/06

PUNTI / ITEMS	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] / ACTION BY [1]
1.	CGS performed on 13/12/07 the RICH random vibration test in Z direction applying the following Notched Spectrum in agreement with INFN.	

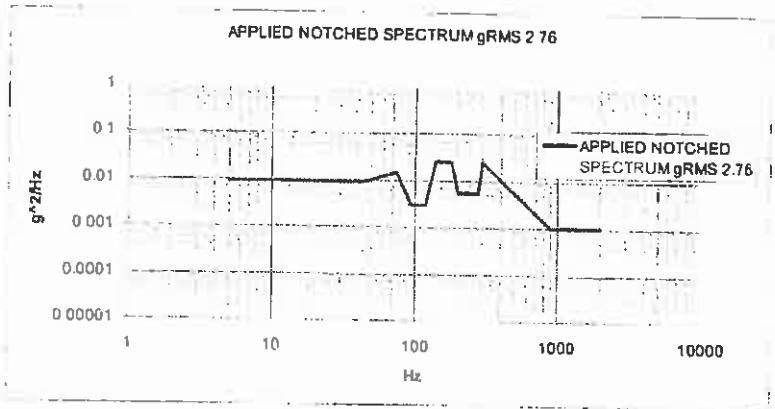
Freq. [Hz]	PSD [g^2/Hz]
6	0.009
45	0.009
75	0.0145
95	0.003
120	0.003
140	0.025
160	0.025
200	0.0055
280	0.0055
300	0.025
900	0.001
2000	0.001
Overall grms	2.76

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) ACTUAL PERSON RESPONSISLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN

Mod. N° MOM-06/02

CARLO GAVAZZI SPACE SpA	RELAZIONE DI RIUNIONE / TELECONFERENZA *MINUTES OF MEETING / TELECONFERENCE*	N° RICHSYS-MI-CGS-028 FOGLIO *SHEET* 2 DI *OF* 2 ANNEX

DATA – *DATE*	LOCALITA' – *LOCATION*	COMMESSA – *JOB*	RIF. - *REF.*
14-12-07	INTA - MADRID	RICHSYS	1913-A

PUNTI *ITEMS*	ARGOMENTI DISCUSSI – DESCRIPTION OF DISCUSSION	AZIONE A CURA [1] *ACTION BY* [1]
	 The maximum g_{RMS} value reached by PMTs lower skin is 6.63 g_{RMS} that is lower than the limit of 6.8 g_{RMS}. The comparison of resonance search before and after random vibration confirmed that no structural degradation was present. The RICH functional test has been successfully performed on 14/12/2007 confirming that all the PMT are working nominally	
2.	Considering the successful completion of the test according to the verification steps of NCR-RICHSYS-CGS-C-020 rev 3 the mentioned NCR is considered closed by INFN and CGS. Formal closure of the NCR with ASI shall take place during the TRB.	AI1 CGS
3.	Based on the results of the vibration and functional test the detector is considered successfully verified according to the applicable requirements and accepted by INFN	
4.	The custody (risk and responsibility) is therefore transferred to INFN that will proceed with the integration activities of RICH detector on AMS-02.	
5.	The formal TRB with ASI will be arranged by CGS for the week 14-18/01/2008. CGS shall provide by 20/12/07 a test summary report in preparation of the TRB	AI2 CGS
6.	The complete Rich vibration test report shall be ready by 30/01/2008, pending availability of the official test plots from the facility for the Z direction run.	AI3 CGS

1) INDICARE IL NOMINATIVO RESPONSABILE DELL'AZIONE E DATA DI COMPLETAMENTO
1) *ACTUAL PERSON RESPONSIBLE FOR THE ACTION AND COMPLETION DATE SHALL BE SHOWN*