### I. Physikalisches Institut B, RWTH Aachen



### ALPHA MAGNETIC SPECTROMETER (AMS) ACCEPTANCE DATA PACKAGE

for

#### **AMS COLLABORATION HARDWARE**

Acceptance Data Effective through [Date]

Part Name: AMS02

Anticoincidence

**Counter System** 

(ACC)

Subsystem/Detector: ACC

Part Number: AMS02-ACC.001 Serial Number: 1001

AMS02-ACC-001A

**ADP Tracking Number:** 

RWTH Aachen, I. Physics Institute B, Sommerfeldstrasse 14, Tower 28, D-52074 Aachen (Germany), Tel.: +492418027158, FAX: +492418022661

### ALPHA MAGNETIC SPECTROMETER (AMS)

### ACCEPTANCE DATA PACKAGE

**FOR** 

PART NAME:

AMS02-Anticoincidence Counter System (ACC)

PART NUMBER:

**AMS02-ACC.001** 

**SERIAL NUMBER:** 

1001

### ALPHA MAGNETIC SPECTROMETER (AMS) MAJOR COMPONENT PRE-INTEGRATION CHECKLIST

	ITEM NAME	CI NO.	PART NUMBER	SERIAL NUMBER
NAS	ollowing checklist must be completed prior A provided Payload Integration Hardware. Eved by all parties.			
	INTEG	GRATION REVIEW IT	EMS	
	All integration plans and procedures have	e been completed an	d approved.	
	All hardware, including interface fastener	rs, is available for inte	egration.	
	Mechanical and electrical interfaces have	e been verified again	st the interface control do	ocumentation.
	All applicable functional, unit-level, subsy	stem, and qualification	on testing has been cond	lucted successfully.
	Integration facilities, including clean room electrical test equipment are ready and a		uipment, handling fixture	s, cranes, and
	Support personnel have been adequately	y trained and will be	available at the integratio	n facility.
	Handling and safety requirements have b	peen documented.		
	All known system discrepancies have be plan.	en identified and disp	posed in accordance with	an agreed-upon
	All previous design review success criter agreed-upon plan.	ia and key issues ha	ve been satisfied in accor	rdance with an
	The quality control organization is ready	to support the integra	ation effort.	
Paylo	oad Integration and Test Manager		Date	-
				_
Contr	actor/Supplier Quality Assurance		Date	

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE INDEX PAGE

		ITEM NAI	ME	CI NO.	PART NUMBER	SERIAL NUMBER
			DOCUMENT	S INCLUDED IN THIS	S DATA PACKAGE	
Y	N	N/A	SECTION		INDEX	
			l	HISTORICAL LOG	/NOTES/COMMENTS	
			II	WAIVERS/DEVIAT	TIONS	
			III	UNEXPLAINED AN	NOMALIES REPORTED	
			IV	UNPLANNED/DEF	ERRED WORK REPORTE	ED
			V	PREPLANNED/AS	SIGNED WORK REPORT	ED
			VI	IDENTIFICATION-	AS-DESIGNED CONFIGU	RATION
			VII	OPERATING TIME	CYCLE REPORTED	
			VIII	AGE SENSITIVE/T	IME ACTION ITEMS REPO	ORTED
			IX	NON-STANDARD	CALIBRATION DATA REP	ORTED
			X	REPAIR LIMITATION	ONS DATA REPORTED	
			XI	PRESSURE VESS	EL DATA RECEIVED	
			XII	NONFLIGHT HAR	DWARE/TEMPORARY INS	STALLATIONS
			XVI	CERTIFICATIONS	RECEIVED	
			XVII	MSDS RECEIVED		
			ACCEPTA	ANCE DATA PACKA	GE APPROVAL	
With the fo	only the ollowing	e exceptions components	listed below, all abo are ready for integ	ve criteria have been ration onto the NASA	successfully completed or provided Payload Integrati	are not applicable and on Hardware.
Paylo	oad Inte	gration and <sup>-</sup>	Test Manager		Date	
Exce 1. 2. 3.	ptions\F	Resolution Pl	an (No signature re	quired if there are no	exceptions)	
				to implement the reso	lution plan as described ab	ove.
Evno	rimont l	ntogration of	nd Toet Managor		Data	

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE HISTORICAL LOG / NOTES / COMMENTS

#### **Section I**

AMS02 Anticoincidence Counter System (ACC)

| AMS02-ACC.001 | 1001 |
| Item Name | Part Number | Serial Number

item name	Part Number	Seriai Number
Tests performed:		
1.) AMS02 ACC scintillation panels: measurements with refersion tillators (see 070911_AMS_ACC_TN Section 1).	ence photomultipliers to de	termine light output of
2.) AMS02 ACC photomultipliers (PMTs): space qualification to -35°C to +50°C, operative from -30°C to +40°C; vibration tests scintillation panel to determine light output of scintillator after 070911_AMS_ACC_TN Section 1)	s: random, 3,4 gRMS); mea	asurements with reference
3.) AMS02 ACC system test; measurement of light output of sclear fiber cable connected to its readout PMT (see 070911_A		d to its corresponding
Potential hazards:		
1.) High voltage (HV) of PMTs		
2.) Venting of ACC system		
Storage requirements: Clean Room		
Center of gravity: x=0, y=0, z=0		
Drawing Charts: see 080917_AMS_ACC_TN Section1		

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE WAIVER DEVIATION / LISTING

#### **Section II**

	,		
	Item Name	Part Number	Serial Number
Waiver / Deviation	A	ffected	
Number	Part Name	Part Number	er Serial Number

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE UNEXPLAINED ANOMOLIES RECORDS

#### **Section III**

Item I	Name	Part Number	Serial Number
Nonconformance		Affected	
Record Number	Part Name	Part Numl	ber Serial Number

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE UNPLANNED / DEFERRED WORK

#### **Section IV**

Item	n Name	Part Number		Serial Number		
Part Number or Specification	Serial	Description of Upplanned / Deformed Work	Inspection and Test / Retest Requirements			
Part Number or Specification	Number Description of Ur	Description of Unplanned / Deferred Work	Test Procedures	Requirement Paragraph Number		

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE PREPLANNED / ASSIGNED WORK

#### **Section V**

Item Name		Part Nun	nber	Serial Number	
Authorizing Work Document Identification	Description of Preplanned / Assigned Work		Inspection and Require	Test / Retest ements	
Document Identification	Preplanned / Assigned Work		Test Procedures	Requirement Paragraph Number	

### Alpha Magnetic Spectrometer (AMS) Hardware Acceptance Data Package As-Designed, As Built

E=electrical, electronic, electromechanical F=fracture critical L=limited life item O=not reconciled C=reconciliation complete

_							As I	Designed	,	As Built			Reco	onciliation	
Ра	Le	aeni evel	ture	Part Number	Qty Required	Nomenclature	Nomenclature Current Dwg Rev Unincorporated DCN's			Serial Number / Lot-Date Code	E/F/L	Component Ref Des	WAD	Notes	Status O/C
															1
															+
															+
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### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE OPERATING TIME / CYCLE

**Section VII** 

	Item Name					Part Nu	ımber		Serial	Number
Time / Cycle	!	Carial			Operati	ng Time			Cy	ycle
Part Name	Part Number	Serial Number		Allowable			Remainin		Allowable	Remaining
rarrame	Tartivamber	110111201	Hrs.	Min.	Sec.	Hrs.	Min.	Sec.		

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE AGE-SENSITIVE / TIME-ACTION ITEMS

#### **Section VIII**

Item Name					Part Number	S	Serial Number	
Part Name	Part Number	Serial Number	Birth Date	Action Due Date	Required Action	Last Operational and / or Servicing Date	Operational and / or Servicing Due Date	

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE NONSTANDARD CALIBRATION RECORD

#### **Section IX**

	Item	Name		Part N	umber	Se	erial Number
PART NAME				PART NUME	BER		
SERIAL NUMBE	R			MEAS. NUM	IBER		
RANGE (ENG	UNITS)	EXCITAT	EXCITATION VOLTS +/-		UNITS STIMULUS (ENG UNITS)		JT VOLTS OR SISTANCE
				(2140.0	14110)	IXLX	DIOTAIVOL
	BIIN NI	JMBER 1			PIININ	  UMBER	)
TEMP. ENV	IXOIT IX	DATE		TEMP. EN		DATE	
STIMULUS		IO. UNITS JLL SCALE	OUTPUT VOLTS OR RESISTANCE	STIMULUS		D. UNITS	OUTPUT VOLTS OR RESISTANCE

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE REPAIR LIMITATIONS

#### **Section X**

Item Name			Part Number		Serial Numbe
TYPE OF REPAIR	REPAIR I	LIMITATION REQIUREMEN	Т	REQUIREMENT	Γ SOURCE
				IDENTIFICATION	N METHOD
DADT NAME	PART	SERIAL/LOT	DUVOIO AL LO		TIMES

PART NAME	PART NUMBER	SERIAL/LOT NUMBER	PHYSICAL LOCATION	TIMES REPAIRED

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE PRESSURE VESSEL DATA

#### **Section XI**

Item Name				_	Part Number			Serial Number			
PART NAME				PART NUME	BER			SERIA	AL NUM	BER	
LIMITED LIFE		THRES	HOLD PRES	SSURE (PSID)				DA	ATE INS	TALLED	
PRESSURE LIMITATINS:	TP: OP:	PP:		CYCLE LIMITA	ATIONS:	MOPO	D:		PPC:		
	TEST NAME	TYPE OF		PEAK	MINIMUM	TIME			CUM	TOTALS	QC/OPER
FACILITY	(PROOF PRESS, LEAK TEST)	PRESSURAN	DATE	PRESSURE	PRESSURE	HRS	MIN	MIN	TIME	CYCLES	STAMP
THIS PRESSURE VESSEL IS CERTIFIED TO MEET ALL CONTRACT REQUIREMENTS, UNLESS OTHERWISE NOTED, AND IS ACCEPTABLE FOR FLIGHT OR GSE USE.											

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE PRESSURE VESSEL DATA

#### **Section XI**

Item Name	Part Number	Serial Number
DATE	CONTRACTOR/SUPPLIER SIG	SNATURE

# ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE NONFLIGHT HARDWARE / TEMPORARY INSTALLATIONS

#### **Section XII**

Item Name			Part N	Serial Number		
STREAMER/TAG NUMBER	PART NAME	PART NUMBER	SERIAL NUMBER	PHYSICAL LOCATION	REMOVAL EVENT	

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE CERTIFICATIONS

#### **Section XIII**

ITEM NAME	CI NO.	PART NUMBER	SERIAL NUMBER
Attached documented evidence attesting to the load, proof pressure, cleanliness, flight, etc.).		•	

Attached documented evidence attesting to the fact the delivered hardware meets specified requirements (i.e., proof load, proof pressure, cleanliness, flight, etc.). Supporting documentation [e.g. Verification Completion Notices (VCNs)], shall be available for review. Certifications and references to supporting records include qualification test procedures, certification analysis, vendor data, justifications for variances from vendor specifications, certification inspections procedures for all design requirements and acceptance requirements.

#### **CERTIFICATIONS INCLUDED IN THIS DATA PACKAGE**

Y	N	N/A	ITEM ID	INDEX
			Α	Qualification Test Procedures
			В	Certification Analysis
			С	Vendor-supplied Data Sheets
			D	Justifications for variances from vendor specifications and any records of approval
			Е	Certification inspection procedures for all design requirements and acceptance requirements
			F	Log of all hardware with corresponding references to certification records for all devices with stored energy (i.e. pressure vessels, capacitors, batteries)
			G	Log of hazardous chemical and materials with corresponding references to certification records

### ALPHA MAGNETIC SPECTROMETER (AMS) HARDWARE ACCEPTANCE DATA PACKAGE MSDS DATA

#### **Section XIV**

	Item Name	Part Number	Serial Number	
CHEMICAL/COMMON NAME	PHYSICAL PROPERTIES	HAZARDS OR OTHER RISKS	SAFE HANDLING	ENGINEERING PROBLEMS