

20170427 STATUS REPORT

Ahram lee

TOF Detector Preparation

12bar test with 2trig

Time resolution summary

bar#	Resolution[ps]	bar#	Resolution[ps]
1	96	7	78
2	87	8	98
3	124	9	96
4	77	10	83
5	99	11	83
6	100	12	81

TOF Detector Preparation

Cables & connectors

~~Thomas cable — sent e-mail a week ago ...~~

~~A-tech (from IBS)~~

Elkoh engineering

(SHV – RG59 – SHV) x 100, 10m

(BNC – RG58 – SMA) x 100, 10m

NexansKorea – in contact

SHV x200, SMA x100, BNC x 100

RG58, RG59 2km each

CERN stores

no problem to send CEA, Sacley

but to Seoul...?

<Connector & Cable ass'y>					
pos.	품 명 및 규 격	단위	수량	단 가	공 급 가 액
	*Halogen free coaxial cable				
1	RG59 10M ass'y/w SHV-SHV	ea	100	₩ 109,000	₩ 10,900,000
2	RG58 10M ass'y/w BNC-SMA 플러그	"	100	₩ 56,000	₩ 5,600,000

TOF Detector Preparation

Documents

SafetyFile



REFERENCE
GBAR Safety

EDMS NO. REV. VALIDITY
1 DRAFT

Page 3 of 9

TABLE OF CONTENTS

1. DESCRIPTIVE PART	4
1.1 GOAL & MOTIVATION	4
1.2 LOCATION AND VICINITY	4
1.3 HARDWARE DESCRIPTION	4
1.4 INFRASTRUCTURE	6
1.4.1 COUNTER	6
1.4.2 COUNTER SUPPORT	6
1.5 DAQ system	7
1.5.1 SPECIFICATION	7
1.5.2 COMPOSITION	7
2. OPERATION AND MAINTENANCE	8
2.1 PROCEDURE TO SET TOF DETECTOR	8
2.2 PROCEDURE TO START EXPERIMENT	8
2.3 PROCEDURE TO END EXPERIMENT	8
2.4 PROCEDURE TO SHUT DOWN TOF DETECTOR	9
3. DEMONSTRATIVE PART	9
3.1 Electrical hazard	9
3.2 Risk of fall	9

1.2 LOCATION AND VICINITY

The system will be installed within the AD machine circumference in the GBAR zone. The positron target is inside the Linac shielding bunker and the extraction line inside and outside the bunker.

3. DEMONSTRATIVE PART

3.1 Electrical hazard

What	Where	Qty	Corrective / Preventive Measure
Current	Cables and connectors	<10 A	

3.2 Risk of fall

What	Where	Qty	Corrective / Preventive Measure
Falling	Plastic scintillation counters array		The counter support

TOF Detector Preparation

Documents

PPSPS

1- REQUIREMENTS

CERN Team: GBAR collaboration

DESCRIPTION OF THE TASK TO BE CARRIED OUT.

Installation on the antiproton electrostatic decelerator in the CERN AD Hall (B.193) for the GBAR (AD-7) experiment. This PPSPS covers the installation of all the decelerator equipment.

Period of execution	Effective
Start Date: 03 April 2017.	Average: 10 weeks.
Completion Date: 18 August 2017.	Maximum: 20 weeks.

Access:

AD hall.
ELENA LNE50 beamline.

Authorisation to start work given on:

2- THE ORGANISATION FOR THE APPLICATION OF THE OVERALL PROCEDURE

	Recipient of the overall procedure	Mobile
Project Engineer: Patrice Perez.	X	
Technical Co-ordinator: Giuseppe Mornacchi.	X	163564 (+41 75 411 3564).
Installation Project Engineer: Jean-Yves Roussé.	X	

3- PERSONS CONCERNED BY THE OVERALL HEALTH AND SAFETY PROTECTION PLAN – External

Intervenants	Name	Tel.
EP DSO	O. Beltramello	160171 (+41 75 411 0171)
EP ADSO	A. Desmarest	168488 (+41 75 411 8488)
HSE correspondent	C. Arregui	166527 (+41 75 411 6527)
TSO	B. Lefort	165954 (+41 75 411 5954)

4- CERN OR INSTITUTE EMPLOYEE INFORMATION

List of persons who executes the work.

Name/Surname	Discipline	Special Authorizations	Person with competent First Aid Skills (Y)	Special Medical Surveillance (Y/N)	Specific habilitation (electric, work at height ...)	Access right
Audic HUSSON	scientist		N	N	electric	AD Hall
Hervé LEFORT	engineer		N	N		
David LUNNEY	scientist		N	N	electric	AD Hall

WORK SUPERVISOR: PATRICE PEREZ FOR ALL THE INSTALLATION.

TOF Detector Preparation

Documents

PPSPS

*5- DECELERATOR INSTALLATION PROCEDURE

1. Introduction:

The antiproton decelerator will be installed in the GBAR experimental zone, after the ELENA beamline LNE50, located in AD hall B.193 (see Figure 1).

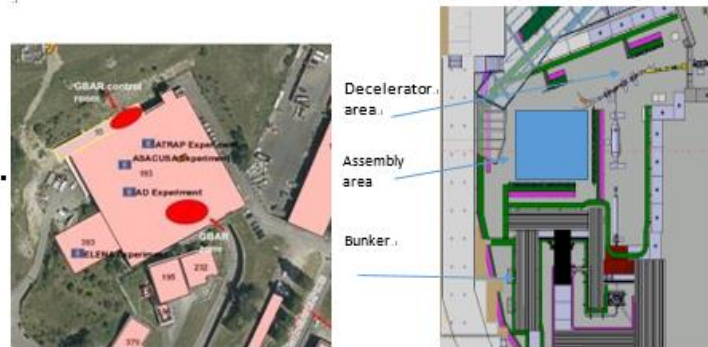


Figure 1: GBAR experiment in ELENA hall in Building 193 at CERN.

The main components of the GBAR decelerator are listed, described and illustrated below (an image of the ensemble is shown in Fig. 2):

- Decelerator-electrode chamber: houses a series of cylindrical electrodes with high-voltage feedthroughs



Work to be carried out: 1. Transport in experimental area Responsible: D. Lunney		Form N° 01 Written by: D. Lunney
Work to be carried out		<i>Transport and management and delivery of boxes with decelerator components from storage location to entrance of experimental hall</i>
Risks		<i>Dropping boxes during loading or unloading</i> <i>Damaging transported element during unpacking process</i> <i>Team personnel can be injured/smashed by transported box</i> <i>Small injuries during unloading of the boxes</i>
Preventive Actions		<i>Special sign on boxes „Lift Here“</i> <i>Weight and content descriptions on documents sticking on boxes</i> <i>Using protective clothing, safety shoes helmets, dosimeter and gloves</i>
Measures to be taken		<i>Delimitation of an area in case crane operation is necessary</i> <i>Only trained people can enter on it</i>
Personnel in charge of the realisation		<i>EN-HE is in charge of the transport</i> <i>Audric Husson</i> <i>Hervé Lefort</i> <i>David Lunney</i>
Materials to be used		<i>Lifting belts and ropes</i>