CERN — European Organization for Nuclear Research

I S I E C

INITIAL SAFETY INFORMATION ON EXPERIMENTS AT CERN

DATE: January 2006 **EXPERIMENT:** MERIT (ntof11)

INSTALLATION START: February 2006 **AREA/BEAM:** TT2A (FTN), TT2, TT10, ISR

SPOKESMAN: Harold G. Kirk (BNL), Kirk McDonald (Princeton University)

GLIMOS : Adrian Fabich **TEL:** 160345

FILLED IN BY: Adrian Fabich **TEL:** 160345

(1) TEST BEAMS : FTN line

LABS AT CERN (BLDG/ROOM): TT2A (FTN), TT2, TT10, ISR

(2) GASES, LIQUIDS, CRYOLIQUIDS

(used in detectors or kept in nearby containers}

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. Press.	Max Flow
cryogenics	LN2	6000 liter	15 bar	200 g/s
Hg loop	mercury	25 liter	100 bar	1.5 l/s
hydr. fluid	Quintolubric	~200 liter	206 bar	~70 l/s
	(see EDMS 702271)			

(3) OTHER CHEMICALS

Toxic/Corrosive/Flammable metals, solvents, additives etc:

see above,
no flammable gases/liquids present

(4) ELECTRICITY

MAGNETS:

Magnet type	Power	Field	Gap Vol.	Max.water press.
BNL solenoid	5 MW	15 T pulsed	15 cm bore, 1m	80 K cryogenic, 15 bar

High Voltage (> 1 KV)

Detector Type	Voltage	Current	Stored Energy	No of HV Channels	Remote Shut-off?
scintillator	???	???	???		
not yet known	???	???	???		

SHORT-CIRCUIT current > 5 mA for >50 V possible anywhere? bus bar to BNL solenoid

POWER dissipated by all electronics **a) on detectors:** negligible

b) off detectors: negligible

SPECIAL GROUNDING REQUIREMENTS? n.a.

(5) LIFTING AND HANDLING

Weight of heaviest single piece to install ? BNL solenoid with baseplate, ~5.5 tons

Specially designed handling equipment? CERN standards: 170 ton crane, turtle, jacks

For which max. weight? see above

(6) VACUUM TANK, PRESSURE TANK, CRYO TANK

Tank	Abs. pressure	Volume	Weakest part(s) of wall
LN2 dewar	2 bar	6000 liter	standard equipement
cryostat	15 bar	120 liter	(with supply lines)
Hg loop	206 bar	open system	beam windows

(7) IONIZING RADIATION

Beam intensity, radioact. Sources, depleted uranium, etc.

PS proton beam, 24 GeV/c, 4*10^13 protons/pulse, see also EDMS 626963

(8) NON-IONIZING RADIATION

	DETAILS (e.g. class of laser, origin of UV light, average power of microwaves or RF, pulsed or CW, ...)
LASER 1	class4, 808 nm, 30 W peak, 150 ns pulse, 1 MHz (2 systems)
LASER 2	class4, 850 nm, 1 W peak, micro-sec pulse at kHz (2 systems)
UV LIGHT	not applicable
microwaves, RF	not applicable

(9) OTHER HAZARDS (or remarks):

ODH, fire, access, interlocks ...

see memos at EDMS 626963, 697850, 697857, 697860

(10) RISK ANALYSIS

ODH not yet done, see also above

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