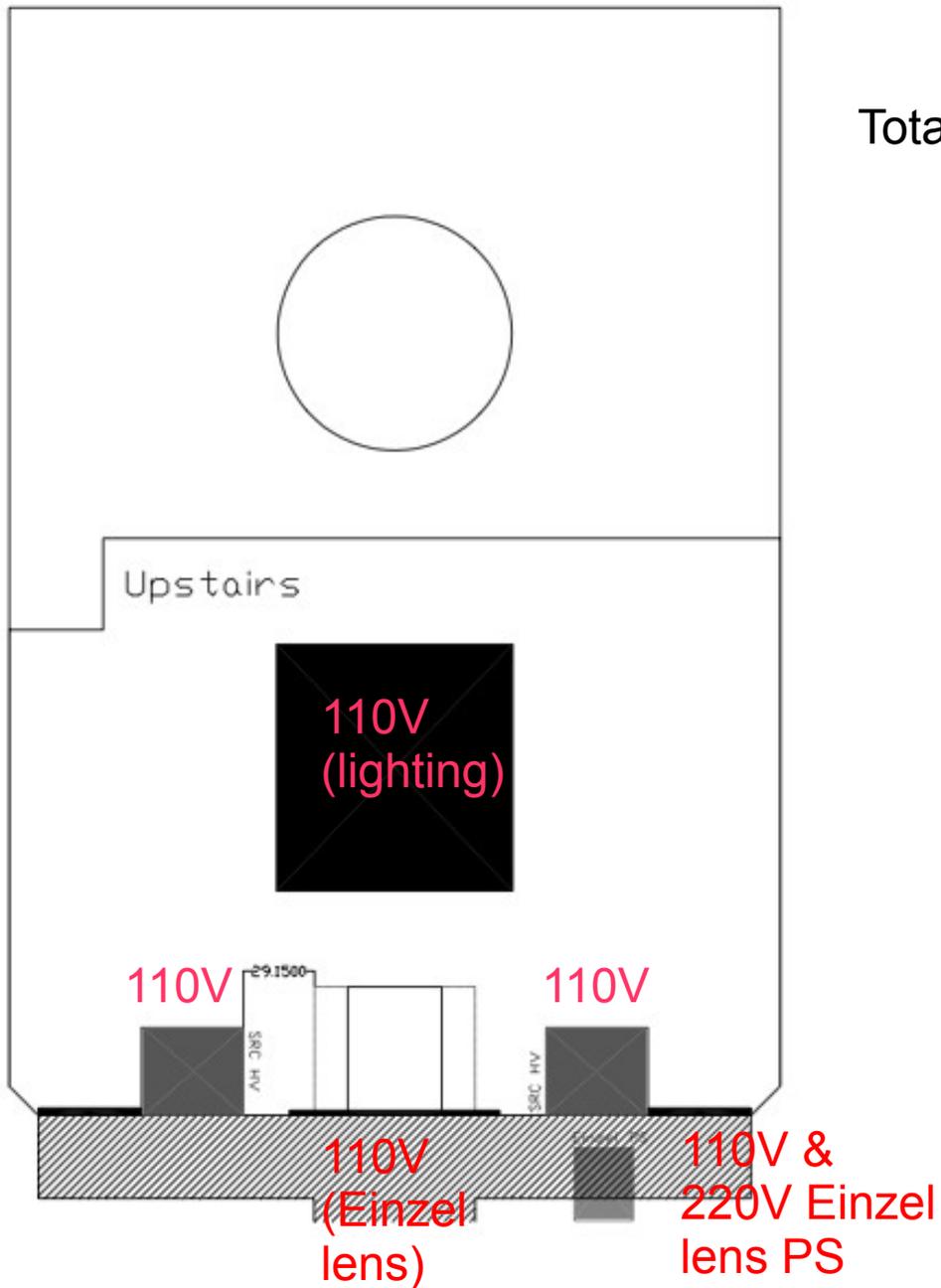


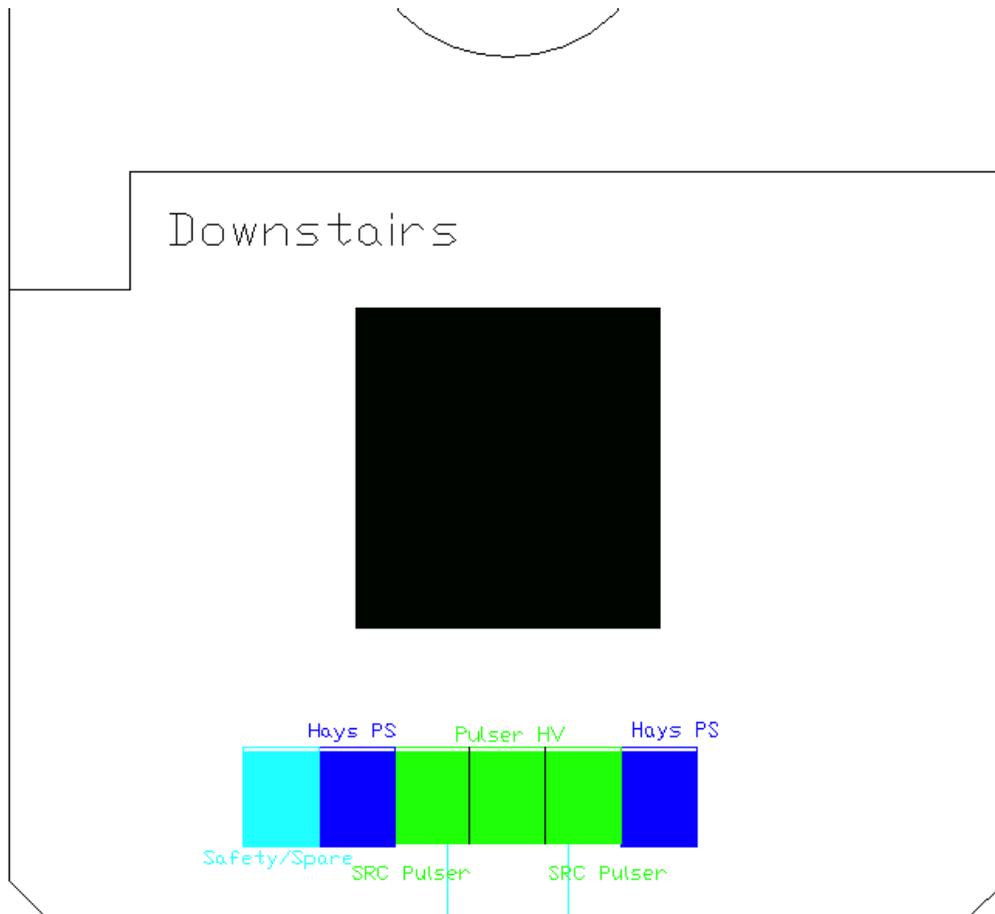
Outlets on upstairs platform



Total 110V = 4
220V = 1

More outlets for pit, see next slide for Steve Hay's more details.

Outlets in pit



Where does safety relay rack go?

Rack	Voltage type	Quantity	Comments
Solenoid	480V	3 outlets	
	120V (1 circuit)	2 plug strips	

Rack	Voltage type	Quantity	Comments
Quad	480V	4	
	120V (1 circuit)	2 plug strips	

Rack	Voltage type	Quantity	Comments
Source HV	120V @ 20A (2 circuits)	2 plug strips	Can Steve and Dan share?
	220V	2	For extractor HV
(Steve hays)	208V	2	3 phase with disconnect
(Steve Hays)	120V	1 plug strip	

Rack	Voltage type	Quantity
Source pulser (A)	120V	1

Rack	Voltage type	Quantity
Source pulser (B)	120V	1

Rack	Voltage type	Quantity
Spare/safety	120V	1

Additional: 1x 489V outlet with disconnect.

Solenoid and Quad power supply racks.

1. 4 each 45 amp 3 phase 480vac circuits for the power supplies.
2. 2 each 120 vac circuits connected to the power supply rack one/rack plug strip.
3. 1 each 120 vac circuit connected to the regulation rack plug strip.
4. 18 in cable tray for power above the racks. Should be able to be supported by platform columns.
5. 18 in cable tray for control cables above the racks.
6. 18 in cable tray for power up the wall to just under the Ion Source .
7. 18 in cable tray for control cables up the wall to just under the Ion Source.
8. 1 each 120vac 20 amp circuit for the CDC controller for the high voltage power supply.
9. 1 each 120vac 20 amp circuit for controls rack plug strip.

High voltage power supply rack

1. 2 each 208 3 phase with a disconnect on the wall for each.
2. 1 each 120 vac circuit connected to the rack plug strip.

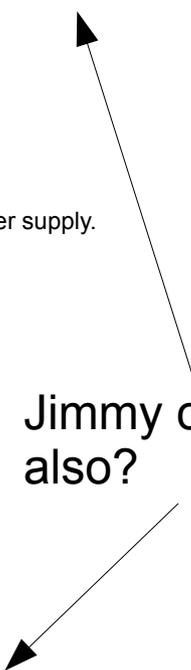
Other items.

1. overhead lighting, two behind the rack line up, two in front of the rack line up and two over by the stairs on a switch near the stairs.
2. one 480vac 60 amp with disconnect welding outlet to be used with transformer for temp power down stairs during construction.
3. we will need 208/120vac power near the source for pumps, fans and test equipments, minimum 6 120 and two 208 circuits.

Suggested installation:

1. Install a 45kva transformer and 200 amp panel in the lower level for all the 208/120 vac circuits.
2. Use wire way for all 208/120 vac circuits above the racks and under the Ion Source.
3. One conduit for all the 480vac circuits. The power supply connection are identical to the MI-30 ANU racks.

Jimmy can install
also?



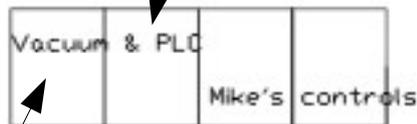
Outlets in H- control room



Stairs

1x20A circuit for 2x 208V
3 phase 20 A.

1x 120V 20A for 2 outlet
strips



2x 120V 20A for 3 outlet strips.

1x 20A circuit for 4x 208V 3
phase 20A 5 wire outlet. (Note:
these can be relocated)

SO cords need to be
replaced!

Haefly



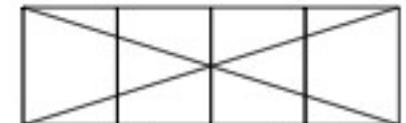
Spares



H-

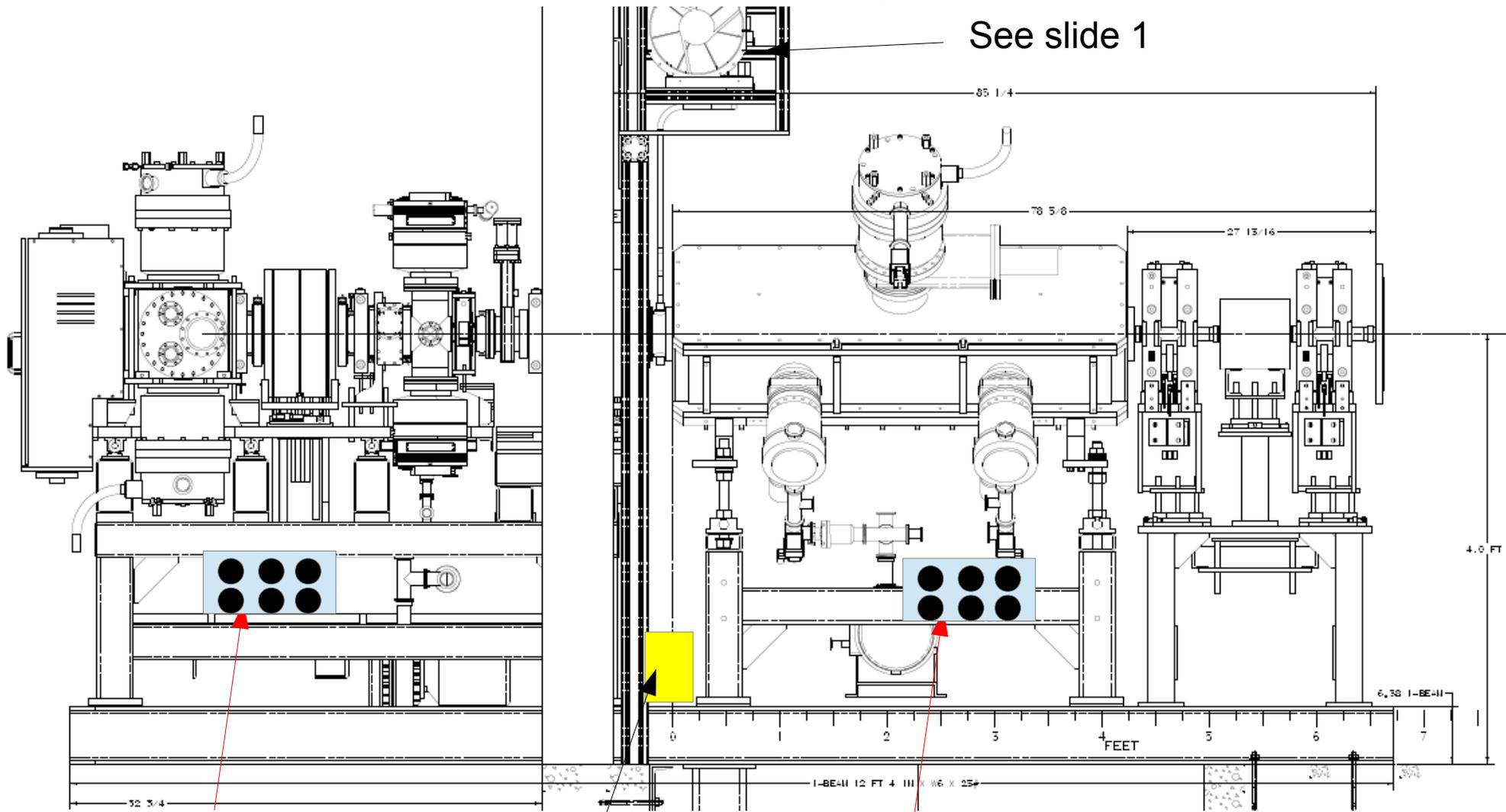


3x110 V



Haefly

Outlets in RFQ injector line



120V for fans

1x 208 3 phase with neutral,
5 wire 20A outlet .

120V for fans

Jeff will build 120V outlets
for the roughing pumps
tapping off from the 208

PP-L1-1B

*This is the panel in the Pre-Acc Control Room
Behind the brown racks w/ LUO-RR1-4*

PP-L1-1B

225 Amps 208Y/120 VAC Fed From PP-L1-1 Circuit 1

Position	Amps	Phase	Load Description	Position	Amps	Phase	Load Description
1	30	A		2	20	A	
3	30	B		4	30	B	IPPS 1 - Relay Rack LUO-RR1-4 Located in LIU-000
5	20	C	(Auxiliary Power for Pre-Acc Dome -208V 3phase ckts 7-9-11 LIU-000 West Wall, Disconnect Switch, GE 30 amp, 3 pole, 600 VAC conduit goes to tunnel area)	6	30	C	
7	20	A		8	30	A	IPPS 2 - Relay Rack LUO-RR1-4 Located in LIU-000
9	30	B		10	30	B	
11	30	C		12	30	C	IPPS 3 - Relay Rack LUO-RR1-4 Located in LIU-000
13	30	A		14	30	A	
15	30	B		16	30	B	IPPS 4 - Relay Rack LUO-RR1-4 Located in LIU-000
17	30	C		18	30	C	
19	40	A		20	40	A	QMS 7 Relay Rack LUO-RR1-3 Located in LIU-000
21	40	B		22	40	B	
23	40	C		24	40	C	ID
25	40	A	QMS 1 Relay Rack LUO-RR1-1 Located in LIU-000	26	40	A	QMS 4 Relay Rack LUO-RR1-2 Located in LIU-000
27	40	B	ID	28	40	B	
29	40	C		30	40	C	
31	40	A	QMS 2 Relay Rack LUO-RR1-1 Located in LIU-000	32	40	A	QMS 5 Relay Rack LUO-RR1-2 Located in LIU-000
33	40	B	IC	34	40	B	
35	40	C		36	40	C	
37	40	A	QMS 3 Relay Rack LUO-RR1-1 Located in LIU-000	38	40	A	QMS 6 Relay Rack LUO-RR1-2 Located in LIU-000
39	40	B		40	40	B	
41	40	C		42	40	C	

FESS Code

L 436

Date of Issue

5-Sep-07

Panel Location

Linac Gallery, Lower Level LIN-000, Pre-Accelerator Control Area, West Wall Behind Rack LUO-RR1-4

Special Notes

PP-L1-1 is Located on the East Wall of this Area

Please Notify Accelerator Division Electrical Coordinator (x3216) of Any Revisions or Corrections.

*Also see PP-L1-1A
near rest room*

LL Linac missing items.xls

PP-L1-1B

Ranson / Aponte / Ducar