

Space and other items needed for commissioning/testing Small Angle Magnet

Test Lab area configuration

NPS crystals
preparation

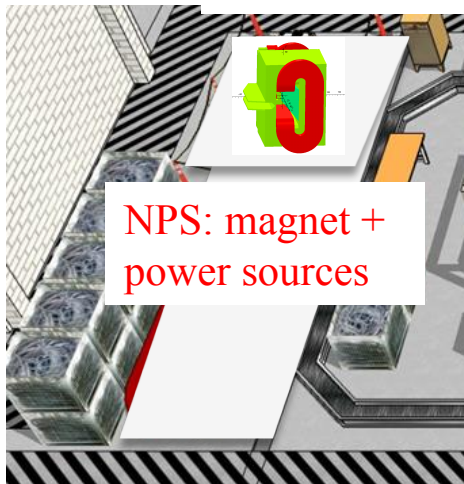


NPS: magnet +
calo + DAQ

Stage #1, October-December 2017

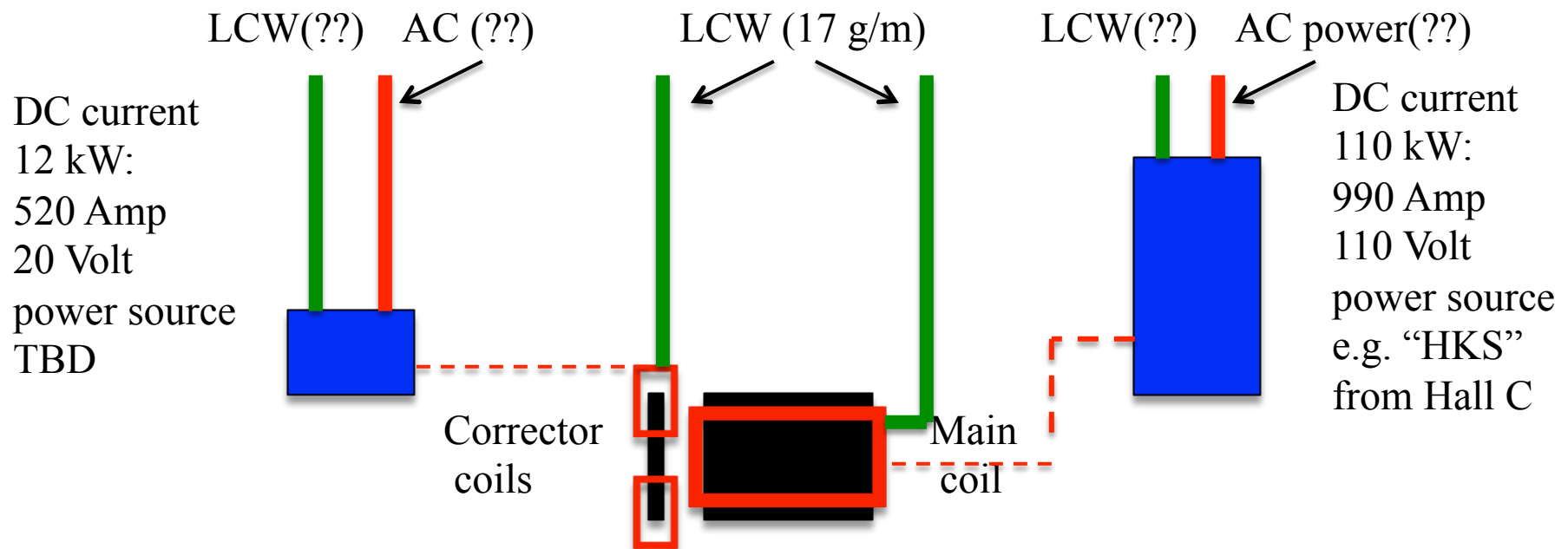
- Assemble magnet with cooling connection
- Power sources installation/connection
- Magnet-to-DC connection
- Magnet + corrector field test

Test Lab area configuration

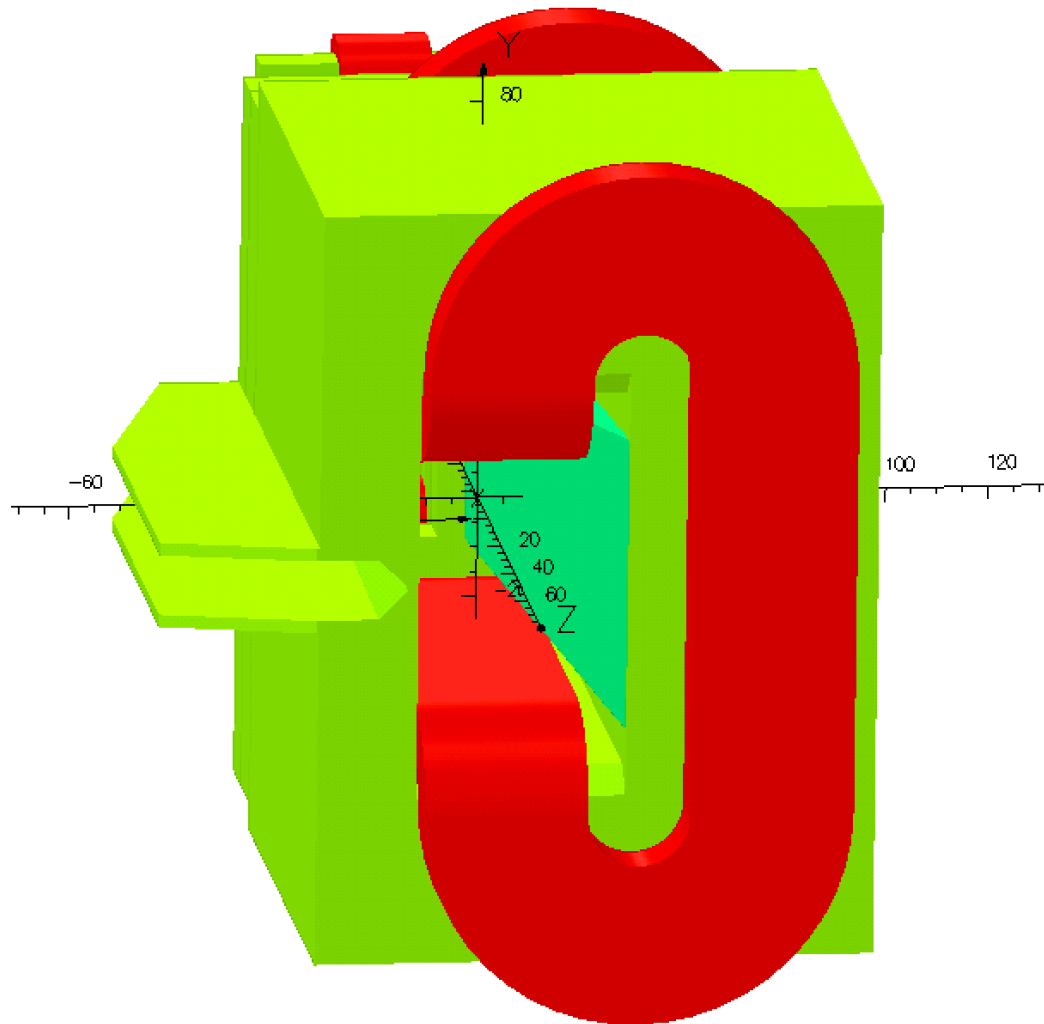


Stage #1, October-December 2017

- Assemble magnet with cooling connection
- Power sources installation/connection
- Magnet-to-DC connection
- Magnet + corrector field test



Revised magnetic design



Non-uniform field but only

1-2% uniform integral Bdl

The same power and coil,
larger radius for the coil.

8
7
6
5
4
3
2
1

REVISION HISTORY			
DATE	REV	DESCRIPTION	APPROVED
07/2	A	REQUIRED CONDUCTOR LENGTH WAS 32 METERS	
			12/2/2016

17 7/8 "KEEP OUT ZONE"

R3 1/4 MAX

R4 1/2

B12

APPROXIMATE WEIGHT: 4000 LBS

NOTES:

- SEE SPECIFICATIONS DOCUMENT # 67508-00004-SPEC-COIL.
- BRAZE ASSY AND LEAK CHECK PER SPECIFICATION ABOVE.

In accordance with the Jefferson Lab ESH&G manual, Subject Matter Expert(SME) signatures may be required

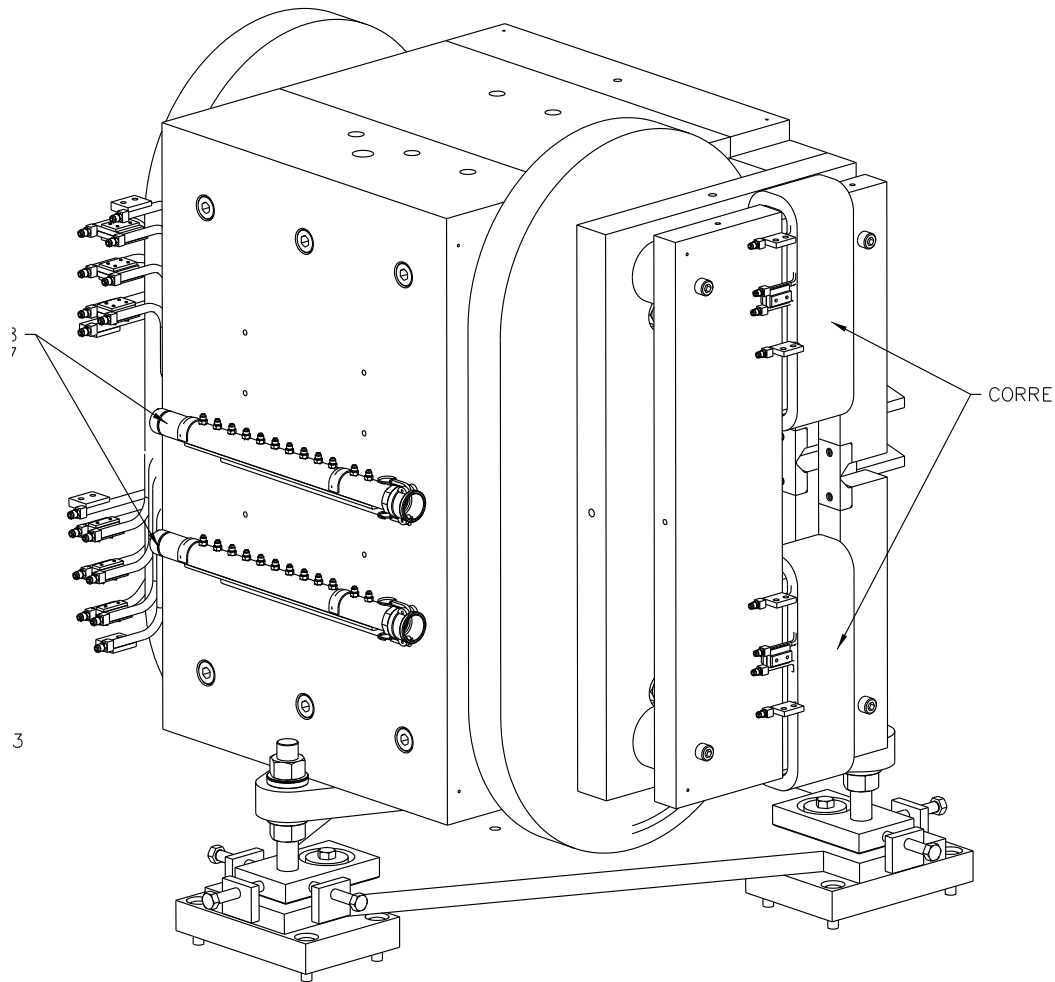
COIL ASSY

COIL WINDING REFERENCE

COIL SECTION

NO	REV	DESCRIPTION	DATE	BY	OR
18	14	WASHER	WASHER SPLIT LOCK	316 SS	OR
19	14	WASHER	1/4 INCH	316 SS	OR
20	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
21	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
22	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
23	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
24	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
25	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
26	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
27	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
28	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
29	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
30	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
31	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
32	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
33	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
34	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
35	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
36	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
37	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
38	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
39	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
40	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
41	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
42	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
43	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
44	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
45	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
46	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
47	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
48	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
49	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
50	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
51	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
52	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
53	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
54	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
55	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
56	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
57	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
58	14	WASHER	1/4-20 X 1.5 INCH	316 SS	OR
59</					

Magnet design



Hall C NPS Sweeper Magnet Yoke

TECHNICAL SPECIFICATION

67508-00004-SPEC

November 5, 2016

Written By Mike Fowler Date 11-15-16
Mike Fowler - Hall C Engineering Support

Approved Paul Brindza Date 11/15/16
Paul Brindza - Hall C Sr Engineer

Approved Bogdan Wojtsekhowski Date 11/15/16
Bogdan Wojtsekhowski - NPS Scientist

Weight	19 tons	need 20 t crane
Vertical size	80 inches	
Horizontal size	62" x 60"	
Mail coil power	990 Amp x 110 Volt	
Corrector power	520 Amp x 20 Volt	
Cooling water	Flow 17 gallons/min	Pressure 130 psi
Access space	3-4 feet around	
Total space	12 feet x 12 feet	