MPS/MU-NOTE/EP 69-5
RM/ld - 21. 5.1969

STANDARD POWER SUPPLIES FOR THE WEST HALL

Remarks to the attached tables :

a) The "B" after the magnet type stands for the new 10 cm gap magnets and lenses designed by P. Bossard.

b) The "2 m B" magnets are not yet designed. Therefore I use the parameters of the 2 m standard magnets.

c) If two "1 m B" magnets connected in series could be used instead of one "2 m B", no changes would be necessary with respect to supplies (the R2B supply remains); the power however, would slightly increase.

d) According to the precision requirements, series-regulator (SR) are not needed. It is nevertheless proposed to order as much SR's as F's (Filter) in order to provide the means for an improved stability, which might become necessary.

R. Mosig

Distribution :

P. Coet
L. Coull
D. Danner
J. Geibel
M. Georgijevic
G.L. Munday
G. Petrucci
N. Rasmussen
M. Reinharz
H. Reitz

PRIMARY BEAM - WEST

Element	Type of Magnet (stand. or special)	Current (A) Max. - Min.	Precision o/oo	Conn.	Supply	Power required KVA	Power required KW	Remarks
Q 1	2 m	800	1	]	R2+D	320	260	
Q 2	2 m	800	1		-	-	-	
Q 3	2 m	800	1		R2	175	130	
Q 4	1 m	600	1	]	R2	155	145	
Q 5	1 m	600	1		-	-	-	
Q 6	2 m	600	1		R2	115	95	
BM 4	Corr. Magnet	250	0.1		T1	10	10	
BM 5	"	250	0.1		T1	10	10	
BM 6	"	250	0.1		T1	10	10	
BM 7	"	250	0.1		T1	10	10	
BM 8	"	250	0.1		T1	10	10	
				R2	4	815	670	
				R1	-			
				F	-			
				D	1			
				SR	-			
				T1	5			

RF BEAM - WEST

Element	Type of Magnet (Stand. or special)	Current (A) Max. - Min.	Precision o/oo	Conn.	Supply	Power required KVA	Power required KW	Remarks
Q 1	2 m	760	1		R2	160	115	
Q 2	2 m	760	1		R2	160	115	
Q 3	1 m	760	1		R2	160	115	
Q 4	2 m	760	1		R2	160	115	
Q 5	0.75 m	400	1		R1+F	50	20	
Q 6	2 m	775	1		R2	170	125	
Q 7	2 m	675	1		R2	135	90	
Q 8	2 m	500	1	]	R2	125	100	
Q 9	2 m	775	1	]	R2	170	125	
Q 10	2 m	500	1	]	-	-	-	
Q 11	2 m	600	1	]	R2+(D)	220	150	
Q 12	2 m	600	1	]]	R2+(D)	220	150	
Q 13	2 m	600	1	]]	-	-	-	
Q 14	2 m	600	1	]	-	-	-	
Q 15	2 m	750	1		R2	160	115	
Q 16	2 m	780	1		R2	170	125	
Q 17	2 m	675	1		R2	135	90	
Q 18	2 m	600	1		R1	90	75	
Q 19	1.2 m B	600	1		R1	90	75	
BM 1	2 m	600	0.1	]	R2+D	220	150	
BM 2	2 m	600	0.1	]	-	-	-	
BM 3	2 m	600	0.1	]	R2+D	220	150	
BM 4	2 m	600	0.1	]	-	-	-	
BM 5	Corr. Magnet	200	0.1		T1	~ 10	~ 10	Corr.
BM 6	Corr. Magnet	200	0.1		T1	~ 10	~ 10	"
				R2	15	2835	2020	
				R1	3			
				F	1			
				D	4			
				SR	-			
				T1	2			

OMEGA BEAM - WEST

Element	Type of Magnet (stand. or special)	Current (A) Max. - Min.	Precision o/oo	Conn.	Supply	Power required KVA	Power required KW	Remarks
BM 1	1 m B	250	1		R1	25	15	
BM 2	2 m B	770	1		R2	150	100	
BM 3	2 m B	610	1		R2	120	80	
Q 1	2 m	660	1		R2	130	90	
Q 2	2 m	590	1		R1	85	70	
BM 4	2 m	780	0.1		R2+F	180	130	
Q 3	1.2 m B	500	1		R1	70	50	
BM 5	2 m B	770	1		R2	170	125	Vert.
Q 4	2 m	550	1	]	R2	140	130	
Q 5	2 m	540	1		-	-	-	
BM 6	2 m B	880	1		R2	210	175	Vert.
Q 6	1.2 m B	560	1		R1	80	65	
Q 7	2 m	510	1	]	R2	155	135	
Q 8	2 m	430	1		R1	65	45	
BM 7	2 m	780	0.1	]	R2+D	310	230	
BM 8	2 m	780	0.1			-	-	
BM 9	2 m	780	0.1		R2+F	180	130	
Q 9	2 m	420	1		R1	55	35	
Q 10	2 m	600	1	]	-	-	-	
Q 11	1 m	560	1		R1	75	55	
BM 10	2 m	780	0.1	]	R2+D	310	230	
Q 12	2 m	520	1		R1	75	55	
BM 11	2 m	780	0.1	]	-	-	-	
Q 13	1 m	550	1		R1	75	55	
BM 12	1 m B	440	1		R1	60	45	
BM 13	NP special	700 ?	1		R2+F	145	100	
				R2	12	2865	2145	
				R1	10			
				F	2			
				D	2			
				SR	-			
				T1	-			

POWER REQUIREMENTS

	KVA	KW	Cosφ
Primary beam	815	670	0.82
RF beam	2835	2020	0.715
Omega beam	2865	2145	0.75
TOTAL	6515	4835	0.74

SUPPLIES

	R2B	R1B	F	D	SR	T1B
Primary beam	4	-	-	1	-	5
RF beam	15	3	1	4	-	2
Omega beam	12	10	2	2	-	-
TOTAL NET	31	13	3	7	-	7
ORDER	35	15	5	10	5	10

Prices for budget estimations (electronics included)

	R2B	R1B	F	D	SR	T1B
Unit price (kFr.)	50	40	15	15	15	25
Total (kFr.)	1750	600	75	150	75	250

TOTAL SUPPLIES (kFr.) 2.900