

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
1	Date:			8/25/2012															
2	Run description:			FRC/RMFO V-ry helicon vs aperture															
3	Base pressures: SEC IG (T)																		
4	CC IG (T)																		
5	FEC IG (T)			2.1e-7															
6	SEC Slow Baratron (T)			-1.0003															
7	CC Slow Baratron (T)			-1.0003															
8	RMF frequency & phase																		
9	Magnet configuration & PS			4x8 + 8x4 coils; BB PS & 2 Magna powers inside 8; eight BN-covered FCs Recentered 4-turn MC coil															
10	RMF system			SRS -> duty factor limiters -> AR100LM9 -> 8KD -> 200 kW home made antennas: 2-turn; cable: RG-226, 60" long															
11	Time			3:45	3:27	3:45	5:46		4:03	4:19	4:30	5:00	4:58	5:44	5:29				
12	Magnapower	L-2 Coils I (A)		300	300				300	298		298	298	300					
13	Big Blue	L-2 Coils I (A)		300	300				302	302		301	302	299					
14		Nozzle coils I (A)		100	100				100	100		100	100	100					
15		SEC IG (T)																	
16		SEC Slow Baratron (T)		1.0011	1.0005				1.0004	1.0000		1.0000							
17		CC IG (T)																	
18		CC slow Baratron (T)		1.706	1.704				1.704	1.709		1.702	1.702	1.698					
19		FEC IG (T)		2.4	2.5				2.5	2.5									
20		FEC FB (T)		0.5	0.5				0.5	0.5									
21	Ta paddle voltage																		
22	Main valve			C															
23	Navigator valve			H															
24	End turbo valve																		
25	Gases/feed location/sccm			H ₂ /SEC															
26	PV-10 (V)																		
27	Pulse	A to/Δt																	
28		B to/Δt																	
29	CC Pressure (mT)	P _b																	
30	(Fast Baratron)	P _a																	
31	170 GHz	dia (mV)/IM freq																	
32	Glassman	High Voltage (kV)																	
33	RMFO system	main SPS																	
34		Pulse width (ns)																	
35		Time between pulses (s)																	
36	Frequency: Center(MHz)/Span(KHz)																		
37	Phase °			2.75	2.77				2.694			2.684		2.683					
38	P _a			7.5	8.32				8.57			8.54		8.49					
39	P _r (kW)																		
40	ΦM or % reflected																		
41	FEC probe																		
42	CC Probe																		
43	Helicon Pf/Pr																		
44	Helicon (SRS/mod)			0.24															
45	Comments/changes:			for Δφ = π/2, n _e = 2.1e12 cm ⁻³ for 16-cm dia plasma															

2022/08/25 ①

* To check the noise with various aperture; peaking time.

SDD1 → 27054 - Radial Scan

SDD2 - 16645 - Nozzle

SDD3 - 19777 - CC Mid Point

01 - noise data taken with no plasma

3:04 02 -
03 -

3:12pm 04 - Noise data taken with B.B = L2 = 300A
05 Nozzle = 100A.
06

3:10pm 07 - SDD1 - L2 = 300A - noise no plasma
08 - SDD3 - " " "
09 - SDD2 " " "

07 - SDD1 - Ap 4 - L2 = 300A, SL = 1.4%

B.B = 300A

Nozzle = 100A.

08 - SDD2 - /

SL = 1.9%

PF = 2.717 V

09 - SDD3

SL = 1.6%

PR = 808 mV

The SL was set to zero

3:40pm 10 - SDD1 - ~~Ap 4~~ - L2 = 300A, SLO

11 - SDD2 - " - "

12 - SDD3 Ap 4 " "

AP - Fully Open.

PF = 2.696

PR = 858 mV

3:47 13 -
14 -

15 - SDD3 - Ap - Open

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Aperture set = 0. SL ~~added~~

$P_f = 2.683$
852 mV

5:02 37
38
39

$A_p = 0$ SL added

702 μ tor

5:10 40 SDD
41
42

$A_p = 4$ Peaking time changed to 2 μ s.

~~56, 2, 9.6, 0.1~~

43
44
45

PT = 9.6 μ s