

15% N.G. → Full
 → H. T. key recovery
 → 5mm probe
 → 1st PI must be
 specific tasks
 → Current subunit thru
 Astro Beam
 DOE agent

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Date:		9/29/2022														
2	Run description:		FRC/RMFO RHF Ar → He breakdown → 5cm probe														
3	Base pressures: SEC IG (T)																
4	CC IG (T)																
5	FEC IG (T)		6.6 e-7														
6	SEC Slow Baratron (T)		.0005														
7	CC Slow Baratron (T)		.003														
8	RMF frequency & phase		1.8832														
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		10:13 10:16 10:17														
12	Magnapower	L-2 Coils I (A)	2.51	2.01													
13	Big Blue	L-2 Coils I (A)	198	147													
14		Nozzle coils I (A)	50	50													
15		SEC IG (T)			10:13	1.3	25	~0.9	4.3	8		1.8832	.960	80	200	185	
16		SEC Slow Baratron (T)	.0014	.0013	10:16	1.4	39	0.36	6.1	13	-515	no change					
17		CC IG (T)			10:35	1.5	54	2.5	2.4	2.0	-515	1.8027					
18		CC slow Baratron (T)	.958	.942	10:44	1.6	74	.124	8.2	2.9	-515						
19		FEC IG (T)	3.0	2.9	10:49	1.7	86	.166	9.6	3.5	-515	no change					
20		FEC FB (T)	e-5	e-6	11:09	1.8	92	.150	10.	4.0		50 → 200 → 200	I-1				
21	Ta paddle voltage																
22		Main valve	C	C	11:12	1.8	94	.161	12	3.8		50 - 300 - 300	forget it				
23		Navigator valve	0	0	11:15	1.7	86	.234	11	3.4		this is higher	doing in run				
24		End turbo valve	0	0	11:20	1.6	75	.274	10	3.0		MPE BB 515	25.20				
25	Gases/feed location/sccm		Ar/CC Ar														
26		PV-10 (V)	11:27 1.5 62 .395 9 2.3														
27		Pulse A to/Δt	11:30 1.4 47 .598 2.5 1.6														
28		Pulse B to/Δt	11:26 1.32 40 1.22 2.4 13.5														
29	CC Pressure (mT) Pb		11:45 1.60 25 .50 10.2 3.1														
30	(Fast Baratron) Pa		11:50 1.70 88 .490 11 3.6														
31	170 GHz dia (mV)/IM freq		11:55 1.80 92 .324 11 3.9														
32	Glassman	High Voltage (kV)	16 11:58 1.80 62 .605 4.6 2.4														
33	RMFO system main SRS		1.8 12:03 1.49 52 1.65 8.1 2.0														
34	Pulse width (ms)		4.5 12:06 1.66 1.02 1.2 1.2														
35	Time between pulses (s)																
36	Frequency: Center(MHz)/Span(KHz)		1.8032 1.66 1.02 1.2 1.2														
37	Phase °																
38	Vc RHF Hz	Pa	-515														
39	Vc RHF Pf (kW)	Pr (kW)															
40	OM or % reflected		12:15 1.6 70 .147 8.3 2.4														
41	Vc	FEC probe	.919	increases	12:20	1.6	80	.170	8.2	2.8		P=1.03 mT	PFE = 2.2				
42	Vc	CC Probe	.293	↑	12:25	1.6	80	.175	8.2	2.9		= 1.831 mT	= 3.0				
43	Helicon Pf/Pr		12:28 1.6 60 .195 8.1 2.4														
44	Helicon (SRS/mod)		0.10 12:32 1.6 80 .230 8 2.4														
45	Comments/changes: for Δφ = π/2, ne = 2.1e12 cm-3 for 16-cm dia plasma																
sheet 4 of 7																	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
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45		Helicon (SRS/mod)																
46		Comments/changes:																

for $\Delta\phi = \pi/2$, $n_e = 2.1 \times 10^{12} \text{ cm}^{-3}$ for 16-cm dia plasma