

2015/08/27

- Helium only

-  $H_2$  gas

- Instruments

Interferometry

Vant & Vball

X-ray

Lagrange Pt. 2.

- Nozzle Carrot Scan

sheet 1 of 3

2015/08/27

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:															
2			Run description:	FRC/RMFO														
3			Base pressures: Main IG (T)															
4			ER IG (T)															
5			Satellite IG (T)															
6			Main chamber Baratron (T)															
7			Expansion region Baratron (T)															
8			Antennas/delay lines	2-turn, RG-217, 15" long														
9			RMF frequency & phase															
10			Magnet configuration & PS	4x8 + 8x4 coils; RR PS; eight BN-covered FCs	Recentered 4-turn MC coil													
11			RMF system	SRS-> duty factor limiter -> AR100LM9 -> 2KD -> four 8K Ultras														
12			Wall Time	1:43	12:05	12:07	12:11	12:14	12:16	12:19	12:23	12:27	12:45	12:54	1:40	1:43	1:46	1:48
13			Main magnets I (A)	132			247								92.2			
14			Nozzle coils I (A)	406	352	307	247	195	146	101	42	0 (-83)	0		403	350	308	255
15			MC IG (T)															
16			MC Slow Baratron (T)	.0084	.0083	.0083	.0083	.0083	.0083	.0083	.0083	.0083	.0083	.0083	.0089	.0089	.0085	.0089
17			MC FB (T)	.33	.28	.25	.25	.24	.24	.23	.22	.23	.19		.64	.65	.68	.66
18			ER IG (T)				Header on											
19			ER slow Baratron (T)	.440	.439	.437	.438	.436	.433	.438	.436	.434	.443		.777	.779	.786	.786
20			ER FB (T)															
21			Satellite IG (T)	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5	1.9e-5		3.6e-5	3.6e-5	3.6e-5	3.6e-5
22			Satellite FB (T)															
23			Bias voltage: paddle															
24			Main valve															
25			Navigator valve															
26			End turbo valve															
27			Gases/feed location/sccm															
28			PV-10 (V)															
29			Pulse	A to/Δt														
30			Ant Vpp	3.43kV	3.36kV	3.43kV	3.48kV	3.51kV	3.50kV	3.47	3.51kV	3.53kV	4.03kV					
31				C to/Δt														
32			Diagnostics	LeCroy time														
33			Spectr	PM Tube (V)														
34			Wavelength	Port/LOS														
35			170 GHz	dia (mV)/IM freq														
36			X-ray	Amptek														
37			RMFO system	main SRS														
38				Pulse width (ms)/ rep rate (Hz)														
39				Frequency: Center(MHz)/Span(KHz)														
40				Pa														
41				Pr/% refl														
42				ΦM														
43				Satellite probe														
44				ER Probe														
45				Pf/Pr	233/39	227/37	230/39	232/40	233/41	232/40	230/39	233/40	237/42	350/39		170/22	170/22	172/23
46				Helicon (SRS/Power/%mod)	.143	.140	.141	.141	.141	.141	.141	.142	.142	.262		.231	.231	.231
47			Comments/changes:	for Δφ = π/2, n <sub>e</sub> = 2.1e12 cm <sup>-3</sup>														

2015/08/27

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:															
2			Run description:	FRC/RMFO														
3			Base pressures: Main IG (T)															
4			ER IG (T)															
5			Satellite IG (T)															
6			Main chamber Baratron (T)															
7			Expansion region Baratron (T)															
8			Antennas/delay lines	2-turn, RG-217, 15" long														
9			RMF frequency & phase															
10			Magnet configuration & PS	4x8 + 8x4 coils; RR PS; eight BN-covered FCs	Recentered 4-turn MC coil													
11			RMF system	SRS-> duty factor limiter-> AR100LM9-> 2KD-> four 8K Ultras														
12			Wall Time	1:51	1:53	1:54	1:56	1:58	2:00	2:03	2:13	2:30	2:52				3:35	
13			Main magnets I (A)								83	132		time	NOZZLE			
14			Nozzle coils I (A)	20	152	100	49	0(-13)	0	299	200	300	351	2:50	410A			
15			MC IG (T)											2:55	259			
16			MC Slow Baratron (T)	.0089	.0089	.0089	.0089	.0089	.0089	.0089	.0089	.0082	.0082	2:56	203	.0073		
17			MC FB (T)	.67	.66	.65	.67	.66	.66	.67	.74	-0.18	-0.25	12:58	152	-1.29		
18			ER IG (T)											3:00	105			
19			ER slow Baratron (T)	.789	.788	.788	.789	.788	.790	.791	.820	.479	.496	3:02	48	.070		
20			ER FB (T)											3:03	0A			
21			Satellite IG (T)	3.6e-5	3.7e-5	3.7e-5	3.7e-5	3.7e-5	3.7e-5	3.8e-5	3.8e-5	2.1e-5	2.1e-5	3:19	49	3.2e-1		
22			Satellite FB (T)											3:20	105			
23			Bias voltage: paddle											3:21	157			
24			Main valve											3:22	209			
25			Navigator valve											3:22	257			
26			End turbo valve											3:23	306			
27			Gases/feed location/scm	intercom										3:24	358			
28			PV-10 (V)	line										3:25	410			
29			Pulse	A to/Δ	1:52	1:54	1:56	1:58	2:00	2:05	2:05							
30			B to/Δ						2:05	2:05	2:05							
31			C to/Δ						2:05	2:05	2:05							
32			Diagnostics	LeCroy time														
33			Spectr	PM Tube (V)														
34			Wavelength	Port/LOS														
35			170 GHz	dia (mV)/IM freq														
36			X-ray	Amptek														
37			RMFO system	main SRS														
38			Pulse width (ms)/ rep rate (Hz)															
39			Frequency: Center(MHz)/Span(KHz)															
40			Pa	250Hz														
41			P:/% refl	Mod!!														
42			ΦM															
43			Satellite probe															
44			ER Probe															
45			Pf/Pf															
46			Helicon (SRS/Power/%mod)															
47			Comments/changes:	for Δφ = π/2, ne = 2.1e12 cm-3														sheet 2 of 3

moving  
ext paddle  
to take  
SRS  
plasma  
potential

NOZZLE  
LANGMUIR  
Sweep!

No  
mod.  
continuous.

100 Hz  
mod!!

Z  
E  
R  
O  
S