

2015/04/~~28~~29

- X-ray detection in Helicon plasma
- H_2 and $H_2 + Ar$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:	7/12/15														
2			Run description:	FRC/RMFO	AT	(Helicon)		Rebus run										
3			Base pressures: Main IG (T)	2.0e-7														
4			ER IG (T)															
5			Satellite IG (T)	1.7e-7														
6			Main chamber Baratron (T)	1.0e-7														
7			Expansion region Baratron (T)	1.0e-7														
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														
11			RMF system	SRS-> duty factor limiter -> AR100LM9 -> 2KD -> four 8K Ultras														
12			Wall Time	10:55			11:18	11:22	11:25	11:28	11:52	11:53	11:55	11:59	12:01	12:04		12:29
13			Main magnets I (A)	92			92											
14			Nozzle coils I (A)	312			312											
15			MC IG (T)															
16			MC Slow Baratron (T)	1.0e-7			1.0e-7			1.8e-7	1.9e-7	1.0e-7	1.0e-7	1.0e-7	1.0e-7	1.0e-7		0.127
17			MC FB (T)															
18			ER IG (T)															
19			ER slow Baratron (T)	1.2e-7			1.4e-7		4.5e-7	4.7e-7	6.6e-7	1.6e-6	0.53e-5	0.47e-5	0.6e-5			2.12e-5
20			ER FB (T)															
21			Satellite IG (T)	3.2e-5			2.0e-5		RGIX	1.1e-5	6e-5	8e-5	5.1e-5	5.1e-5	4.5e-5	4.9e-5		1.1e-5
22			Satellite FB (T)							1e-5	6.5e-6	4.9e-6	2.31e-6	2.4e-6	1.5e-6			
23			Bias voltage: paddle	110V														
24			Main valve	110V														
25			Navigator valve	110V														
26			End turbo valve	110V														
27			Gases/feed location/scm	H ₂ /He														
28			PV-10 (V)	110V														
29			Pulse	A to/Δ														
30				B to/Δ														
31				C to/Δ														
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				333		185	333	200	220	245	375	380	350		215
44			ER Probe				60		15	30	20	10	4	75	100	50		20
45																		
46			Helicon (SRS/Power/%mod)				0.71/32.3		0.71/	0.31/	0.18/	0.18/						
47			Comments/changes:	for Δφ = π/2, n _e = 2.1e12 cm ⁻³														sheet 1 of 3

2015/04/29 SPE provisions

[illegible]

2015/04/29

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:	1/24/15														
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	1:46	1:55	1:57	1:56	1:59	2:01	2:04	2:08	2:08	2:11					
13			Main magnets I (A)	135														
14			Nozzle coils I (A)	303	412	412	378	257	265	211.5	112	57	32	0(45)	Lower	93	90	500
15			MC IG (T)	.0087														
16			MC Slow Baratron (T)	.0087	.0087	.0087	.0087	.0087	.0087	.0087		.0087	.0087					.0087
17			MC FB (T)															
18			ER IG (T)															
19			ER slow Baratron (T)	.406		.405	.406			.408		.411						.408
20			ER FB (T)															
21			Satellite IG (T)	1.8e5		1.8e5	1.8e5			1.8e5		1.8e5						5.3e5
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				B to/Δt														
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		Pa	Satellite probe	205	205	208	205	208	208	209	208	205	205	208				
44		Pr	ER Probe	15	16	16	15	15	17	17	17	18	15	17				
45																		
46			Helicon (SRS/Power/%mod)															
47			Comments/changes:	for Δφ = π/2, n _e = 2.1e12 cm ⁻³														
																		sheet 3 of 3