

2016/12/02: Friday

H₂ gas

RMF & Helicon

RF diagnostics

- RMF was inconsistent at first. Fine-tuning the capacitor bank voltage fixed this.
- Final power variance $\sim 4\%$.

Probe diagnostics

- SEC probe scan revealed $V_p < -1000$ during RMF!

X-Ray diagnostics

- SDD at midplane, testing new variable apertures.
Temperature & density.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:	12-2-16														
2			Run description:	FRC/RMFO	fasting	RMF + SDD	pinholes	after	gassy + fixing	North	antenna	cell						
3			Base pressures: Main IG (T)	2.9e-6														
4			ER IG (T)															
5			Satellite IG (T)	1.9e-6														
6			Main chamber Baratron (T)	0.243														
7			Expansion region Baratron (T)	1.000														
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	9:36	8:47	9:55	9:58	10:02	10:11	10:23	10:27	10:41	10:52	11:30	1:04	~2hr		
13			Main magnets I (A)	83	87	83	83	83	83	83	83	83	83	83	83	83	SE	
14			Nozzle coils I (A)	305	305	305	305	305	305	305	305	305	305	305	305	305	SE	
15			MC IG (T)		.0285													
16			MC Slow Baratron (T)	.0243	.0255	.0253	.0248	.0247	.0248	.0250	.0249	.0251		.0250	.0249	SE		
17			MC FB (T)															
18			ER IG (T)															
19			ER slow Baratron (T)	.0243	.0255	.0253	.0248	.0247	.0248	.0250	.0249	.0251		.0250	.0249	SE		
20			ER FB (T)															
21			Satellite IG (T)	5.9e-6	2.9e-5	2.2e-5	2.1	2.0e-5	2.0e-5	1.4e-5	1.9e-5	1.7e-5		330	340	340		
22			Satellite FB (T)															
23			Bias voltage: paddle															
24			Main valve															
25			Navigator valve															
26			End turbo valve															
27			Gases/feed location/scrm															
28			PV-10 (V)															
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															
44			ER Probe															
45			Helicon Pf/Pr															
46			Helicon (SRS/mod)															
47			Comments/changes:	for Δφ = π/2, ne = 2.1e12 cm-3														
48																		