

2018/03/02: ~~Tuesday~~ Friday

- H_2 gas
- Seed Plasma
- 19 MHz helicon antenna
- Paddle voltage
 - pressure scan in FEC
- FEC radial probe
- X-ray spectra
- transition region observed in detail

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1			Date:	3-2-18														
2			Run description:	FRC/RMFO helicon 14MHz FRC probe at paddle														
3			Base pressures: Main IG (T)	6.3e-7														
4			ER IG (T)	1.4e-6														
5			Satellite IG (T)	3.6e-7														
6			Main chamber Baratron (T)	0.206G														
7			Expansion region Baratron (T)	0.18e-3														
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-> 200 kW home made														
12			Wall Time	12:42	12:47	12:49	12:55		13:10	13:23	13:36	13:40	13:45	13:52	14:04	14:12	14:15	14:21
13			Main magnets I (A)	239	239	239	239		239	240	241	241	241	241	243	241	241	241
14			Nozzle coils I (A)	379	379	379	379		380	383	381	381	382	381			381	381
15			MC IG (T)	6.3e-7	5.2e-6	4.9e-4	4.3e-4		1.8e-4	3.0e-4	2.0e-4	3.0e-5	3.0e-4	3.0e-4	3.0e-4	3.1e-4	3.0e-4	3.1e-4
16			MC Slow Baratron (T)	0.0205	0.026	0.0217	0.0216		0.0211	0.0211	0.0211	0.0211	0.0211	0.0211	0.0212	0.0212	0.0212	0.0211
17			ER IG (T)	1.4e-6	1.1e-6	3.0e-5	2.1e-5		9.6e-6	3.1e-5	3.3e-5	3.3e-5	3.4e-5	3.4e-5	3.5e-5	3.4e-5	3.4e-5	3.5e-5
18			ER slow Baratron (T)	0.020e-3	0.007e-3	0.020e-3	0.030e-3		0.014e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3	0.050e-3
19			Satellite IG (T)	3.6e-7	7.8e-7	1.2e-5	1.1e-5		5.4e-5	4.6e-5	4.3e-5	4.2e-5	4.0e-5	3.6e-5	3.2e-5	4.7e-5	5.0e-5	4.6e-5
20			Satellite FB (T)															
21			Ta paddle voltage															
22			Main valve	open	closed	closed	closed		closed	closed	closed	closed	closed	closed	closed	closed	closed	closed
23			Navigator valve	open	open	open	open		open	partial	partial	partial	partial	partial	partial	partial	partial	partial
24			End turbo valve	open	open	open	open		open	partial	partial	partial	partial	partial	partial	partial	partial	partial
25			Gases/feed location/sccm	H ₂ /4.6/5.4	H ₂ /4.5/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4		H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4	H ₂ /4.6/5.4
26			PV-10 (V)															
27			Pulse	A to/Δt														
28				B to/Δt														
29				C to/Δt														
30			Diagnostics	LeCroy time														
31			Spectr	PM Tube (V)														
32			Wavelength	Port/LOS														
33			170 GHz	dia (mV)/IM freq														
34			X-ray	Amptek														
35			RMFO system	main SRS														
36			Pulse width (ms)/ rep rate (Hz)															
37			Frequency: Center(MHz)/Span(KHz)															
38			helicon source temp (°F)	76.8	75.4	74.2	143.6		149.8	156.6	158.2	155.6	152.4	151.0	151.8	155.0	162.6	156.0
39			Pf/% refl															
40			nozzle temp T1/T2 (°F)	71.4/75.5	72.1/73.5	71.7/73.0	93.3/101.9		94.3/103.7	98.9/101.8	97.2/103.0	95.2/103.7	101.1/106.4	100.7/107.3	100.6/105.2	94.4/100.0	93.5/98.8	97.2/104.2
41			Satellite probe															
42			ER Probe															
43			Helicon Pf/Pr	315/12	315/12	315/12	315/12		312/11	315/12	315/12	315/12	315/12	320/16	315/15	710/10	310/10	315/12
44			Helicon (SRS/mod)	0.63/100	0.63/100	0.63/100	0.63/100		0.63/100	0.63/100	0.63/100	0.63/100	0.63/100	0.63/100	0.63/100	0.63/100	0.63/100	0.63/100
45			Comments/changes:	for Δφ = π/2, ne = 2.1e12 cm-3 for 16-cm dia plasma														sheet 1 of

F₆ pink observed: 14.23

Normal shut down: 14:25