

2020/10/27: Tuesday

SMA1, SN 27058, in CC radial scan mount start of JUG
SMA3, SN 19777, in CC midpoint mount, ap5, Mylar filter

C1: RMF pulse
C2: SMA3 SCAB
C3: SMA1 SCAB

C4: SMA gate signal

H₂ gas

9:36AM (02,03) Seed plasma. SMA3: 4°C/s
SMA1: 2°C/s

10:06AM: RMF segns. No LN₂. 5 ms pulses. (05,06)
SMA3: 10°C/s SMA1: P:letup. It's only 20kV.

10:16AM 4,000°C/s (07,08) 37kV. Could be wall? Certainly strong.
This is only 150A L⁻², by the way. WHeops! Contaminated with next condition

10:21AM Ch.3 retuned & power went up. (09,10) 7,000°C/s

10:42AM (11,12) Gas puff at 1ms per sec. 4,500°C/s

10:45AM (13,14) Gas puff now 1ms earlier. Decreased count rate! 3,500°C/s



10:59AM: Gas puff reduced. Power increased. LN₂ starts. 4,000°C/s, CR still drops up-n gas puff. (15,16) Oh... big oxygen line?

Oxygen line appeared upon addition of LN_2 .

Water removed from vessel, added to surface via deposition... Must be surface emission.

Although Bruce estimates it's NOT FREEZING yet! What's happening?

Maybe hotter? More K-shell electrons

11:08AM: Things are really changing now. 15,000 $^{\circ}$ S. (17,18)

Huh... The peak isn't actually at the O K-α peak, It's lower-energy. Could it be the K-shell transmission phenomenon?

Yeah, spectrum 3, Fe , has it at ch 98, while

γ has it at ch 54-55. K-α: 525eV K-shell: 543eV
where is the centroid?



11:18AM: (18,20) mon drift. O still visible. Takes ~7 min to get a Maxwellian fit.

12:21PM (21,22) 45kV, down from 60kV. CR lower. 1,900 $^{\circ}$ S. Lines faint.

Spectrum also visible in SAPP!!!

12:33PM (23,24) Gas pulse, 2ms longer. CR decreases when gas is puffed.

12:45ish: ARC. End of run.