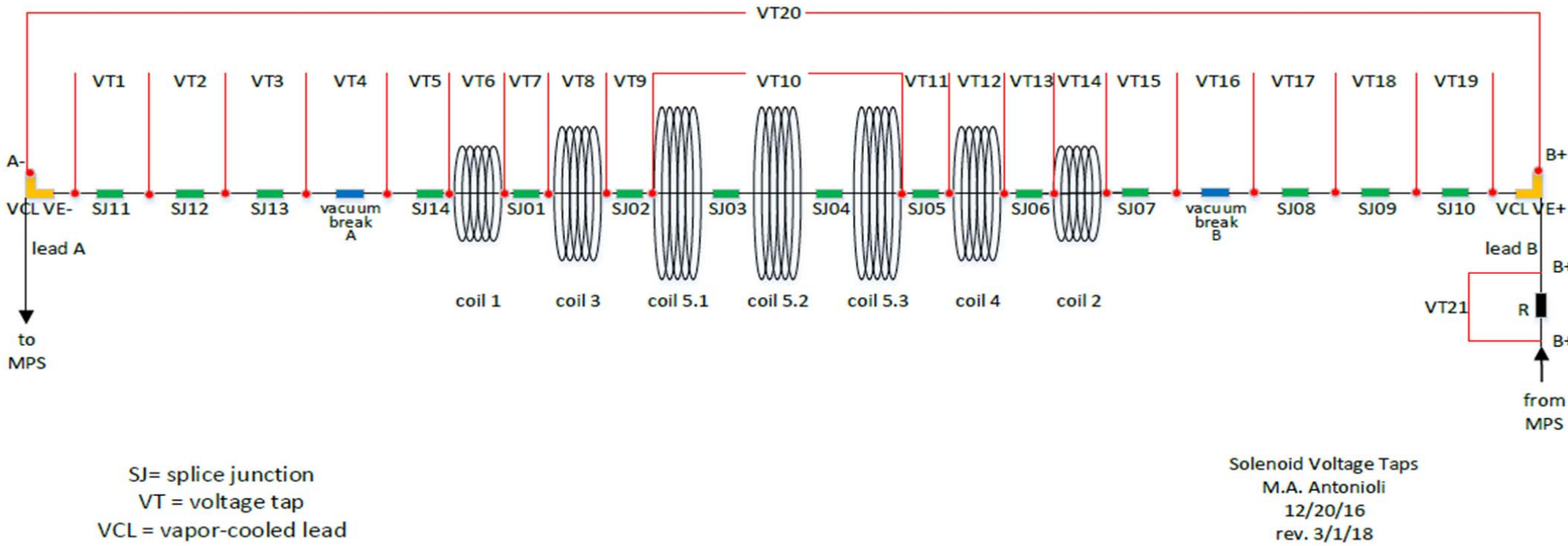


Hall B - Solenoid Fast Dumps (Sep, 2017 to Feb,2018)										
Period	Fast Dump #	Date	Time	Tripped @ Current [A]	Cause	VT combination	Description	Threshold	Time Delay	Notes
Commissioning	1	9/12/2017	14:47	932	QD1 :Ch3	VT15+VT16+VT17+VT18+VT19	VT18 had voltage spike ~600 [mV] that generates VT8 (coil 3 quenching) went to ~ 2.3[V]	60 [mV]		
	2	9/12/2017	17:27	1014	QD1:Ch3	VT15+VT16+VT17+VT18+VT19	VT18 splice voltage spike ~125 [mV] which generated VT12 (coil 4 quenching) went to ~ 5.5 [V]	60[mV]		After this event on 09-15-2017- Magnet team decided to change PLC as primary protection system for VT splices. Thresholds changed for QDs 1/2 (Non coils VTs) and PLC comparators. QD VT splices threshols raised from 60 to 750 [mV] and trigger window from 0 to 999 [ms]
	3	9/13/2017	16:15	1035	QD1:Ch1	[VT11+VT12+VT13+VT14] - [VT5+VT6+VT7+VT8+VT9+VT10]	Differential of addition of all VT combinations in QD1:Ch1 generated Fast dump	60[mV]		
	4	9/15/2017	9:05	1060	QD1:Ch2	[VT9+VT10+VT11+VT12+VT13+VT14]- [VT5+VT6+VT7+VT8]	Suspected VT8 (coil 3)	60[mV]		
	5	9/15/2017	11:39	1066	QD1:Ch2	[VT9+VT10+VT11+VT12+VT13+VT14]- [VT5+VT6+VT7+VT8]	Suspected VT8 (coil 3)	60 [mV]		Found voltage noise on QD1 (Ch 1 and Ch2 Channels associates with VT coils 1-5) ~ 41 [mV]. Decided to raise threshold from 60 to 100 [mV]
	6	9/15/2017	19:52	2148	Cryogenics	N/A	Over temperature on VCLB. Temperatrue increased to > 14 K	13.5[K]		To Fast dump overview coils VTs refer: https://logbooks.jlab.org/entry/3484612 to check behavior of coils VTs
Engineering Run	7	12/12/2017	22:02	1208	QD1: Ch3	VT15+VT16+VT17+VT18+VT19	VT18 had voltage spike ~175 [mV]	750[mV]	999 [mS]	QD1:Ch4 VTs combinations modied to only cover VT19 rather than VT17,VT18,VT19
	8	12/14/2017	14:13	1208	QD1: Ch3:	VT15+VT16+VT17+VT18+VT19	VT18 had voltage spike of 170 [mV]	750 [mV]	999[ms]	Noticed that voltage spike tripped QD1 interlock even when the read value was lower than the set thresholds
	9	12/16/2017	10:35	2416	QD1:Ch1	[VT11+VT12+VT13+VT14]- [VT5+VT6+VT7+VT8+VT9+VT10]	QD1:Ch1 lower consisting in Coils 4 and 2	100[mV]	20[ms]	After this event, trip delay time thresholds for QD1: Ch1 and ch2 were increased to 100 [ms]
	10	12/18/2017	9:01	1493	QD2:Ch4	VT15+VT16+VT17+VT18	VT18 had voltage spike ~ 400 [mV]	750 [mV]		Magnet team found considerable noise along the cable used for VT18 (150 mV). Cable used consists in a 3 separated shielded multiconductor, which one of them was not grounded.
	11	1/23/2018	23:54	-2416	QD1:Ch1	[VT11+VT12+VT13+VT14]- [VT5+VT6+VT7+VT8+VT9+VT10]	Suspected voltage increment across coils generated fast dump. Considered shift of coils as a cause	100 [mV]	100 [ms]	After this trip, time delay thresholds for QD1: Ch1 and ch2 were increased to 200 [ms] and all other QD ch to 999 [ms]
Phisycs Run	12	2/19/2018	15:47	2416	QD1:Ch3 / QD2:Ch4	VT15+VT16+VT17+VT18+VT19 / VT15+VT16+VT17+VT18	VT18 Presented an spike signal ~ 60 [mV]. Adding all VT values in: QD1:Ch3 ~ 155 [mV] and QD2:Ch4 ~80 [mV]	1500 [mV] 1550 [mV]	999 [ms]	Noticed for 3th time that voltage spike tripped QD1 interlock, even when the read value was lower than the set thresholds
Total Fast Dumps		12								



Incident QD Channels	Frequency
QD1:Ch1	3
QD1:Ch2	2
QD1:Ch3	5
QD2:Ch4	1
Total incidents due to QDs	11

