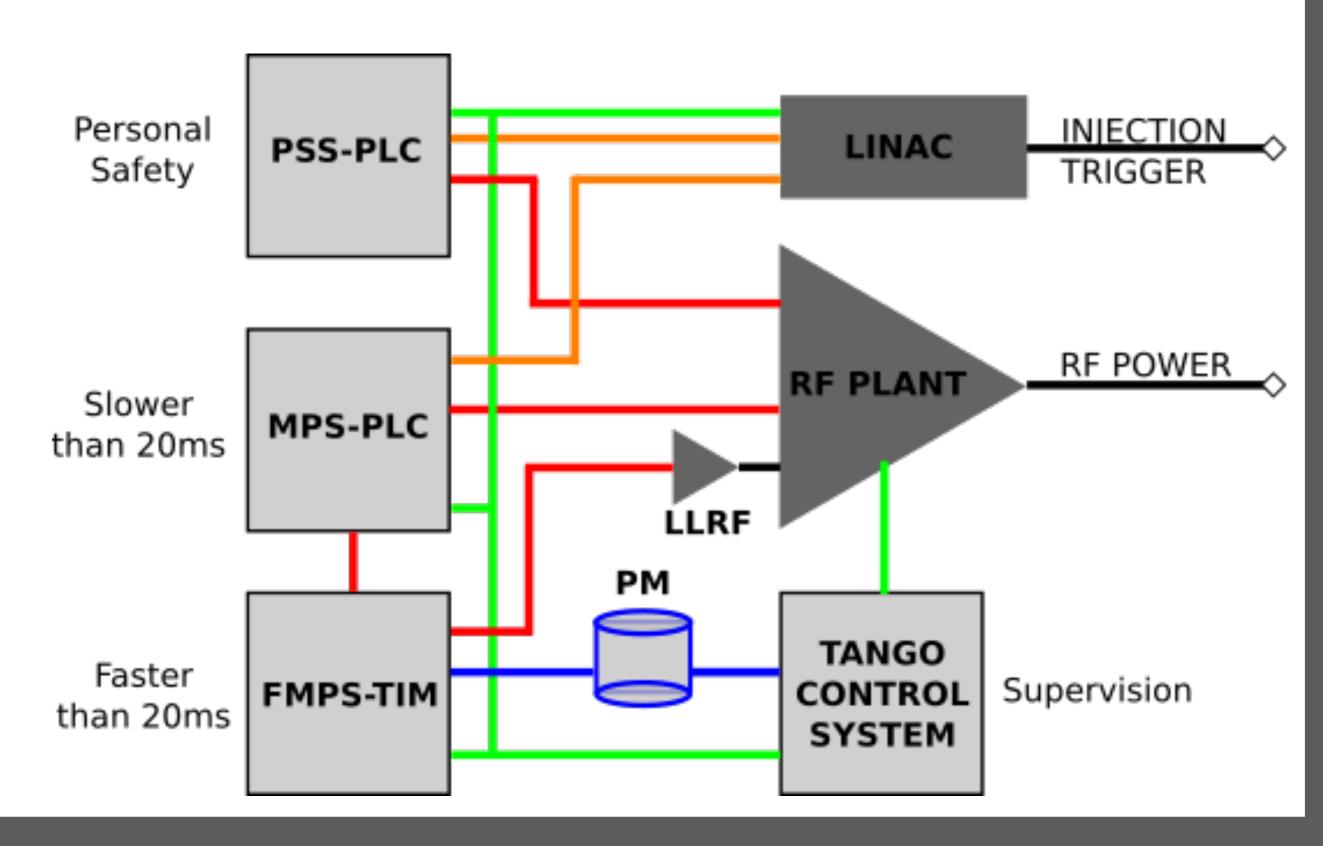
TIMING SYSTEM STATUS AND DEVELOPMENT

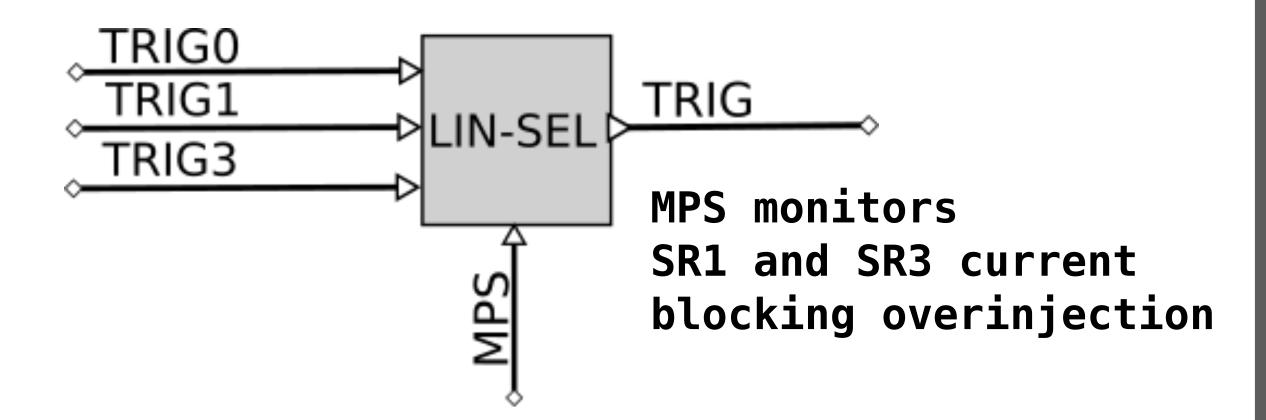


J. Jamroz, V. Hardion, V. Martos, J. Forsberg, D. Spruce, MAX-IV, Lund, Sweden

MPS flow of SR1 and SR3 general block diagram.



LINAC Trigger Selector



LIN and SPF - TRIGO (3GHz, 77MHz, 50Hz)
SR1 - TRIG1 (100MHz, 3.12MHz, 50Hz)
SR3 - TRIG3 (100MHz, 568kHz, 50Hz)

SPF-2014 BEAM August 2015 LINAC-2014 Offices SR3-2015

MAX IV will work in 4 different modes:

LINAC 3GeV (LIN)

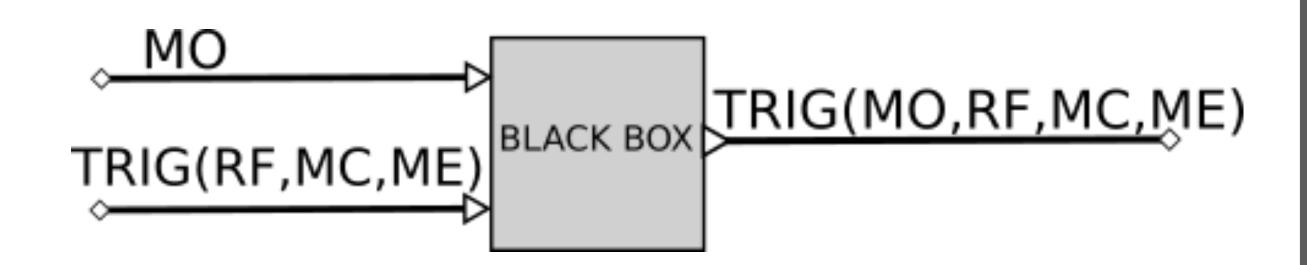
LINAC 3GeV + Short Pulse Facility (SPF)

LINAC 3GeV + Storage Ring 1.5GeV (SR1)

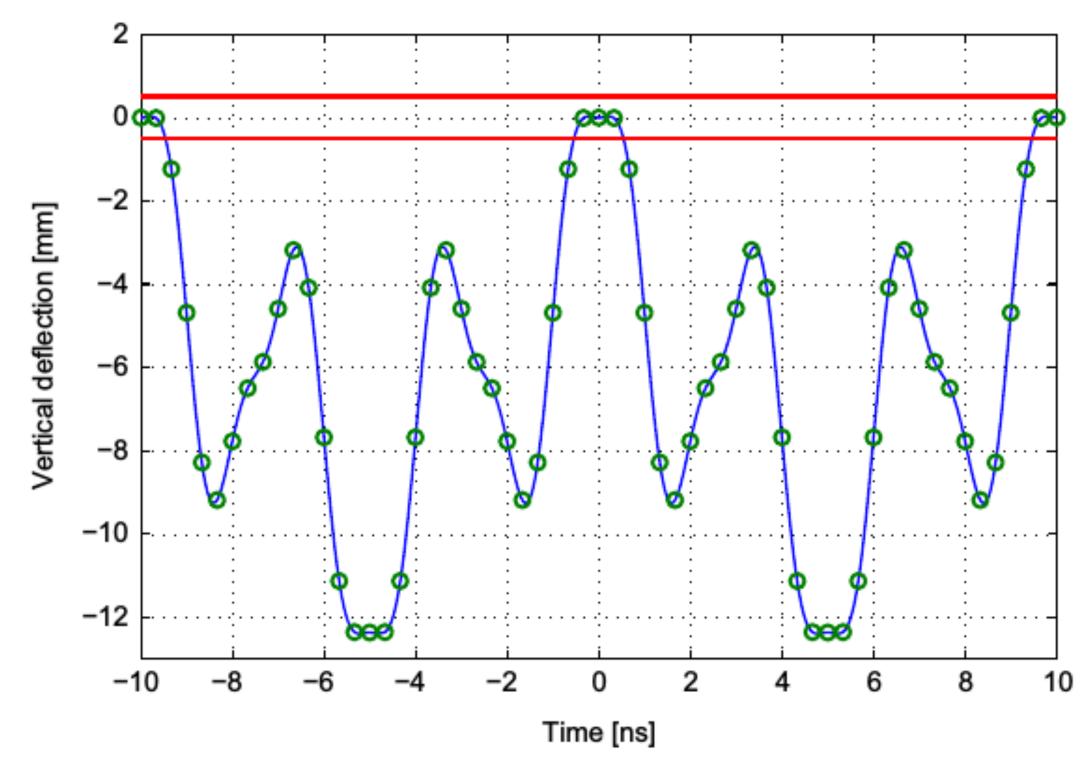
LINAC 3GeV + Storage Ring 3GeV (SR3)

LIN and SPF are rated for 100Hz injection whereas SR1 and SR3 for 10Hz.

Future LINAC trigger upgrade



LINAC chopper selection of 3x330ps electron bunches



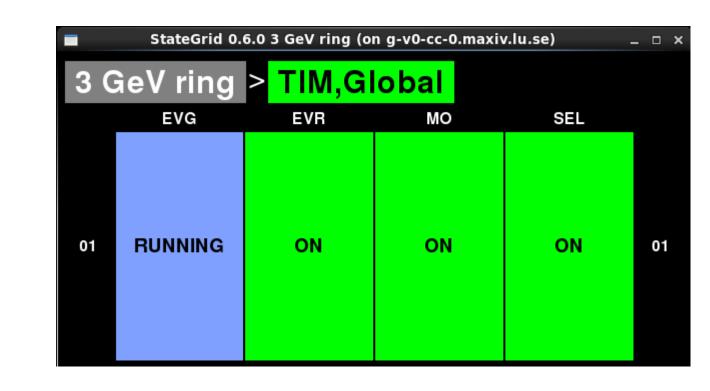
TRIG(RF,MC,ME) = SR injection from
2x up to 3.5x bunch per SR bucket

TRIG(MO,RF,MC,ME) = SR injection exactly
3x bunch per SR bucket

MAX IV state grid presenting TANGO "States"

_				State Suid of o	3 CoV ning (on a vo co o	manin lu ca)				
2 Go	V ring			StateGrid 0.6.0	3 GeV ring (on g-v0-cc-0.	.maxiv.iu.se)				×
3 GE	VAC	VAC/Valves	MAG	RF	TIM	DIA	DIA/BPM	DIA/Inserts	WAT	
301 ^{5/6}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>	FAULT	^{2/2} <u>ON</u>	^{26/26} ON	11/11 <u>NA</u>	4/4 <u>ON</u>	^{15/15} ON	301
302	<u>ON</u>	1/4 <u>MOVING</u>	^{73/73} <u>ON</u>		^{2/2} <u>ON</u>	^{31/33} <u>ON</u>	10/10 NA		^{15/15} ON	302
303	<u>ON</u>	OPEN OPEN	^{73/73} ON		ON	^{30/30} ON	^{10/10} NA		15/15 <u>ON</u>	303
304	<u>ON</u>	OPEN OPEN	^{73/73} ON		ON	^{29/29} ON	^{10/10} NA		15/15 <u>ON</u>	304
305	<u>ON</u>	OPEN OPEN	^{73/73} ON		ON	^{30/30} ON	^{10/10} NA		15/15 <u>ON</u>	305
306	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		ON	^{30/30} ON	^{10/10} <u>NA</u>		15/15 <u>ON</u>	306
307	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		^{2/2} <u>ON</u>	^{30/30} ON	10/10 NA		15/15 <u>ON</u>	307
308	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		ON	^{30/30} ON	^{10/10} <u>NA</u>		^{15/15} ON	308
309	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		ON	^{30/30} ON	^{10/10} NA		^{15/15} ON	309
310	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		^{2/2} <u>ON</u>	^{32/32} <u>ON</u>	^{10/10} NA		^{15/15} ON	310
311	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>		ON	^{30/30} <u>ON</u>	^{10/10} NA		15/15 <u>ON</u>	311
312 ^{5/6}	<u>ON</u>	OPEN OPEN	^{73/73} <u>ON</u>		^{2/2} <u>ON</u>	^{30/30} ON	^{10/10} NA		15/15 <u>ON</u>	312
313 ^{6/6}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>		UNKNOWN	^{30/30} ON	10/10 NA		15/15 <u>ON</u>	313
314 ^{5/6}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>		ON	^{30/30} ON	^{10/10} NA		^{15/15} ON	314
315 ^{6/7}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>		ON	^{30/30} ON	^{10/10} NA		^{15/15} ON	315
316	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>		ON	^{30/30} <u>ON</u>	10/10 NA		1/16 <u>UNKNOWN</u>	316
317 ^{5/6}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} ON	2/2 RUNNING	^{2/2} <u>ON</u>	^{30/30} ON	^{10/10} NA		1/16 <u>UNKNOWN</u>	317
318 ^{5/6}	<u>ON</u>	4/4 <u>OPEN</u>	73/73 <u>ON</u>		ON	^{30/30} ON	^{10/10} NA		^{16/16} ON	318
319 ^{5/6}	<u>ON</u>	4/4 <u>OPEN</u>	^{73/73} <u>ON</u>	2/2 RUNNING	^{3/3} <u>ON</u>	^{30/30} ON	10/10 NA		^{16/16} ON	319
320 ^{7/8}	<u>ON</u>	4/7 <u>OPEN</u>	^{73/73} <u>ON</u>		ON	^{32/32} ON	^{10/10} NA		16/16 <u>ON</u>	320
PLC 20/20	RUNNING		PUNNING						RUNNING	PLC
Alarm			ON							Alarm
Global				ring (on g-v0-cc-0.maxiv.lu.se)	^{3/4} ON		NA			Globa

TIM and DIA/BPM columns present the timing system integration



Sub-field of "Global TIM"