

Linac4 action list

	action	person	status	date
SM18 high-power test stand				
<input type="checkbox"/>	before exchanging module 3 with module 2: i) RGA on module 3, ii) bead-pull, need to get a document with the results	Frank/Jan	RGA done, 1 order of magnitude better but still not within specs,	
<input type="checkbox"/>	exchange pumps in bunker, replace ion with turbo pumps when module 3 is installed	JM/Jan		
<input checked="" type="checkbox"/>	power/pick-up calibration with power meter	Han/Jose	done	
<input type="checkbox"/>	buy 2nd power meter	Han	on 69742	
<input type="checkbox"/>	need automatic frequency tuning to compensate	Tomoko/Jose/ Nuaman	code ready, now implementation in SM18	
movable tuners				
<input checked="" type="checkbox"/>	discuss modified piston guidance with Alessandro/vacuum group	Yves	next meeting 11.10.13	
<input type="checkbox"/>	prepare test of DTL type coupler with inclination	Jose/Yves	horizontal test in preparation	3-Oct-13
<input type="checkbox"/>	fabricate dummy pistons and measure port diameters of CCDTL using dummy pistons	Yves		
<input checked="" type="checkbox"/>	verify that piston diameters can be reduced by 2 mm without affecting stability of EB-welds	Yves	confirmed by Gilles	23-Oct-13
<input checked="" type="checkbox"/>	verify that reduced weld thickness does not affect pressure vessel stability	Marco/ Alessandro	no problem	23-Oct-13
<input checked="" type="checkbox"/>	verify parallelism of THK guides	Yves	parallelism and dimensions within 0.02 mm	23-Oct-13
<input checked="" type="checkbox"/>	verify possibility of using ceramic ball bearings	Marco/ Alessandro	not possible	23-Oct-13
<input checked="" type="checkbox"/>	decided not to use any guidance for piston stems	all		1-Nov-13
<input type="checkbox"/>	verify if piston diameters can still be reduced at CECOM	Frank	waiting for cost estimate by CECOM	23-Oct-13
<input type="checkbox"/>	measure alignment of MEBT pistons	JM/Yves		
<input type="checkbox"/>	equipment list for welding demonstration during CECOM visit until 15. Nov.	Yves/Franck M.		
<input type="checkbox"/>	list of discussion points until 15. Nov.	Alessandro/ Marco		
<input type="checkbox"/>	flight/hotel bookings for CECOM visit	Frank/Laurie		
<input type="checkbox"/>	discussion points on coupler?	Suitbert/ Alessandro		
<input type="checkbox"/>	verify if we can re-machine (cut, machine, re-weld) pistons for MEBT tuners	Yves		
<input type="checkbox"/>	modification of plans until 15. November	Yves		
<input checked="" type="checkbox"/>	verify possibility to improve alignment on flanges for CCDTL and PIMS using a special tooling	Marco/ Alessandro	not necessary	
<input type="checkbox"/>	movable tuner installation on bunchers in week 48		will probably only be needed from week 50 onwards	
<input type="checkbox"/>	try prototype on Indian coupler to see if penetration is sufficient for matching in SM18	Rolf/Jose		
3 MeV installation in Linac4				
<input type="checkbox"/>	RF tests of buncher amplifiers	Han/Jose	week 49-50	
<input checked="" type="checkbox"/>	2 amps ready to be sent back to DB for modification	Han	done	
<input type="checkbox"/>	scaffolding for RF feeder line installation	Han		47
<input type="checkbox"/>	install RF feeder lines for buncher cavities	db	week 48-49	
<input type="checkbox"/>	install RF feeder line for debuncher	db	week 48-49	
<input type="checkbox"/>	RF tests on buncher amplifiers	Han/Jose	after above	
<input type="checkbox"/>	re-heating system	Jose	design office will finish work until end of August, start-up of RFQ can be done without	
<input checked="" type="checkbox"/>	commissioning of RFQ cooling system	Jose	now works as it has been in test stand, will be used like that for first RFQ power tests, instead of trying to maintain a fixed temperature with CV and fine tuning system, it is now proposed that CV always cools by 1 deg and Jose always heats by ~1 deg, first operation will be done with old system, ready for operation	17-Oct-13
<input type="checkbox"/>	slug tuners are not yet cooled	Jose	after first tests,	
<input checked="" type="checkbox"/>	solution for cooling water for buncher circulators	Han/Jose	most likely from chopper cooling (in parallel)	12-Sep-13
<input type="checkbox"/>	interlock tests/commissioning before beam start-up	Jose	ongoing	
<input checked="" type="checkbox"/>	buncher pick-ups are connected	Han/Jose		3-Oct-13
<input type="checkbox"/>	re-design and fabrication of buncher pick-ups	Yves/Frank/ JM	will be ready in some days	7-Oct-13
waveguide couplers				
construction in India				
<input checked="" type="checkbox"/>	prepare CERN-India meeting on October, 11th and clarify production strategy	Frank	gave mid-November as limit date to receive a conform Linac4 coupler,	
construction at CECOM				
<input checked="" type="checkbox"/>	clarify if CECOM can produce more couplers if needed	Suitbert	yes, but delay needs to be clarified	12-Jul-13
<input type="checkbox"/>	packaging of raw material (series) for CECOM	Yves/JM	will be delivered after acceptance test of pre-series, delivery will take place probably in October,	
<input checked="" type="checkbox"/>	weld qualification tests at 2nd company	Suitbert	samples have been sent to company, welds seem ok but sheets are deformed too much, exclude for the time being	3-Oct-13
jacks				
<input type="checkbox"/>	complete series of 2.5 and 5 t jacks	Yves/Suitbert	received everything (apart from one)	7-Nov-13
<input type="checkbox"/>	installation of jacks (CCDTL + PIMS1) before February 2014	Frank/Benoit		
CCDTL				
assembly in SM18				
<input type="checkbox"/>	quad installation module 6	JB	probably next week	17-Oct-13
<input type="checkbox"/>	quad installation module 7	JM/JB	one quad faulty	15-Aug-13
<input type="checkbox"/>	conditioning of module 3	Tomoko/Jose/ Frank		
<input checked="" type="checkbox"/>	bead pull data from Alexey for module 3	Frank		
<input checked="" type="checkbox"/>	measurement procedure BINP	Frank		
<input checked="" type="checkbox"/>	verify power measurements on module 2	JM/Rolf	done and understood	7-Nov-13
<input type="checkbox"/>	verify if all survey results are done	Frank	waiting for further data from Jean-Frederic	
<input type="checkbox"/>	collect vacuum tests (EDMS) for all measurements made	Frank/Jan	waiting for data from vacuum group	
DTL				
construction				
<input type="checkbox"/>	fabrication of Al covers for ports for vacuum tests,	Yves	fabrication launched	
<input type="checkbox"/>	final machining of covers tank2,3			
<input checked="" type="checkbox"/>	delivery T3S4	Suitbert	received but needs some repairs,	12-Sep-13
<input checked="" type="checkbox"/>	Cu plating T3S4	Yves	done	17-Oct-13
<input checked="" type="checkbox"/>	delivery T3S2		some repair to be done at CERN	7-Oct-13
<input type="checkbox"/>	drift tube installation in T3S4	Yves	2 leaks on pick-ups found with the same leak rate, to be investigated	7-Oct-13
<input checked="" type="checkbox"/>	assembly of T1S1 and T1S2	Yves/Suitbert	done on rotating support, survey of half tank alignment done, seems to be just within limits, t.b.v.	29-Sep-13
<input checked="" type="checkbox"/>	preparing for low-level RF measurements		repair of movable short circuit needs to be done	3-Oct-13
<input type="checkbox"/>	last 24 drift tubes assembly + last weld + qualification		within next month	7-Nov-13
PIMS				
<input type="checkbox"/>	go through Patricia's work on tuning curves for tuning islands, complete simulations, calculate curves and tables the 3 different cell types for cavity M	Rolf	good progress, so far we seem to be well prepared, cavity M done, continuing with L	
<input type="checkbox"/>	qualification of disc production for series	CERN workshop	ok given for discs of cavity 3 and 4 (coaxiality problem (4 times tolerance) => waiting for metrology of fully assembled cavity, steps on nose cone tip => waiting for high power test results)	
<input type="checkbox"/>	metrology of central disc M_8-9 and ring M_9-10	Rolf	not yet received, preparation for re-machining, should be done next week	17-Oct-13
<input checked="" type="checkbox"/>	metrology and brazing analysis of waveguide ring M	Rolf	needs repair, too short by .5 mm, Ra 2-3 instead of 0.8 (20% higher losses), coaxiality not perfect, brazing done, brazing seems successful but flange needs re-machining because pieces have moved slightly (0.6 mm), new flange fixture under study, cleaning procedure needs to be established, geometry did not change too much, flange was re-machined and now has a flatness of 20 um, though a roughness of 1,	3-Oct-13
<input checked="" type="checkbox"/>	prepare tooling for surface treatment of discs	Yves/Rolf	discussed with Marc, principle to be discussed with Yves, Yves started design/calculation work, production launched	26-Sep-13
<input type="checkbox"/>	assembly and inspection of cavity M	Rolf		
<input type="checkbox"/>	if time permits, optimise tuning of PIMS cavities (Octave routines, network analyser communication, intelligent tuning suggestion)	Rolf		
<input type="checkbox"/>	determine amount of re-machining for all discs cavity M	Rolf		
<input type="checkbox"/>	re-machining of discs cavity M	Rolf		
<input type="checkbox"/>	problem with ring M11-12 prevents green light for series until	Rolf	trapped volume of air can probably be opened to cavity vacuum	
<input checked="" type="checkbox"/>	rings for 3 cavities are sent to Jülich		ready and are now sent back to Poland	7-Nov-13
<input type="checkbox"/>	2nd waveguide ring will be done after disc machining			17-Oct-13
windows				
SPL/HOM				
MTF				
<input type="checkbox"/>	MTF input DTL	SR/RVT	drift tube data being uploaded,	
<input type="checkbox"/>	MTF input CCDTL	SR/FG/RVT	started	
<input type="checkbox"/>	MTF input PIMS	FG/SR/RVT		
<input type="checkbox"/>	MTF input buncher cavities	FG/SR/RVT		
A.O.B.				
<input type="checkbox"/>	revision of RF structure transport into tunnel (meeting with Catherina, Rolf, Suitbert, Frank)			
<input type="checkbox"/>	Han measured too high RF radiation (for interference limits, no issue with personnel safety) close to the RFQ klystron, MV needs to be informed and a report needs to be written	Han		7-Oct-13

Operations & maintenance

	action	person	status	date
shut-down work				
	Modulator	Vince	done	
	HV power supply + hazemeyer and regulation are responsibility of power group, HV line and ignitrons and interlock is with us			
Frank James				
<input type="checkbox"/>	prepare a complete spare amplifier (apparently all pieces are available from Linac3 spare amplifier),	Vince/Han/ Frank	missing is the ramping up of filament system, including testing ~60 kCHF, agreement by Erk that this project will be financed one way or another	1-Jun-14
<input type="checkbox"/>	RFQ cavity base: try to remove some corrosion from all the fixed parts to avoid that rust gets into the movable parts, verify if there is a water leak (internal/external) responsible for corrosion and apply some spray...	Vince/JM	needs water to fully test,	
<input type="checkbox"/>	completion of 4 FJ amps (buncher, debuncher L2), capton needs to be ordered, installed tested (CU plating to be clarified)	Han		
Linac2 maintenance				
	Linac3 maintenance	Vince	basically done	18-Jul-13
<input type="checkbox"/>	Linac3 maintenance	Vince	stopped until mid-September because a big AC unit was placed before the amplifiers to replace the regular unit during maintenance work	
<input type="checkbox"/>	RFQD maintenance	Vince		
<input type="checkbox"/>	tuner maintenance		motors and switches done by us, if there is a problem with moving the tuners (dirt, grease) Richards section is responsible,	
<input type="checkbox"/>	water only comes back 1. March			
<input type="checkbox"/>	1. June first beam to isolate, so mid-may beam to PSB,			
<input type="checkbox"/>	interlocks still need to be connected/verified,			
<input type="checkbox"/>	from now on the tunnel can no longer be accessed with RF on,			
<input type="checkbox"/>	a procedure is under discussion if we can access the tunnel with source off and RF on,			
<input type="checkbox"/>	2 months of interlock tests are foreseen before start-up, which coincides with our amplifier tests,			
<input type="checkbox"/>	we need at least 1 month with continuous access to the RF system, we need 3 weeks with continuous access to prepare for an exchange of a power coupler before March 1st to do the measurements on the coupler which showed the problem (tank 1). Access to the gallery, to the tunnel, to the complete power transport line. + 1 week of tests with beam	Frank/Detlef,		
machine operation				
<input checked="" type="checkbox"/>	water cut			1-Jun-13
<input checked="" type="checkbox"/>	define date when we need the water back for amplifier test	JM	for everything else we need water 1 month before start up. Added another 1 month for JM's amplifier test. FG sent a request to Detlef	30-May-13
<input checked="" type="checkbox"/>	clarify when water is back	Han	1. March	
REX upgrade				
<input type="checkbox"/>	opening of RFQ	Han/Vince	measurements done, delayed because of CV works, could be shifted to beginning of 2014	
<input checked="" type="checkbox"/>	several integration problems with new/old installations of REX upgrade	Han	Han follows and makes sure that our installations remain operable	19-Sep-13
<input type="checkbox"/>	amplifier tests	Han	complete test by March 2014, installation by June 2014	
<input type="checkbox"/>	1st week of December, visit to Bertronix to qualify new amplifier work,			
<input type="checkbox"/>	no REX Isolde operation next year,			
A.O.B.				
<input type="checkbox"/>	order of new network analyzer	Han		
<input type="checkbox"/>	2 months of ampl. testing Feb. to April 2014, needs organising meeting with involved groups,			
<input type="checkbox"/>	commissioning of FESA class in Linac2			
<input type="checkbox"/>	for RFQD, we need one month before start-up, verify date	Frank		