MEBT PULSER SPEC. LIST

The ESS Bilbao Medium Energy Beam Transport (MEBT) pulser

1. Pulse

	ESS requirements	**Door Ref.**	**Initial ESSBilbao spec.**		**Final spec.**
Rise Time	<10ns (5-95%)	MEBT.BMD79	<6ns (10% to 90%)	Measured at End of Cable	ok
Fall Time	<10ns (5-95%)	MEBT.BMD79	<6ns (10% to 90%)	Measured at End of Cable	ok
Voltage	4kV or ±2kV	/Workshop	±2.5kV	Measured at End of Cable	ok
Macro Pulse	The chopper voltage macro-pulse shall consist of a pair of micro-pulses generated with a variable interval between 0.005 and 2.86 ms.	MEBT.BMD81	As per Doors		ok
Pulse Rep. Rate	1 Hz to 14 Hz	MEBT.BMD82	As per Doors		ok
Micro Pulse	The chopper voltage operating micro-pulse length* shall be variable from 1 microsec to 20 microsec.	MEBT.BMD83	As per Doors		ok
Failure mode Nominal Pulse length	200us	MEBT.BMD84 /Workshop Presentation	As per Doors	Single event	Implentation is undefined may require major modifications to standard pulser operation.
voltage flat-top noise	±0.001 of the nominal voltage	MEBT.BMD89	As per Doors		±0.01 of the nominal voltage
post-pulse noise	±0.001 of the nominal voltage	MEBT.BMD90	As per Doors		±0.01 of the nominal voltage
Chopping Efficiency	99.00%	MEBT.BMD80			Not Achievable due to external factors. This will not be measurable without beam.