

Overview and Rational

Old parameter set is obsolete, since it is based on a main beam accelerating structure design, which according to our present knowledge cannot work.

Goals for new list

- Get a set of parameters giving the best overall performance, consistent with our present knowledge of limitations
- Get consistent guidelines/specifications for the design of CLIC subcomponents
- Get consistent guidelines/specifications for feasibility demonstrations in CLIC test facilities.

Specifications used for this parameter list

Physics

E_{CMS}	3 TeV
Luminosity in 1% energy bin	$\geq 3.3 \cdot 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$

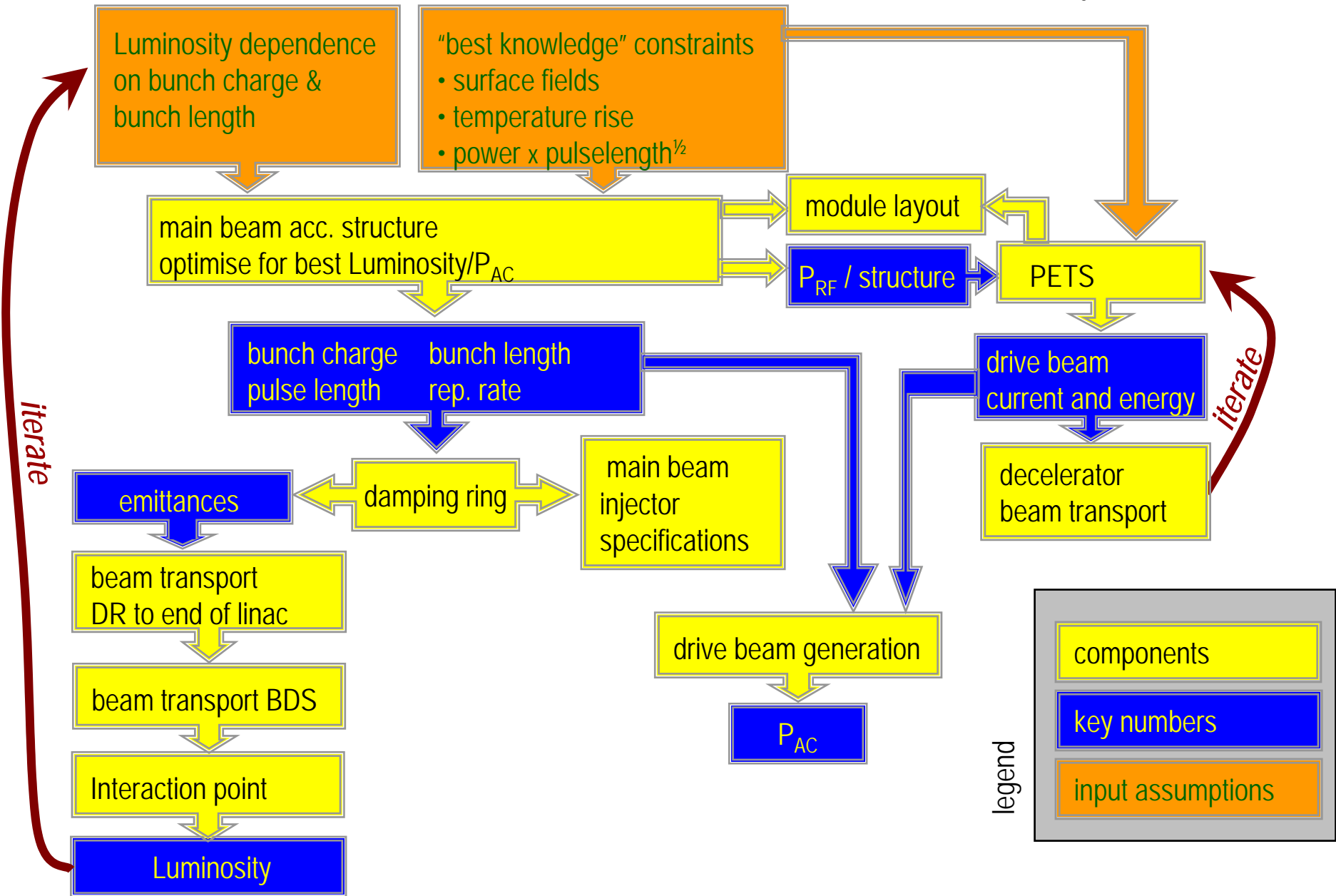
Fixed accelerator parameters

Accelerating field	150 MV/m
Frequency	30 GHz

<i>Input power per acc. structure</i>	<i>< 150 MW</i>
<i>main beam train Pulse length</i>	<i>> 60 ns</i>

CLIC PARAMETER "WHO DRIVES WHO" MAP*

*main roads only



Remarks

- Optimization criteria is minimizing P_{AC} for a given luminosity. This is not an unique choice. Another choice (i.e. total cost or investment cost only) will lead to different parameters.
- Results are sensitive to assumptions on break down limits. Those are mostly extrapolated from NLC and CTF II results with large error margins. New results from structure R&D can lead to a different optimum.
- Results are sensitive to assumptions on achievable IP spot sizes. New results on damping ring, low emittance beam transport and BDS can change optimal parameters.
- Parameters optimized for $E_{CMS} = 3$ TeV will be suboptimal for a low energy machine.