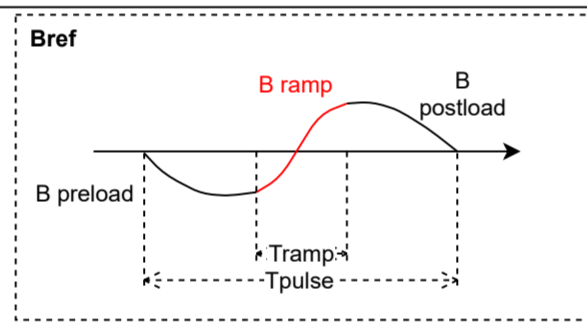


HE acceleration scheme (??)
 Computes the global structure of the HE accelerator
 Inputs: ... number of stages?
 Output: ...

RCS1

RCS Acceleration (David-Fabian)
 Computes the basic parameters for a given RCS
 Inputs: Planned survival rate, Circumference, type, Einj, Eext, Bncmax, Bsc
 Output: p0cinj/ext, Binj/ext, gammainj/ext, Tramp, L_NC, L_SC, etc..

Bref profile (Fulvio et Al)
 Computes the Bref total profile which is similar to a sinusoid:
 Inputs: Binj, Bext, Tramp, Tpulse, dB/dt max
 Output: Bref algebraic equation (piecewise)



? do we need it

Ring geometry/Optics (Antoine et Al)
 Compute the ...
 Inputs:
 Output: Dipole/quadrup length and number, dipole and quad gap dimensions,

Computation of RF system: (Fabian, Heyko, Alexej..)
 Inputs:
 Outputs: Cost

Computation of Vchamber losses: (Erik-David..)
 Inputs: Gap dimensions, Bref(t) equation
 Outputs: V chamber losses, ...

Computation of Impedance: (Erik-David..)
 Inputs:
 Outputs:Cost of vacuum chamber?

Computation of dipole/Quads:(Fulvio et Al)
 Generate magnets in FEM or with analytic formulae
 Inputs: Gap dimensions, Bmax in gap, Bref pulse duration, V chamber losses, magnet related parameters
 Outputs: Dipoles dimensions, Total required current, B to I ratio, Losses (included VChamber) Lmag Cost

Computation of Iref for powering (Fulvio et Al):
 Inputs: Gap dimensions, Bmax in gap, magnet related parameters
 Outputs: Dipoles dimensions, Losses (without VChamber) Lmag

Computation of powering system:
 Inputs: Rmag, Lmag
 Outputs: Dipoles dimensions, Losses (without VChamber) Lmag, Cost

RCS2

RCS3

RCS4