

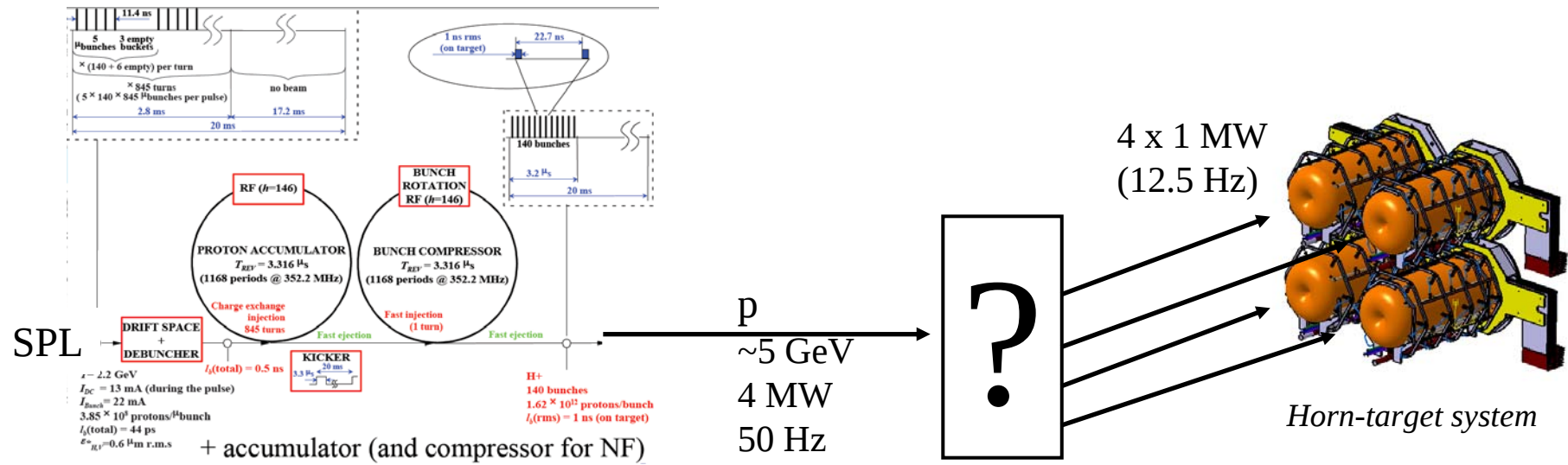
Preliminary study of the 4 proton beams WP2

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Preliminary study of the 4 proton beams

Aim: Distribute 4x1 MW power proton beam onto the horn-target system



How? Defining and placing optical elements such as kickers, septa, dipoles, quadripoles but also correctors, beam position/intensity monitors...

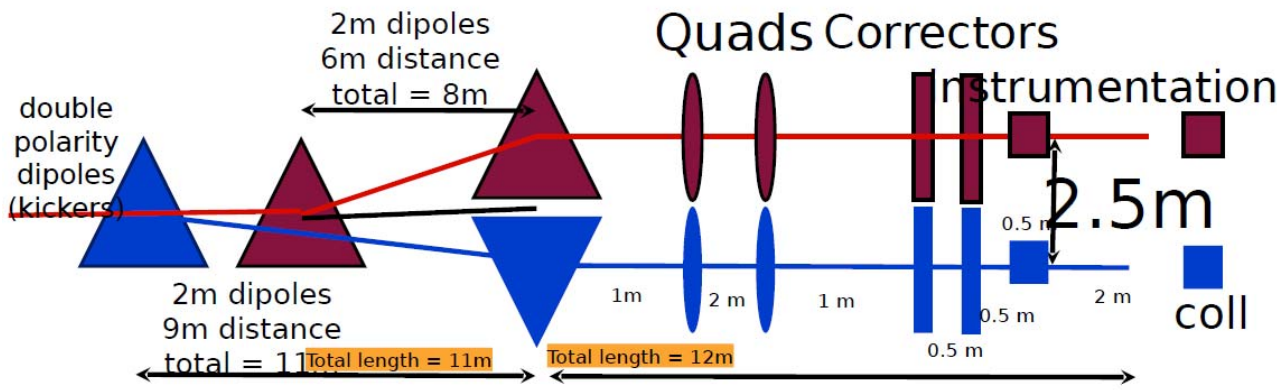
Approach:

- EUROnu Super-Beam context
- physical needs (characteristics of the primary beam)
- take into account the constraints wrt the horn/target system
- technical definition of the optical elements needed
- technological choice
- definition of the constraints generated by this beam distribution process
- costs, delay estimations
- safety issues (presence of kickers -> beam dumps)

Feasibility

Preliminary study of the 4 proton beams

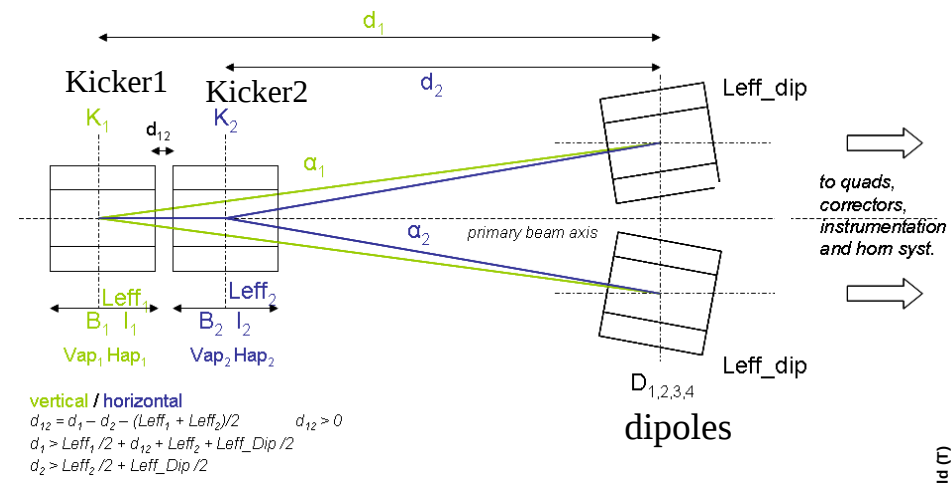
A possible layout to start with ?!



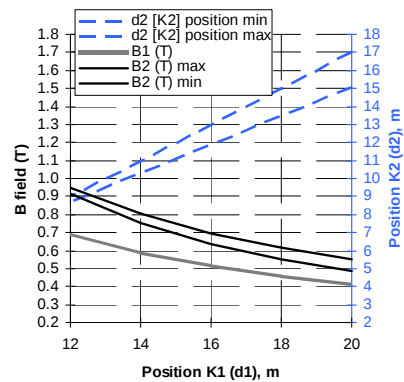
Taken from M. Zito's talk (NUFACT11)

First estimations

	Kicker 1	Kicker 2
B field (T)	0.4 - 0.7	0.5 - 0.95
Angle (mrad)	62 - 104	83 - 143
Eff. Length (m)	2	2
Apert. H&V (m)	0.25	0.25



Beam rigidity: 16.16 Tm



Next steps:

- Beam optics checking
- Other layouts to investigate
- ...