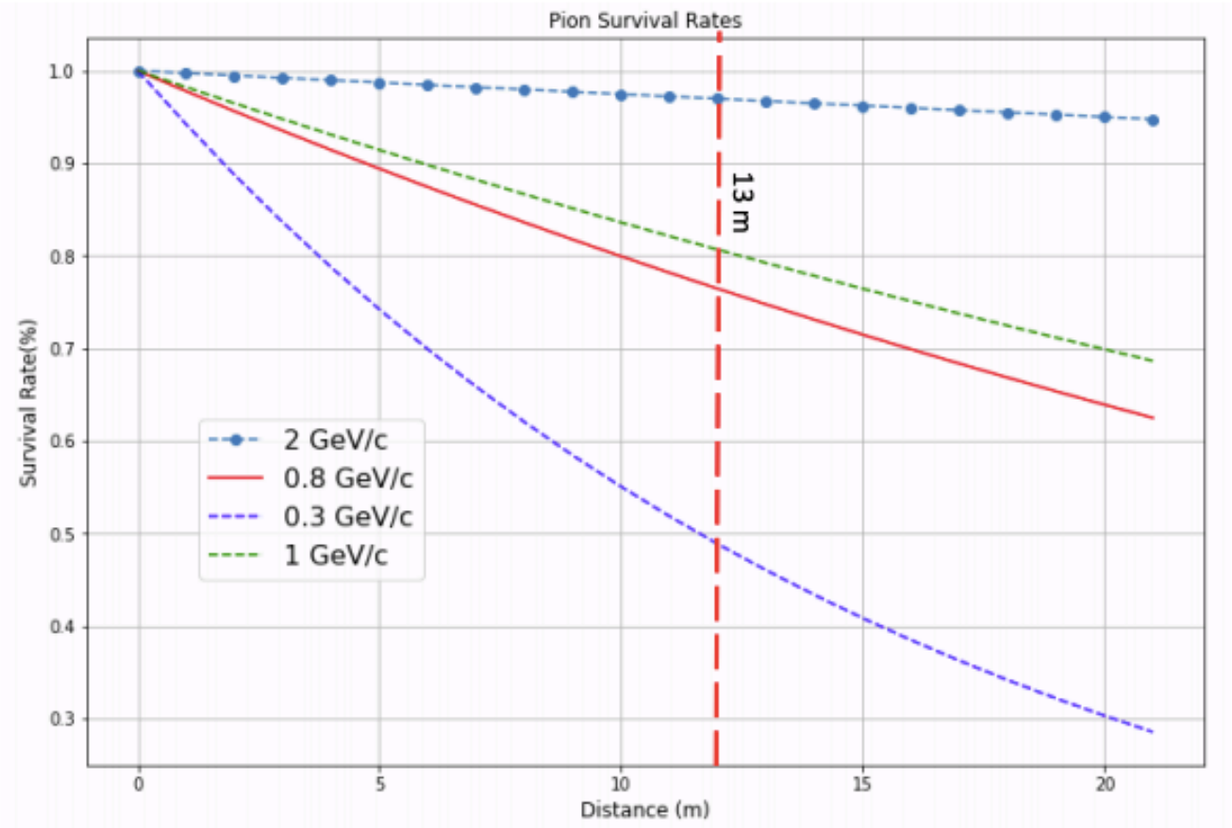
S.BORDONI, P.SALA

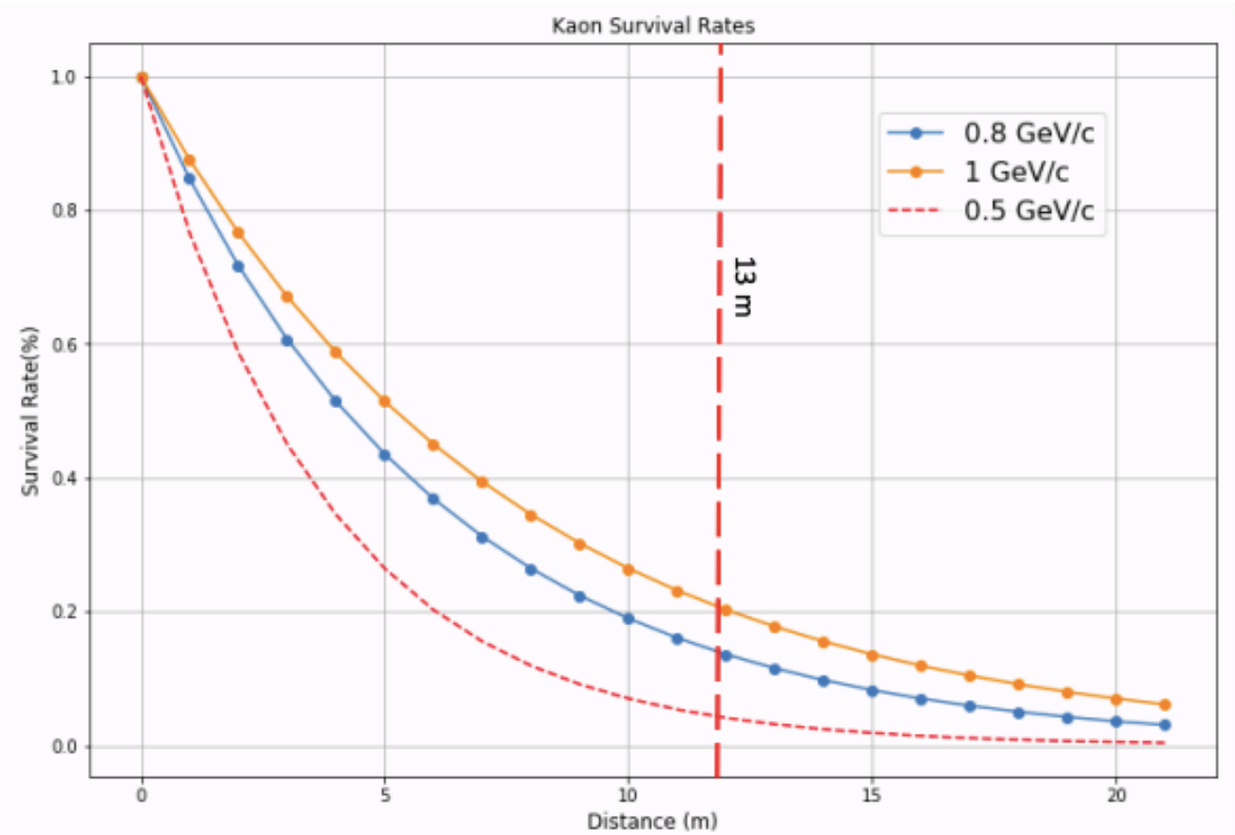
STATUS OF THE VVLE PROPOSAL

SINCE THE PROPOSAL

- Work in close contact with EN-EA (Nikos and Lau)
- Preliminary thoughts about possible layout of a new facility with a sub-GeV tertiary beam line at the North Area. Main driven requirements:
  - all particle species (pions, protons and kaons)
  - short beam line to keep decent particle survival rate
- Several design have been drafted:
  - using existing elements —> limit the potential investment
  - free design —> understand the best we can have (in the existing NA)

PARTICLE SURVIVAL RATE





SHORT SUMMARY OF THE STUDIES

- Considering secondary beam particle at 40 GeV/c. New beam line at an angle wrt the target (e.g. 200mrad)
- **With existing elements:**
  - Beam with large acceptance in both planes and good intrinsic resolving power : 4 (2) bending magnets and 4 (7) quadrupoles —> L ~ 20 m
  - Beam with still large acceptance but less stringent requirements on particle's momentum recombination and beam spot size: 2 (1) bending magnets and 6 quadrupoles —> L ~ 13-14m
- **With new elements:**
  - 2 bending magnets and 6 quadrupoles —> L < 10m

OTHER CONSIDERATIONS

- Preliminary studies done also concerning the particle yields wrt the target type (Be or W) and its length
- Particle identification in the beam line with ToF and Cherenkov needs also careful studies. Instrumentation also to be considered in the total length of the beam line

FEEDBACK FROM SPSC REFEREES

- Interesting new facility
- Physics case need to be clarify and strengthen (impact on oscillation analyses, detector calibrations)
- Invitation to look for synergies with WCTE
  - clear common interest
  - timescale different
  - facility vs simple beam line
  - probably not kaons