



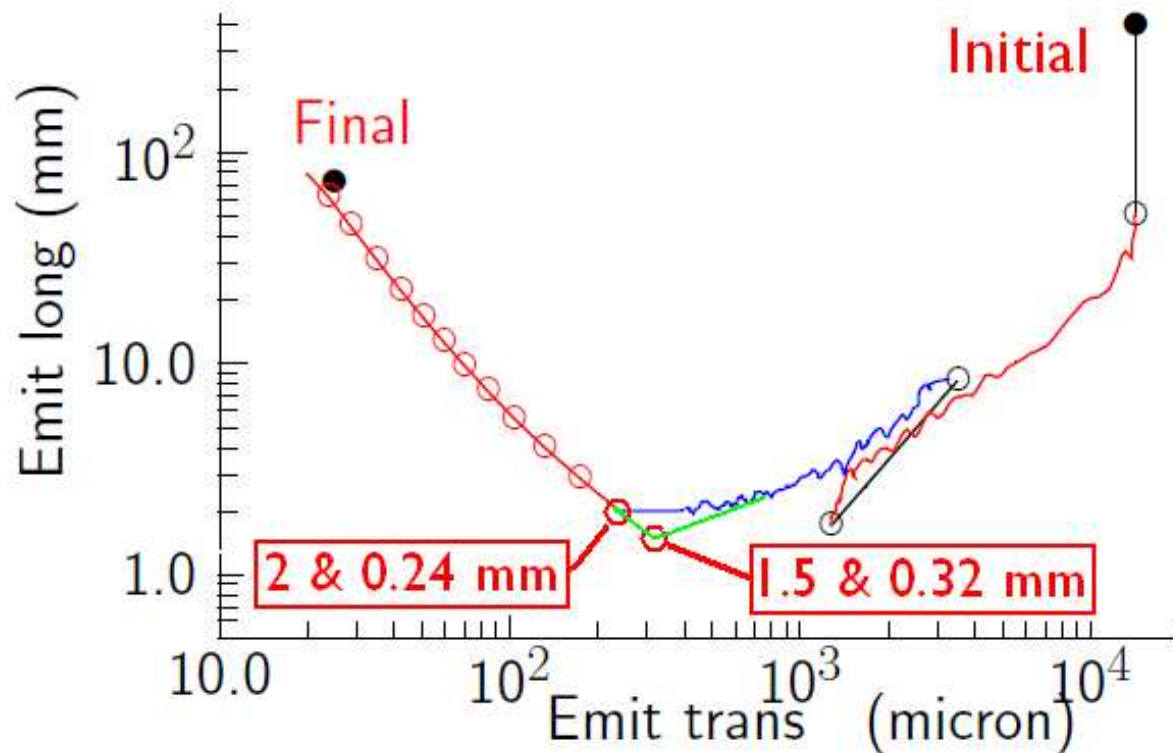
# Vacuum rf 6D Cooling

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## Specification

- Input: from end of Neuffer phase rotation (without 4D cooling)
- Output:  $\epsilon_{\parallel} = 1.5$  mm, and  $\epsilon_{\perp} = 0.32$  mm.
- Components: Charge separator, Rectilinear 6D, 6D merge, further Rectilinear 6D



# Priorities

1. Confirm simulation of Phase rotation and fix output files
2. Confirm simulation of Cary's charge separator and fix output files
3. Fix and simulate Valeri's and/or Diktys' 6D cooling systems
  - Simulate Valeri's using output from Cary and a standard code
  - Break Valeri's into before and after merge systems
  - Add final stage to Valeri's, using HTS, to 0.32 mm transverse
4. Choice of Rectilinear RFOFO lattices
5. Complete design and G4BL simulation of 6D bunch merge
6. Do end-end simulation
7. Start study of engineering: absorbers, rf, magnets, supports, thermal insulation.
8. Consideration of Snakes and other 6D cooling systems that might offer advantages; eg cooling both signs