

CDR & Simulation Update

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WP6 Meeting

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ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



- 1) Overview
 - a. Layout & Key parameters
- 2) Stage 1 Design & Performance
 - a. Lattice description
 - b. Optics Tracking and Performance
 - i. Parameterized Beam
Spectrum *
Angular Distribution *
Transverse Spatial Distribution
 - i. Start-to-end tracking
Nozzle Region
Reduced Angular Divergence
Stage 1 Nominal Design Performance
Space Charge Impact and Mitigation
Stage 2 Operation
Uniform Profile Generation
Gabor Lens Tracking
 - i. End station Dose Estimation
Model
Maximum theoretical dose calculations
- 3) Stage 2 Design & Performance
 - a. Injection Line
 - i. Lattice description
 - ii. Optical Performance
 - b. FFA
 - i. Lattice Description
 - ii. Optical Performance
 - c. Extraction Line
 - i. Lattice Description
 - ii. Optical Performance

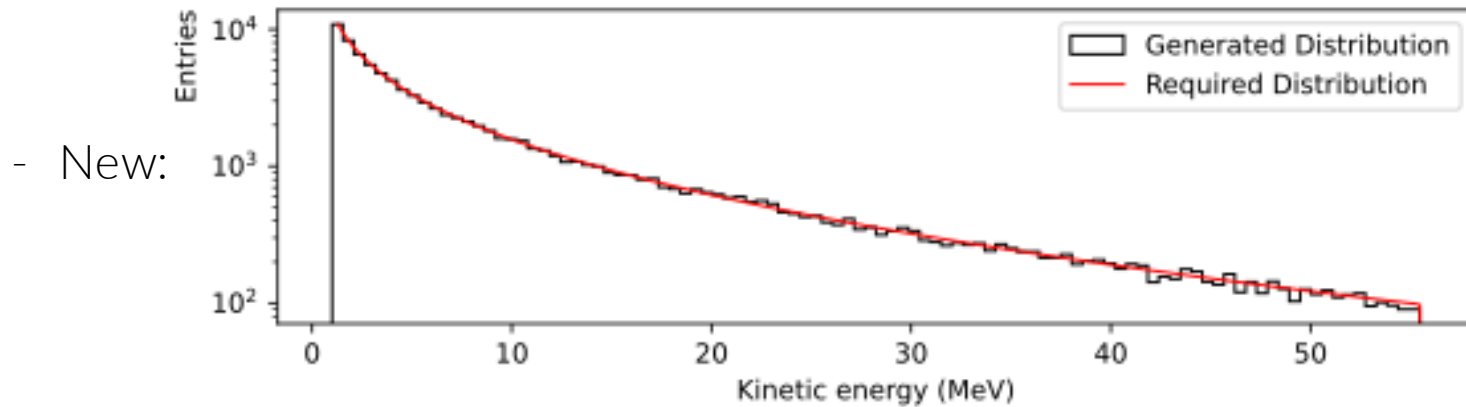
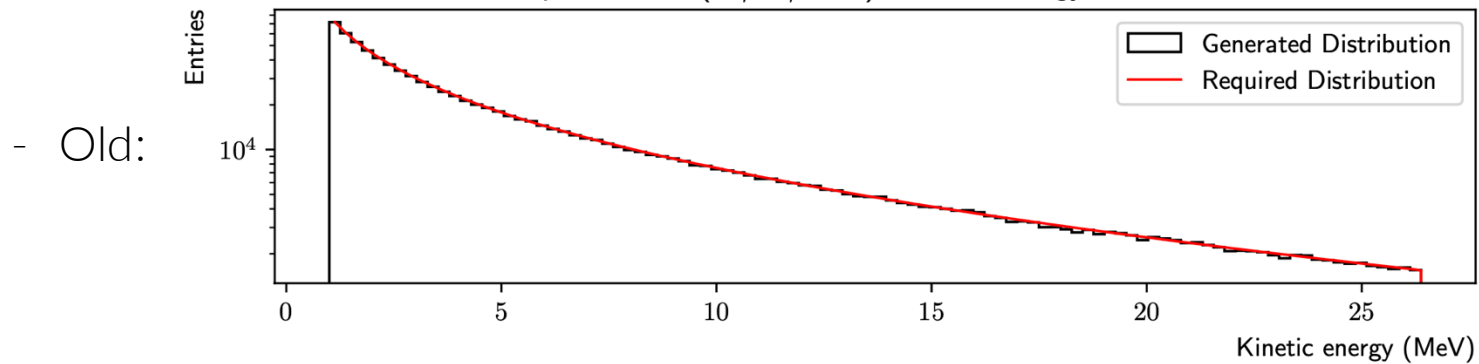
- 4) LhARA Technical Systems
 - a. Magnet Design
 - b. RF Cavities
 - c. Diagnostic System
 - d. Control & Feedback Systems
 - e. Vacuum Concepts
- 5) Conclusions

Now in ch. 7

- 1) Engineering & Infrastructure
 - 1) ITRF/LhARA Building Concept Design
 - 2) Bulk Shielding Assessment
 - 3) Mechanical Systems Integration Support Concepts
 - 4) Power Consumption & Cooling Requirements

Facility Design Chapter
Material Not Started
Material Ongoing
Material Complete

- Much broader spectrum with updated laser parameters (N.D. & R.G.)



CDR: Parameterised Spectrum

- Include 3D plots in the CDR?

