



JINR DLNP Linear Accelerator: Commissioning Results and Preparations for the Official Startup

Mikhail Nozdrin

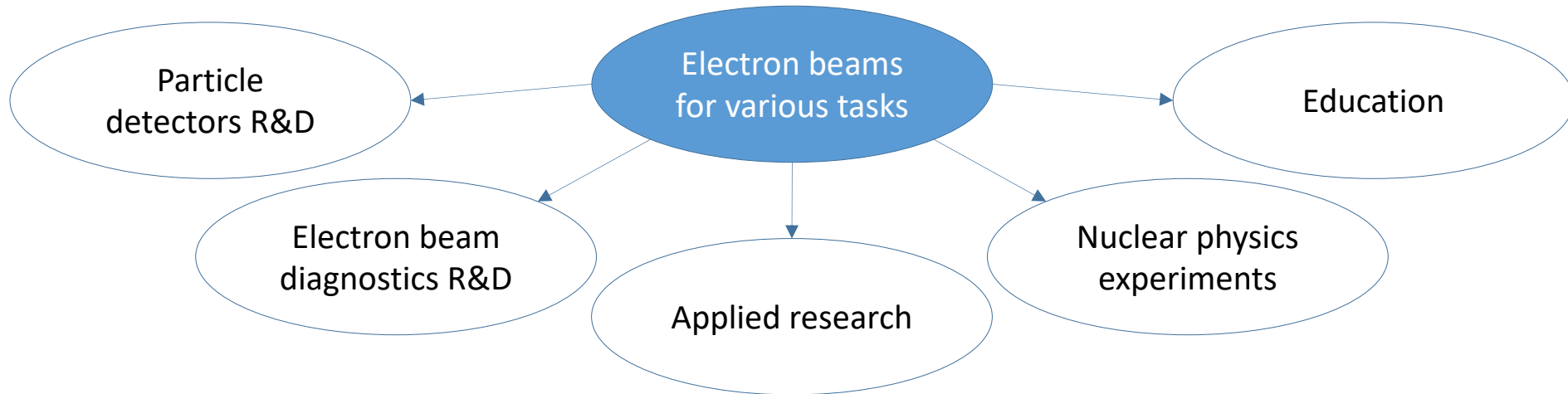
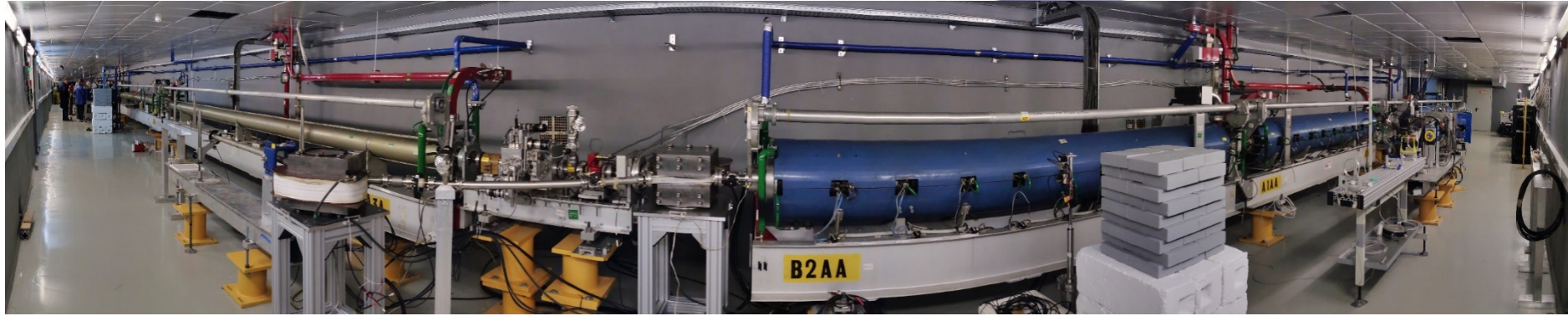
Accelerator applications



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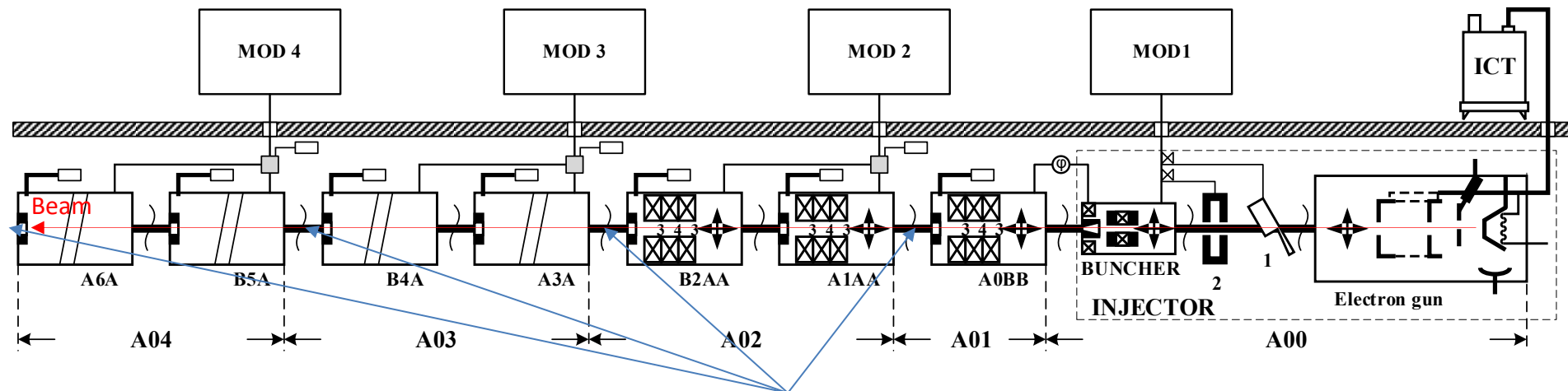
Layout & Parameters



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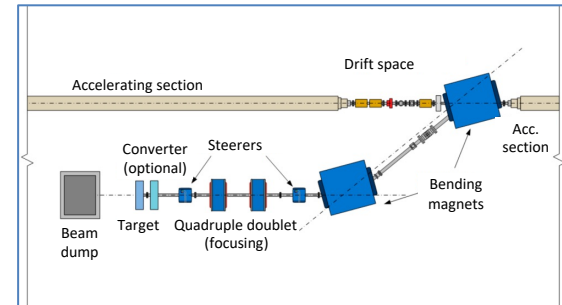


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- $f = 1-10 \text{ Hz}$ (25 @ A0BB)
- $\tau = 0.25-2 \mu\text{s}$
- $I_{\text{peak}} = 40 \text{ mA}$ ($\tau = 2 \mu\text{s}$)
- Converters for γ & n

- User channels (UCs)
 - 5-24 MeV after A0BB
 - 24-60 MeV after B2AA
 - 60-133 MeV after B4A
 - 133-205 MeV after A6A



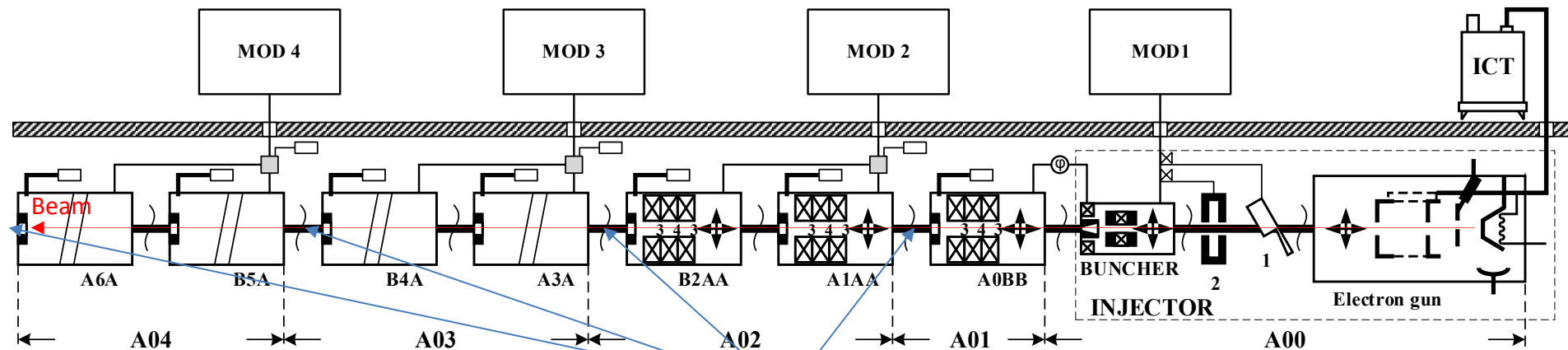
Commissioning Results



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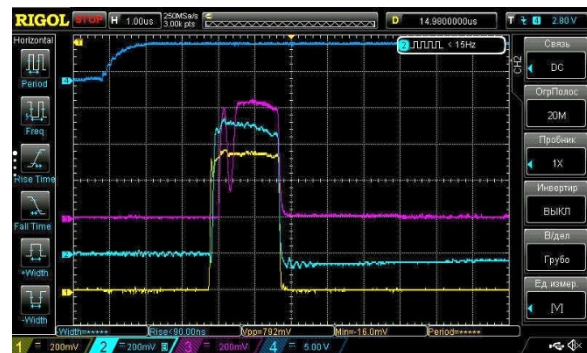


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	Normal Operation	Max, or Design	
Final energy	0.7	0.8	GeV
Accel gradient	5	7	MeV/m
$\Delta E/E$ (FWHM)	(3) < 0.1	(3) < 0.1	%
Rep. rate	150	250	Hz
Pulse length	2	3.5	μ s
Beam intensity	0.040	0.060	A
Norm. emit. (1 σ)	25		π mm-mrad

- Max energy reached:
 - 25 MeV after A0BB
 - 63 MeV after B2AA
 - 138 MeV after B4A
 - 205 MeV after A6A



Conclusion & Outlook



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- Main poster: TUPO004
- Related posters: TUPO056, THPO027, THPO053



nozdrin@jinr.ru

- Commissioning is being finished
- Operation for users foreseen at the end of 2026
- 400 MeV in 2027