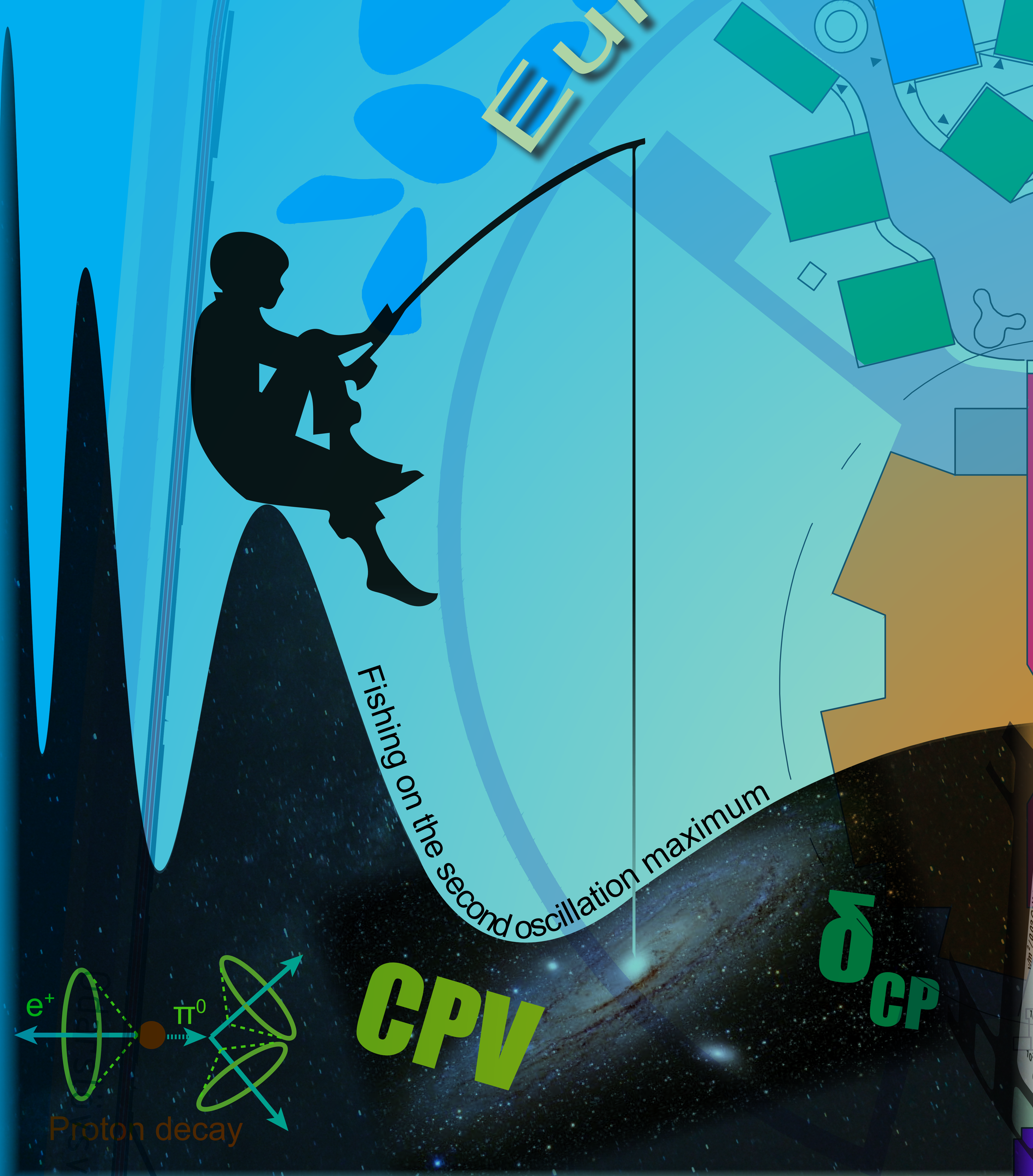
The ESSνSB Neutrino Oscillation Design Study

CP violation at the 2nd oscillation maximum

European Spallation Source

Physics Programme
- CP violation
- Mass Hierarchy
- Proton decay
- Supernova neutrinos
- Solar and atm. neutrinos

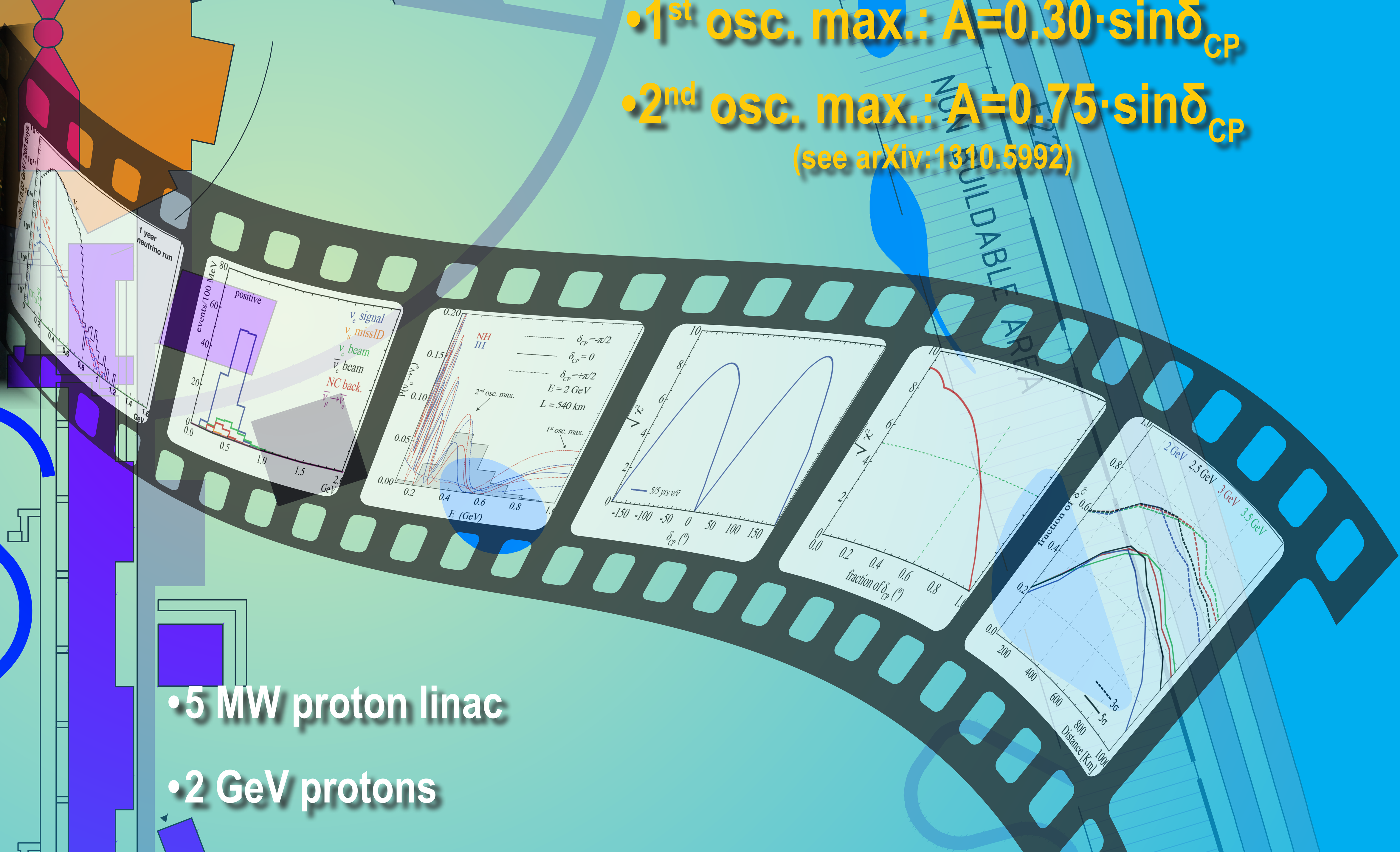
(arXiv:1309.7022)

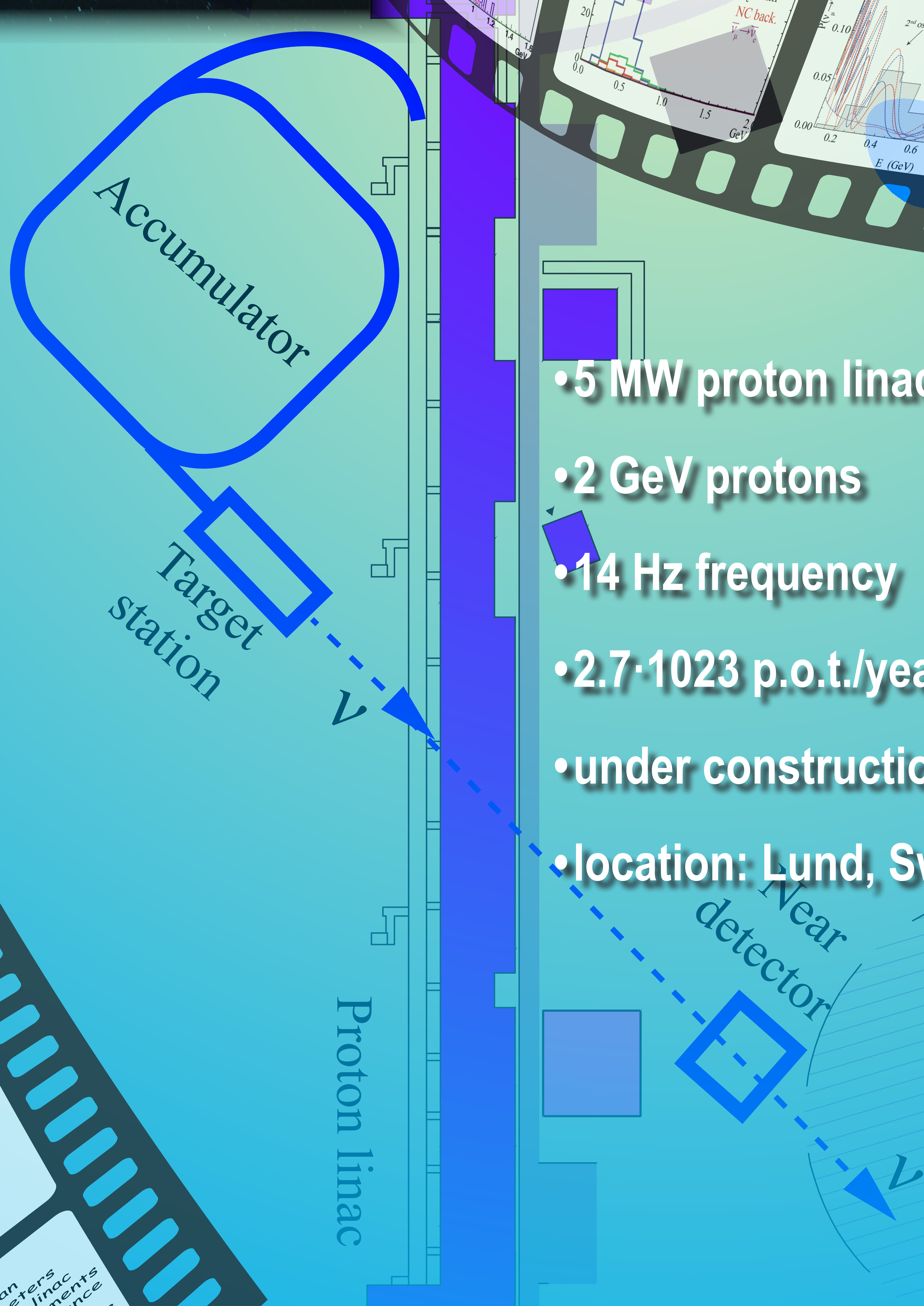


MATTER/ANTIMATTER ASYMMETRY

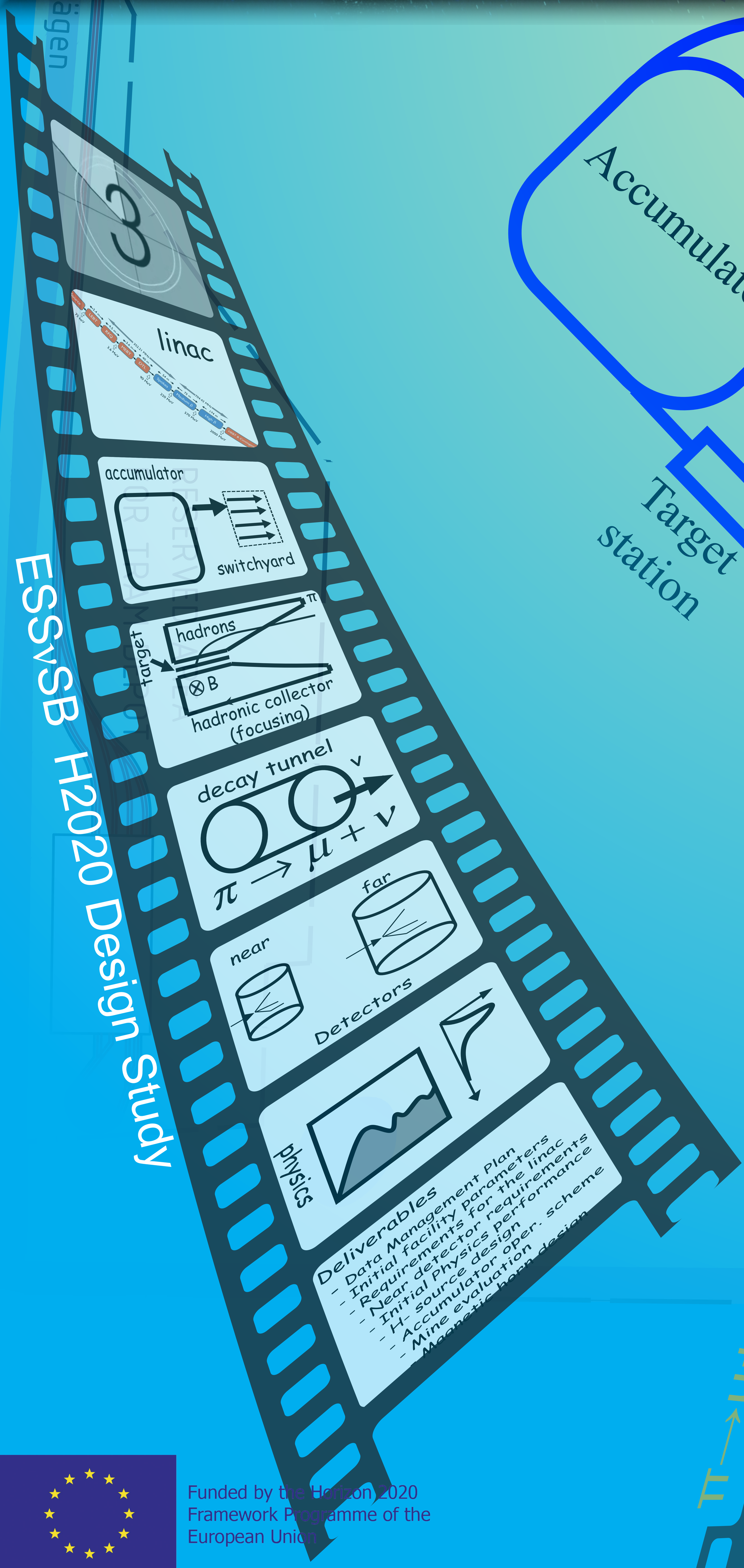
- 1st osc. max.: $A=0.30 \cdot \sin\delta_{CP}$
- 2nd osc. max.: $A=0.75 \cdot \sin\delta_{CP}$

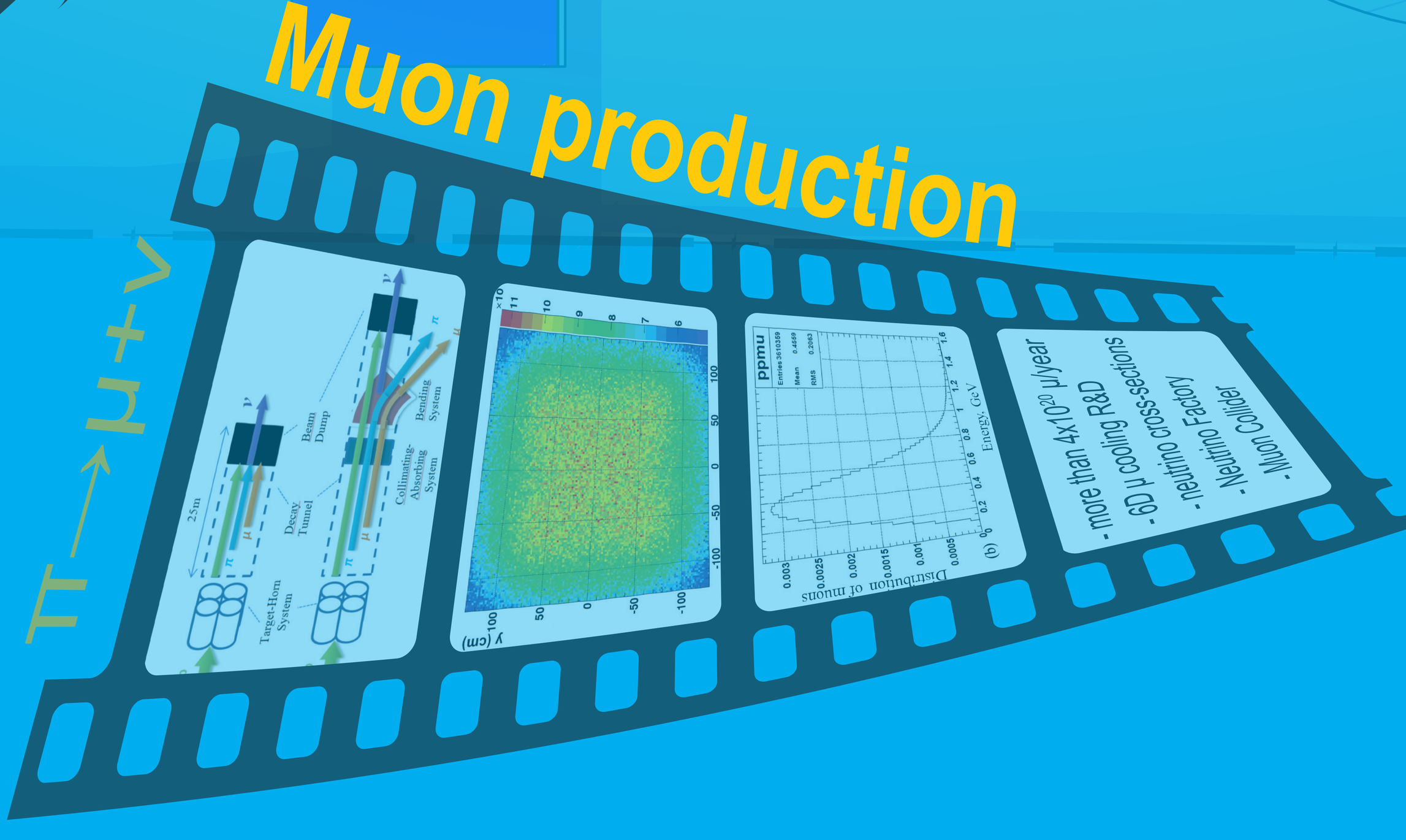
(see arXiv:1310.5992)

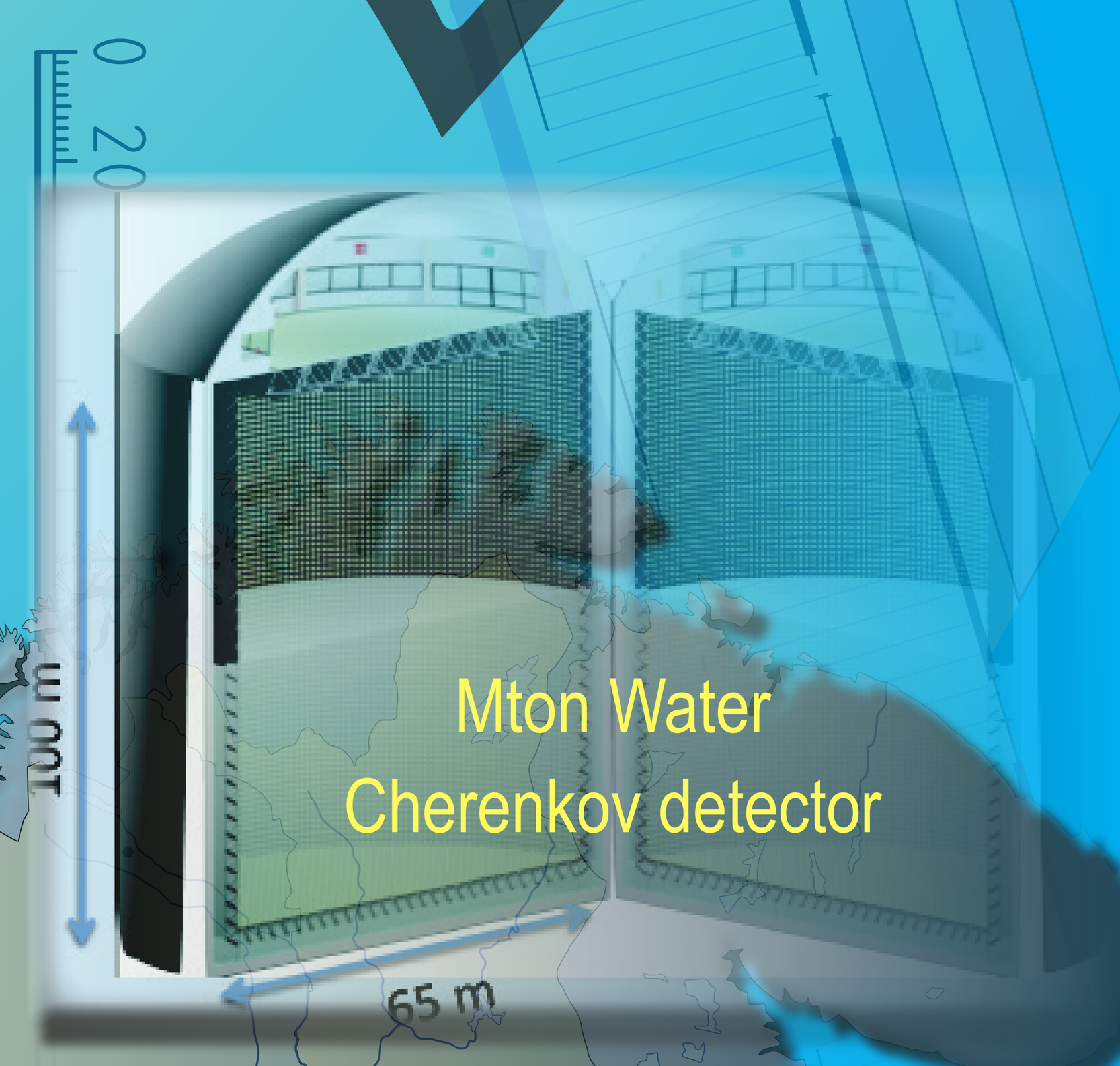




- 5 MW proton linac
- 2 GeV protons
- 14 Hz frequency
- 2.7·1023 p.o.t./year
- under construction, ready by 2023
- location: Lund, Sweden







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