

ESS facility technical objectives:

5 MW (upgrade 7.5 MW) long pulse source

≤ 2 ms pulses

≤ 20 Hz

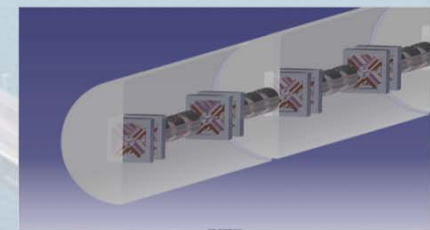
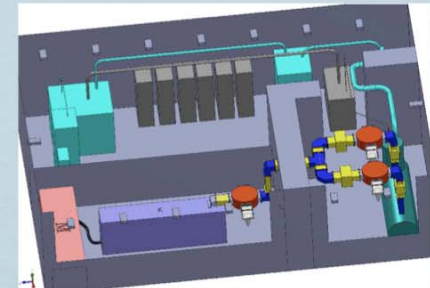
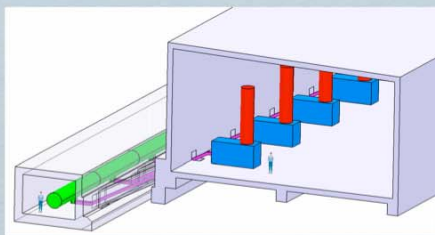
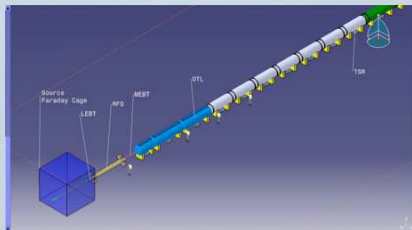
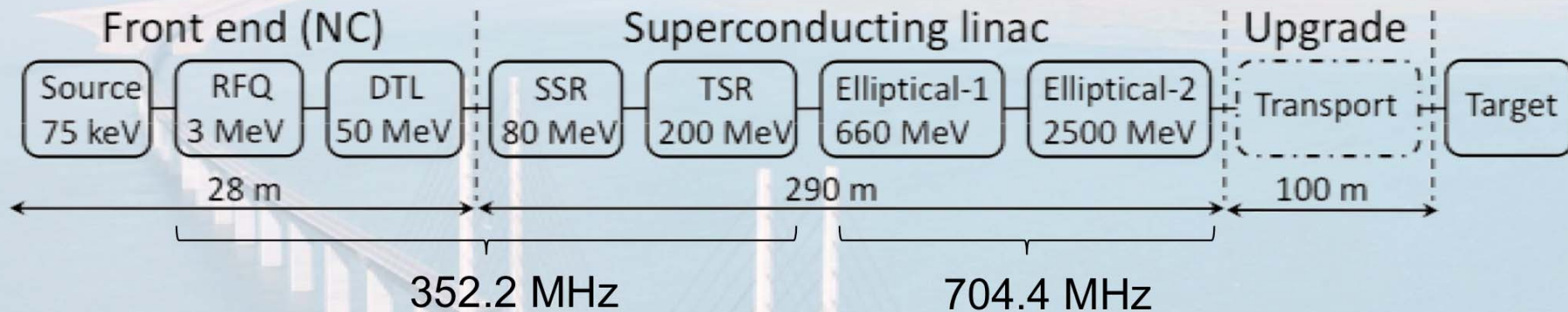
Protons (H⁺)

Low losses

High reliability, $>95\%$



Design update: ESS (S and B) Preparatory work



		B	S
INPUT			
Average beam power	[MW]	5.0	
No. of instruments		22	
Macro-pulse length	[ms]	1.5	2.0
Pulse repetition rate	[Hz]	20	
Proton kinetic energy	[GeV]	2.2	2.5
Peak coupler power	[MW]	1.2	1.0
Beam loss rate	[W/m]	<1.0	
OUTPUT			
Duty factor		0.03	0.04
Ave. current on target	[mA]	2.3	2.0
Ave. pulse current	[mA]	75	50
Ion source current	[mA]	~90	60
Total linac length	[m]		~420

Writing Group for linac project plan

- Project plan for the linac design update and prototyping
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Collaboration model for linac design!

Work Package (work areas)

1. Management Coordination - ESS
2. Beam Physics - ESS
3. Infrastructure Services – Tekniker, Bilbao
4. SCRF Spoke cavities – IPN, Orsay
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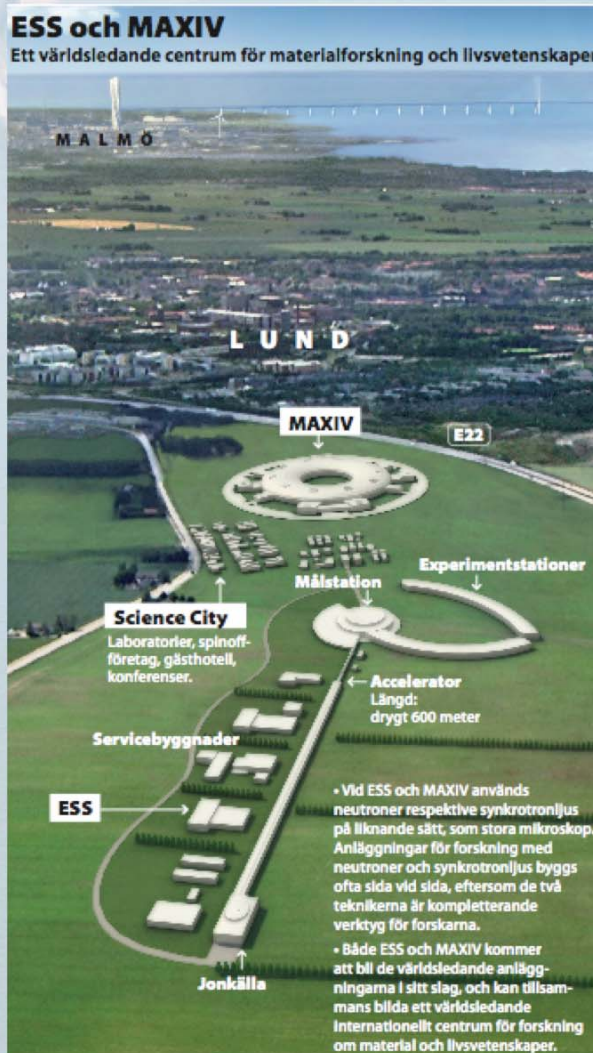
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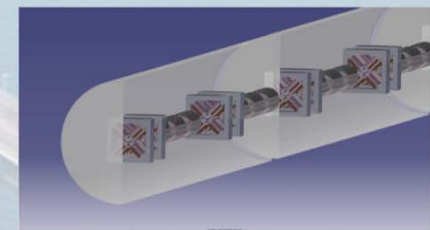
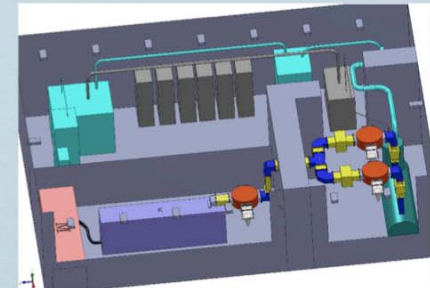
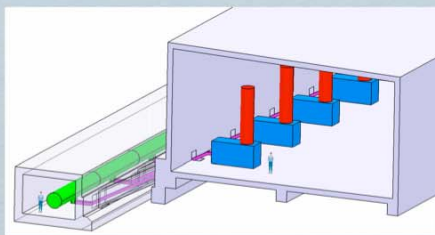
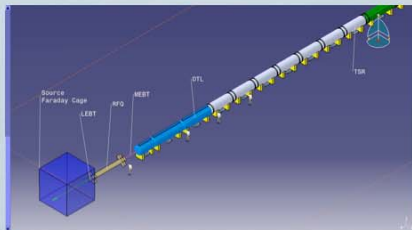
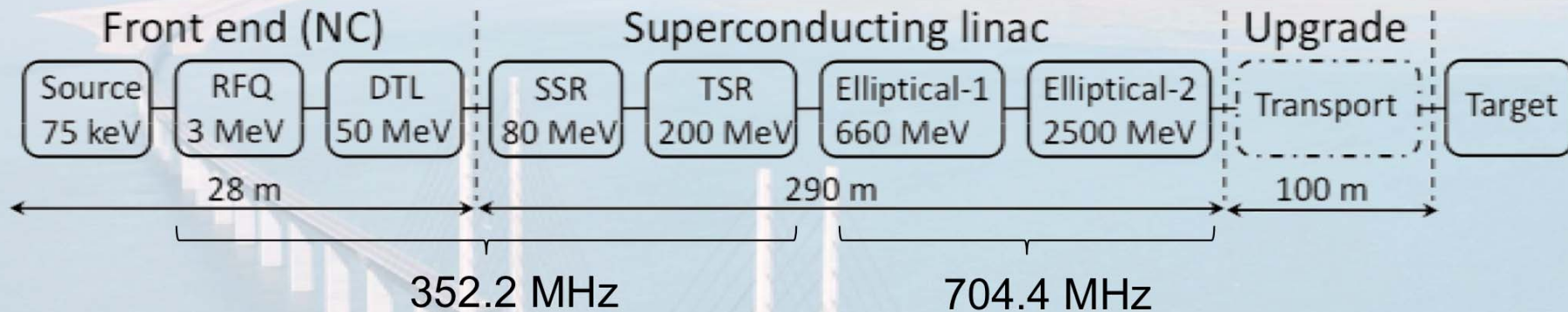
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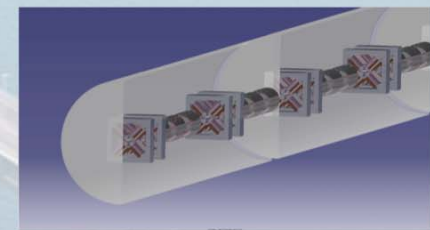
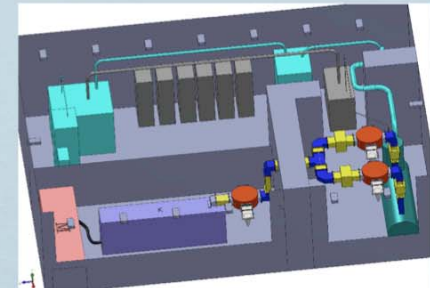
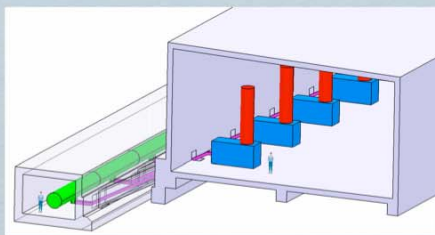
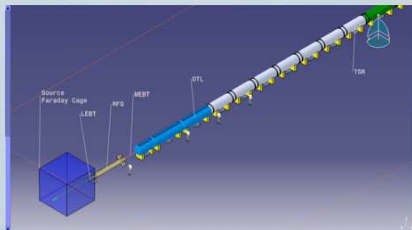
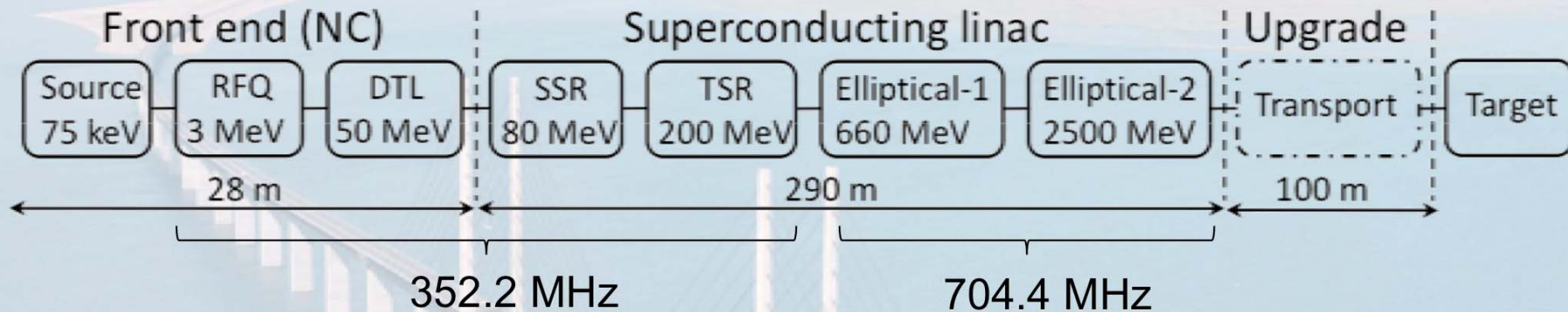
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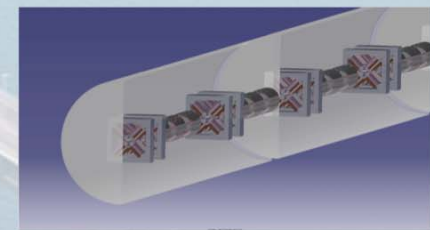
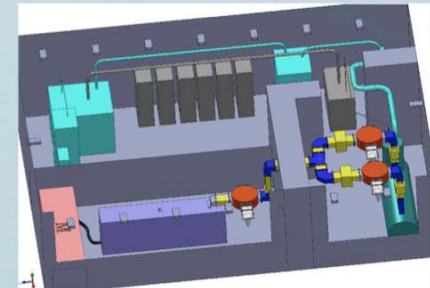
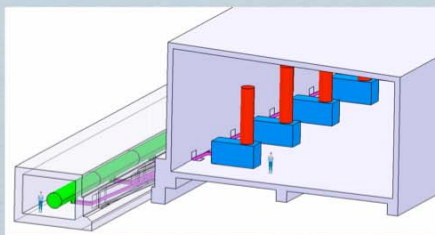
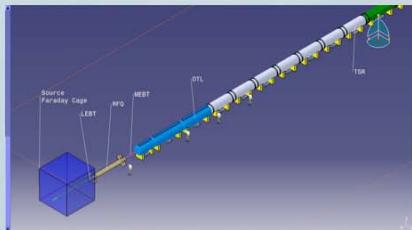
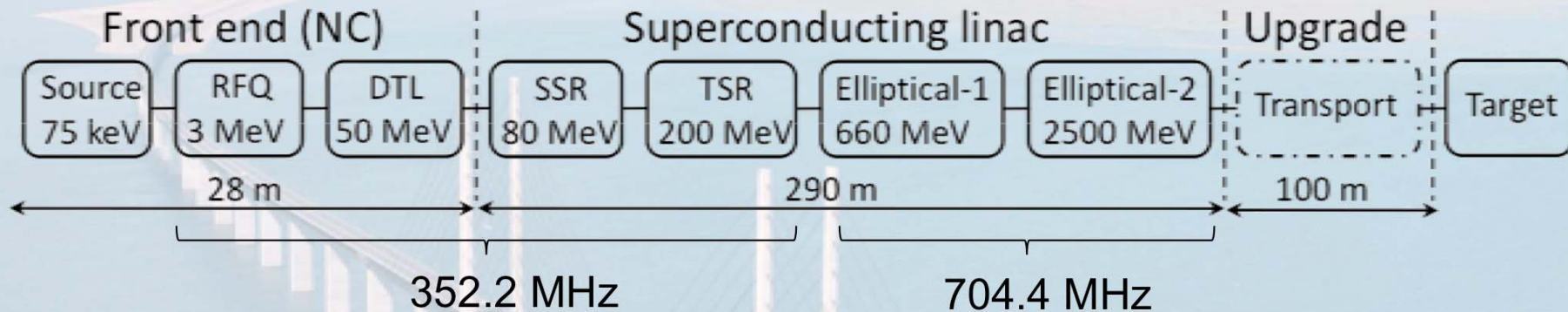
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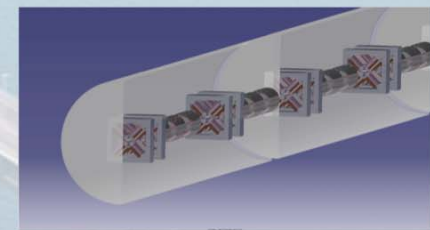
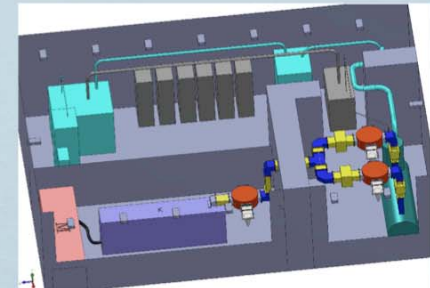
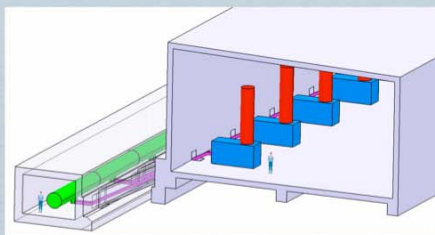
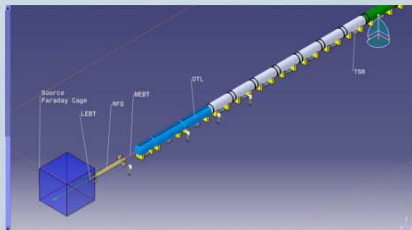
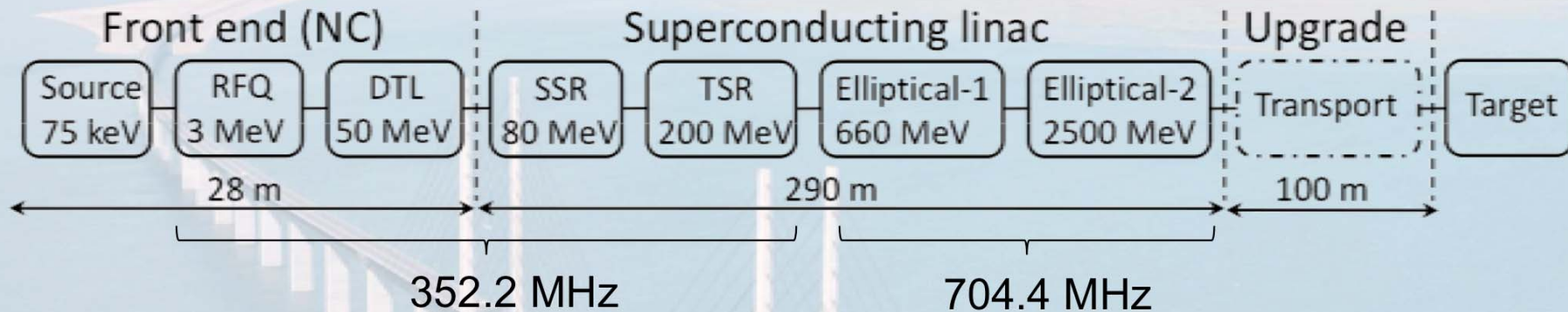
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