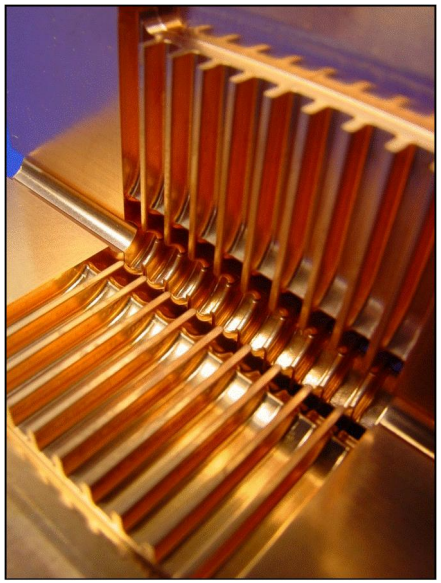
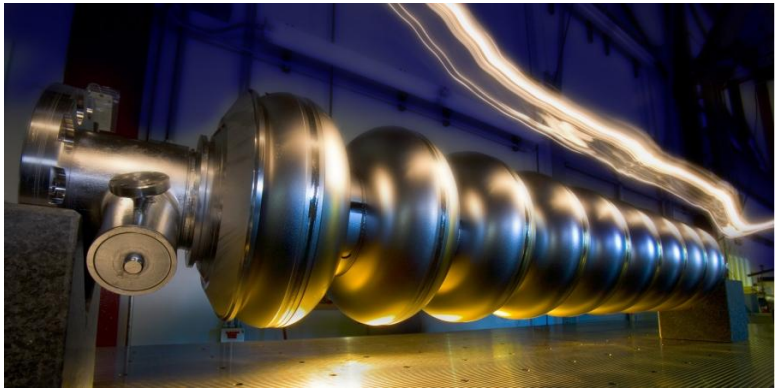
ILC and CLIC in a few words…

linear collider, producing e^+e^- collisions



CLIC

ILC



- Based on 2-beam acceleration scheme
- Gradient 100 MV/m
- Energy: 3 TeV, though will probably start at lower energy (~0.5 TeV)
- Detector study focuses on 3 TeV

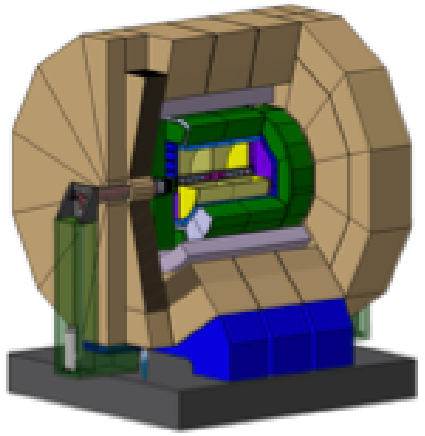
- Based on superconducting RF cavities
- Gradient 32 MV/m
- Energy: 500 GeV, upgradeable to 1 TeV (lower energies also considered)
- Detector studies focus mostly on 500 GeV

Luminosities: few 10^{34} $cm^{-2}s^{-1}$

Validated ILC concepts

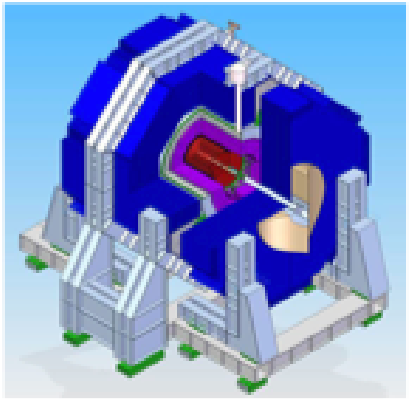
ILD: International Large Detector

"Large" : tracker radius 1.8m
B-field : 3.5 T
Tracker : TPC + Silicon
Calorimetry : high granularity particle flow
ECAL + HCAL inside large solenoid



SiD: Silicon Detector

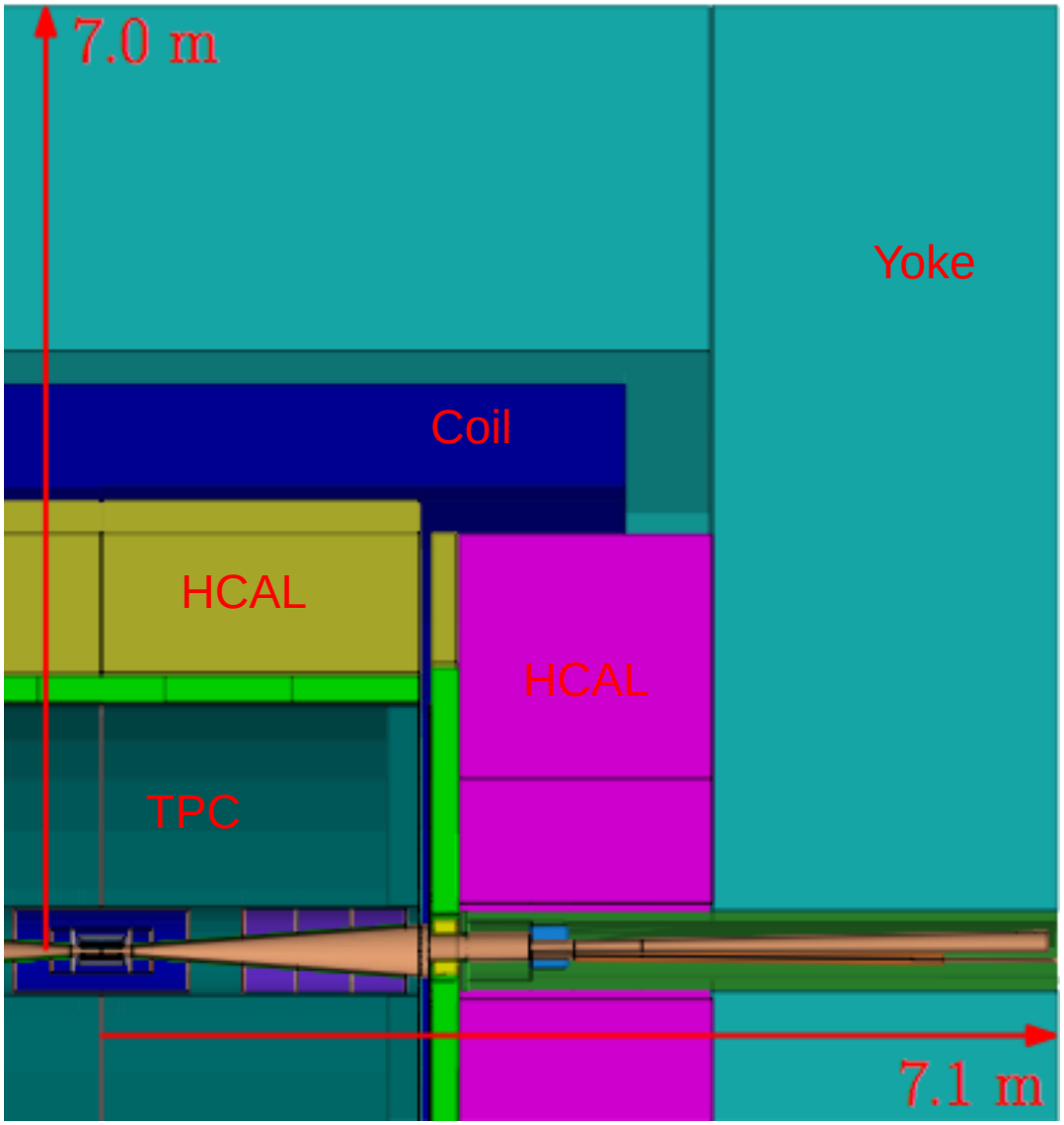
"Small" : tracker radius 1.2m
B-field : 5 T
Tracker : Silicon
Calorimetry : high granularity particle flow
ECAL + HCAL inside large solenoid



CLIC detector concepts will be based on SiD and ILD.

Modified to meet CLIC requirements

e.g. ILD concept adapted to CLIC



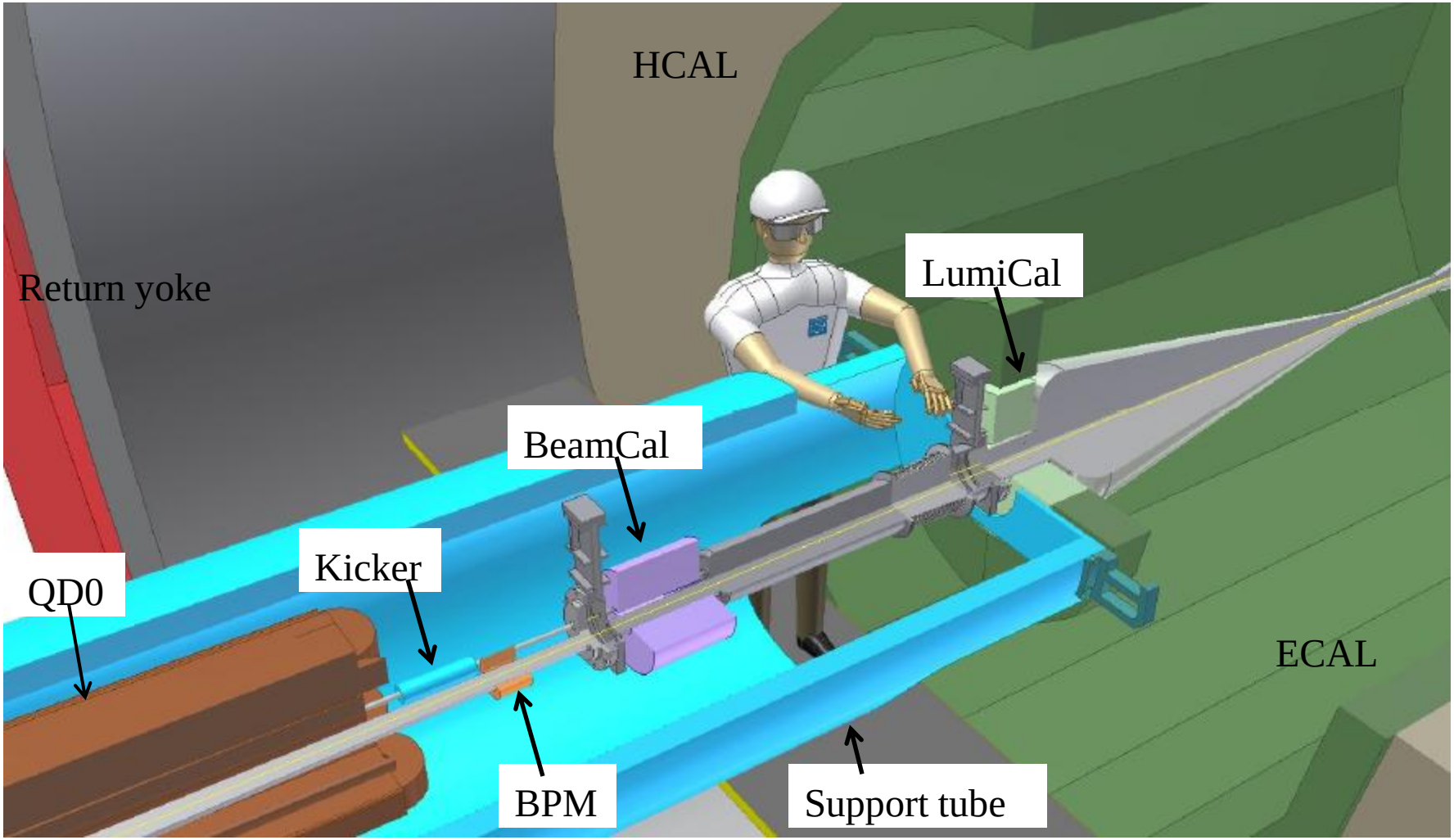
Changes to the ILD detector:

- 20 mrad crossing angle
- Vertex Detector to ~30 mm inner radius, due to Beam-Beam Background
- HCAL barrel with ~7 Λ_i with 1 cm tungsten plates
- HCAL endcap with ~7 Λ_i with 2 cm steel plates
- Forward (FCAL) region adaptations

… and similarly for SiD

Andre Sailer

Forward region (1)



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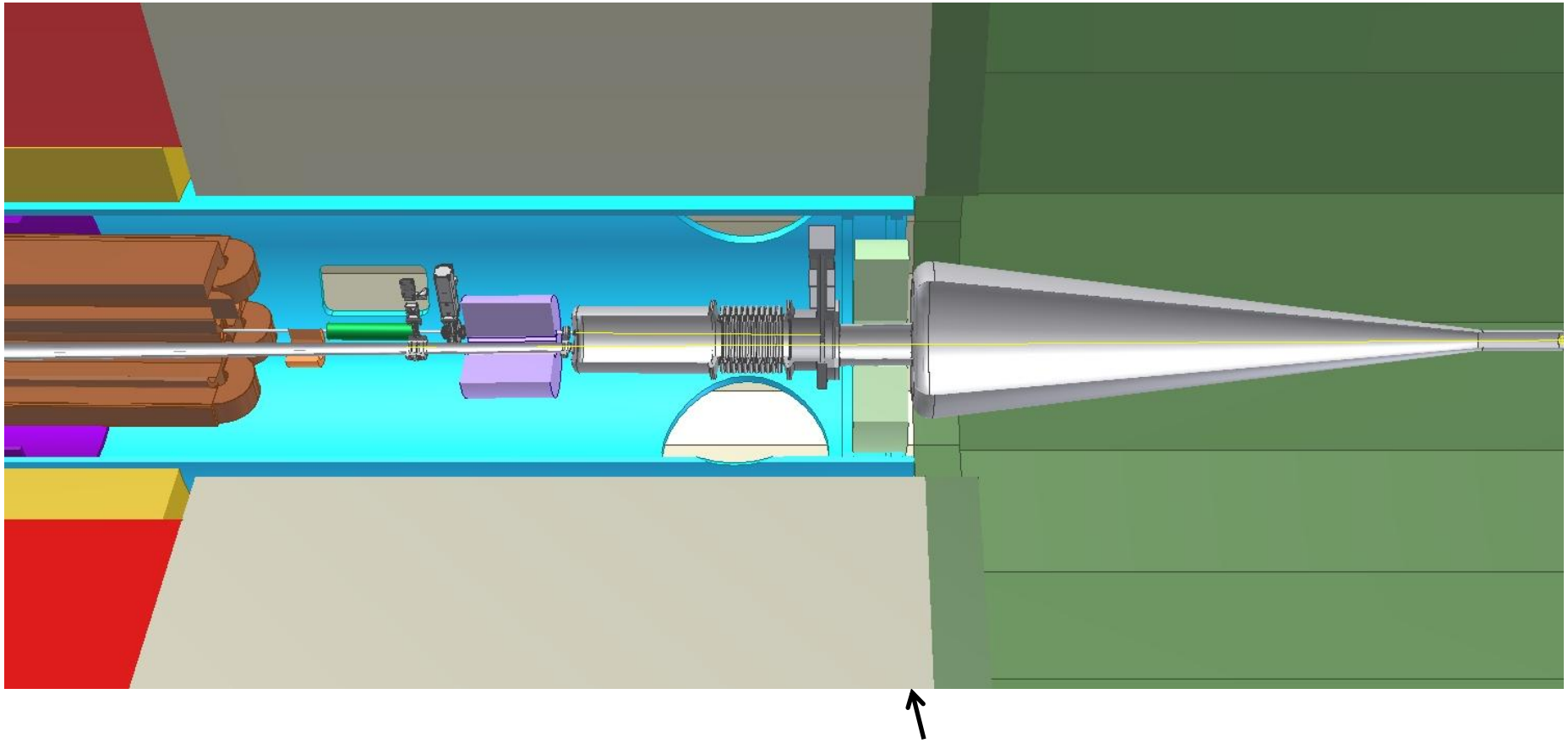
Forward region (2)



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