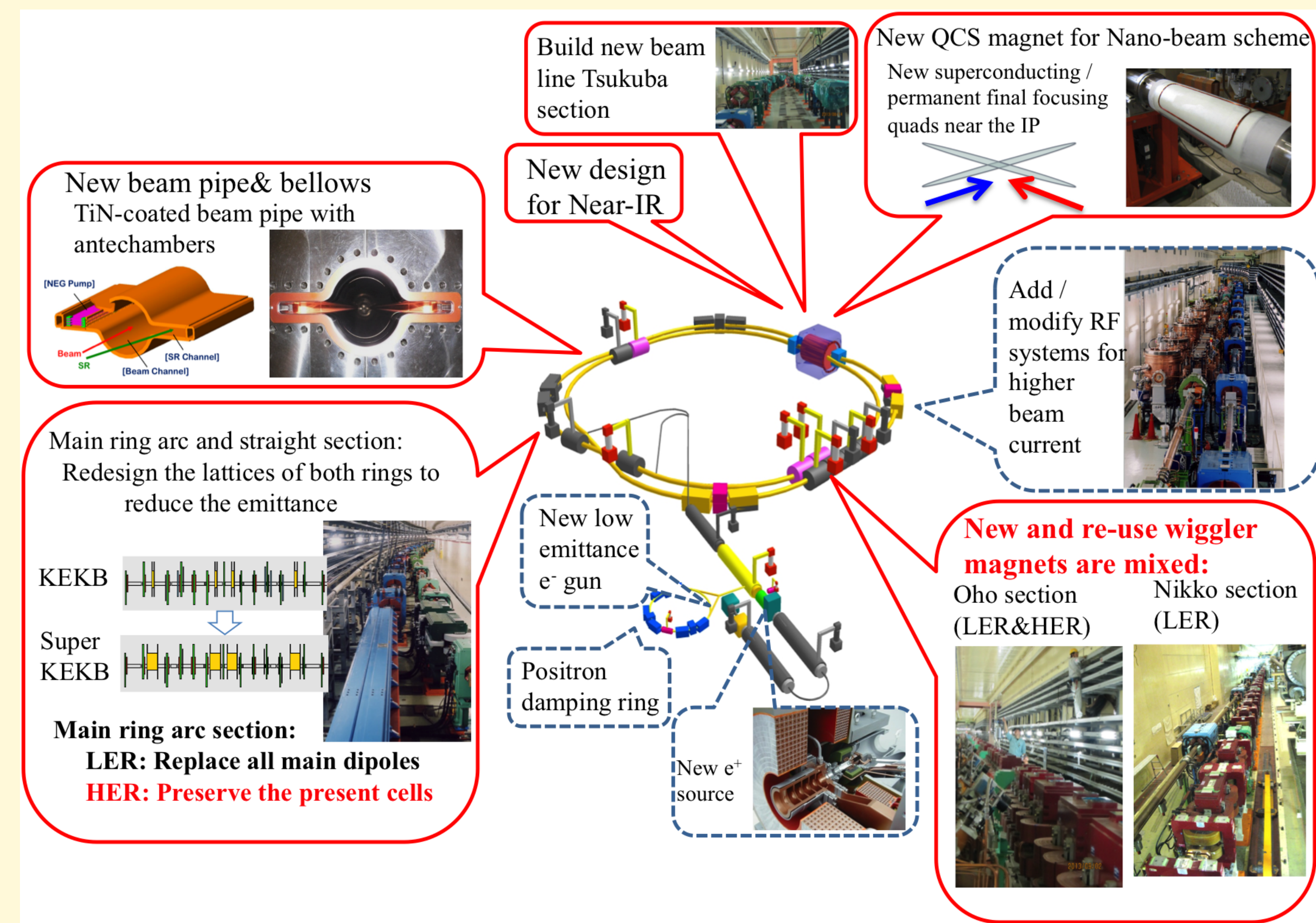


Christoph Schwanda

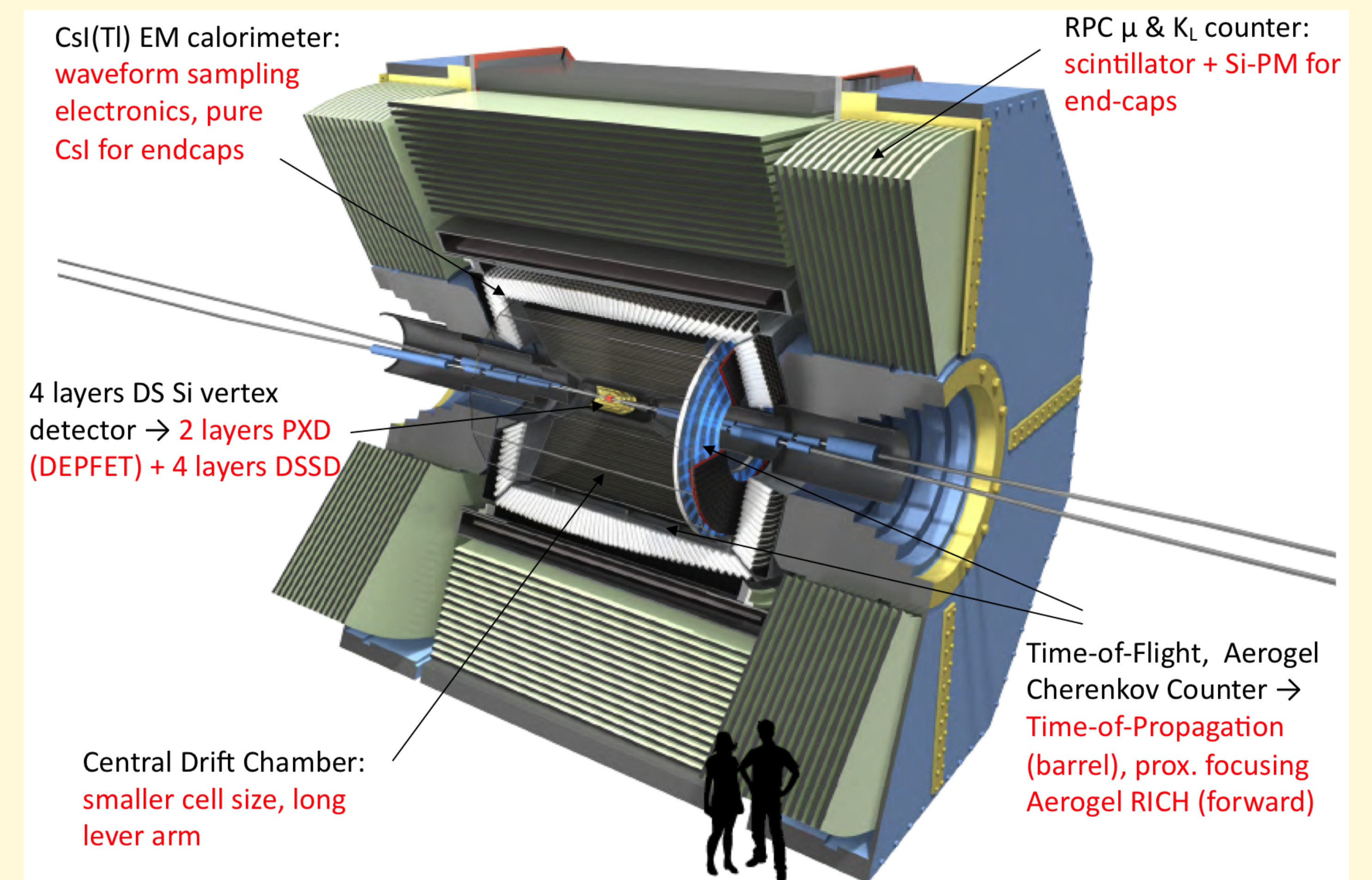
Institute of High Energy Physics, Austrian Academy of Sciences

From KEKB to SuperKEKB



e^+e^- collisions @ $E_{cm} = 10.58$ GeV, $\mathcal{L} = 8 \times 10^{35}/\text{cm}^2/\text{s}$

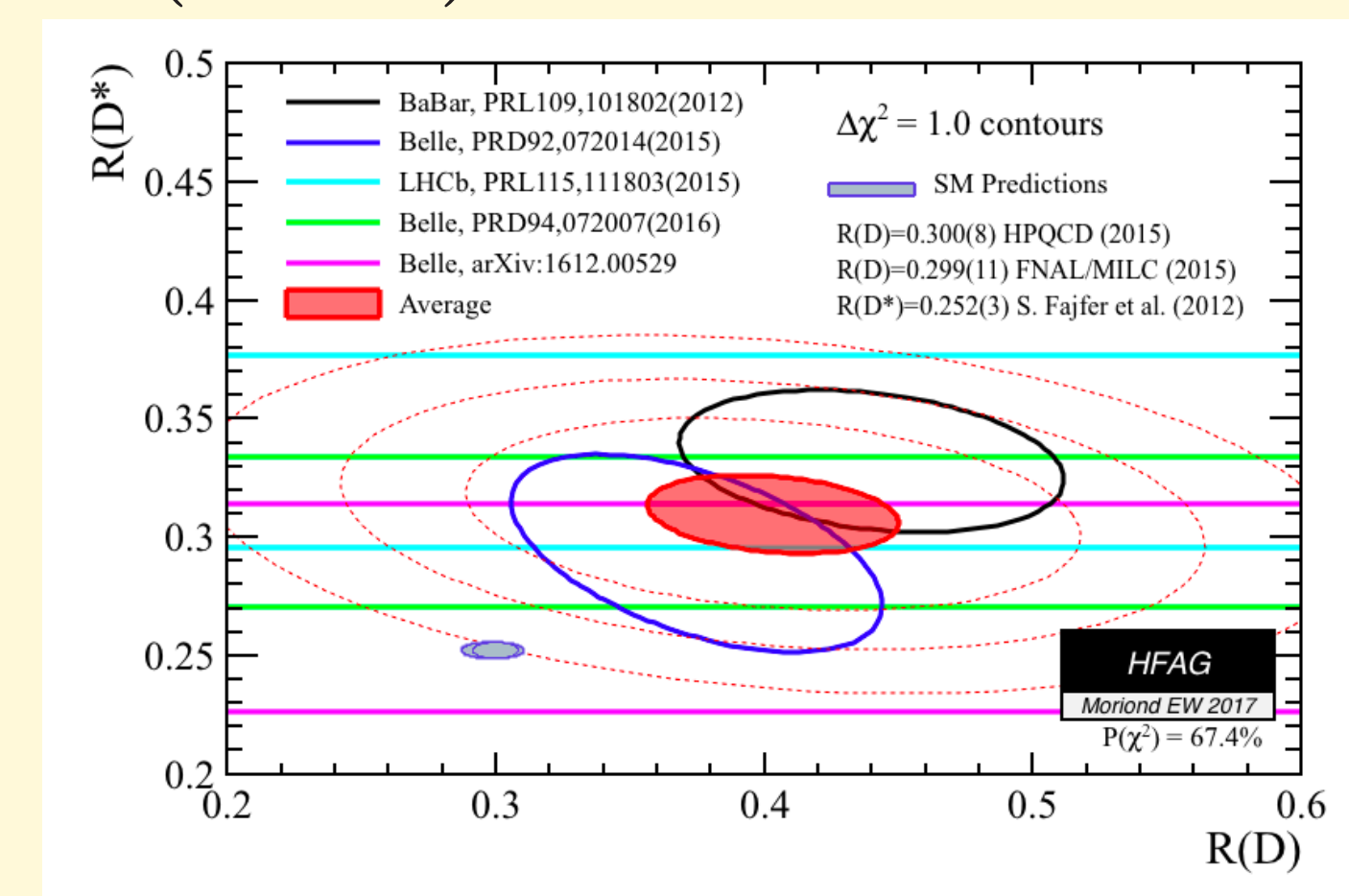
From Belle to Belle II



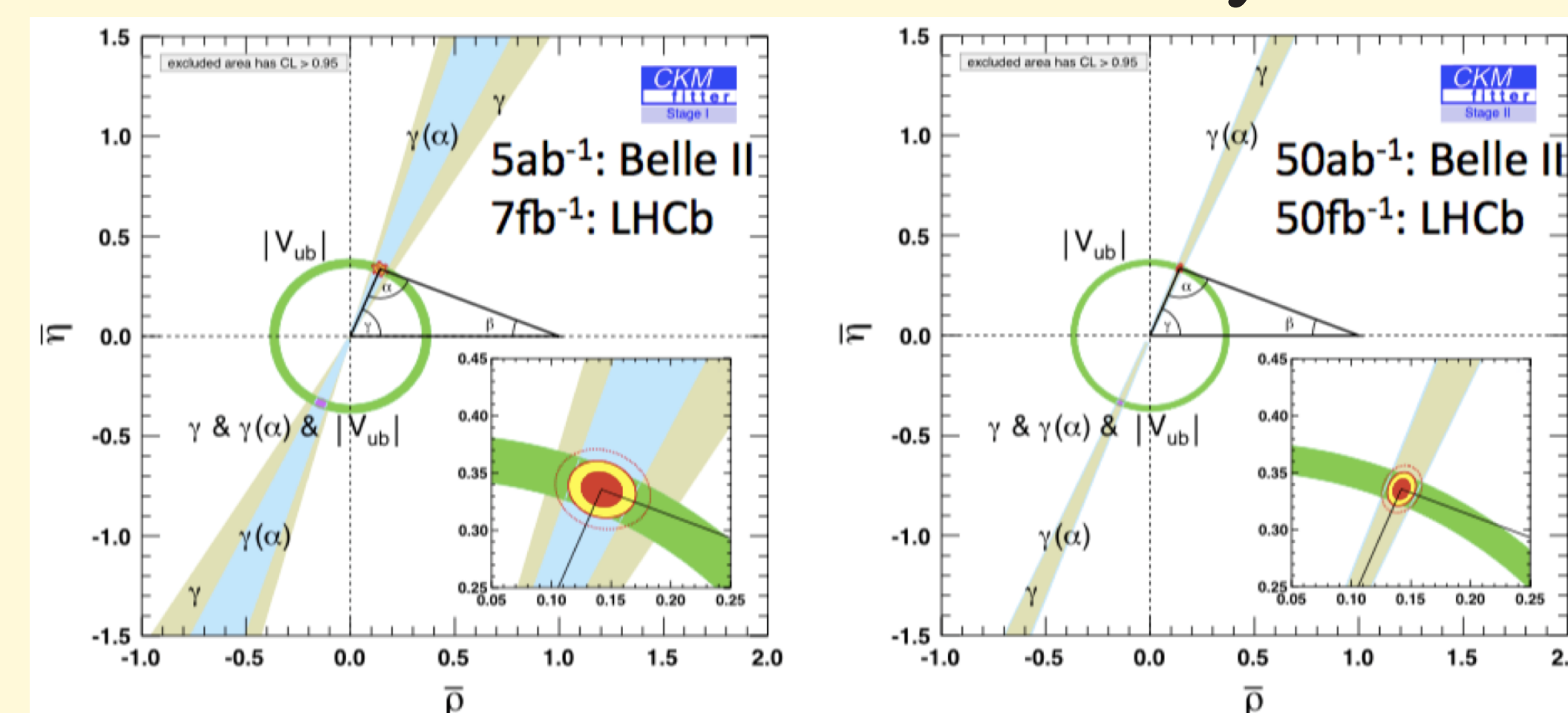
Better particle identification, more background-hard compared to Belle

Belle II physics highlights

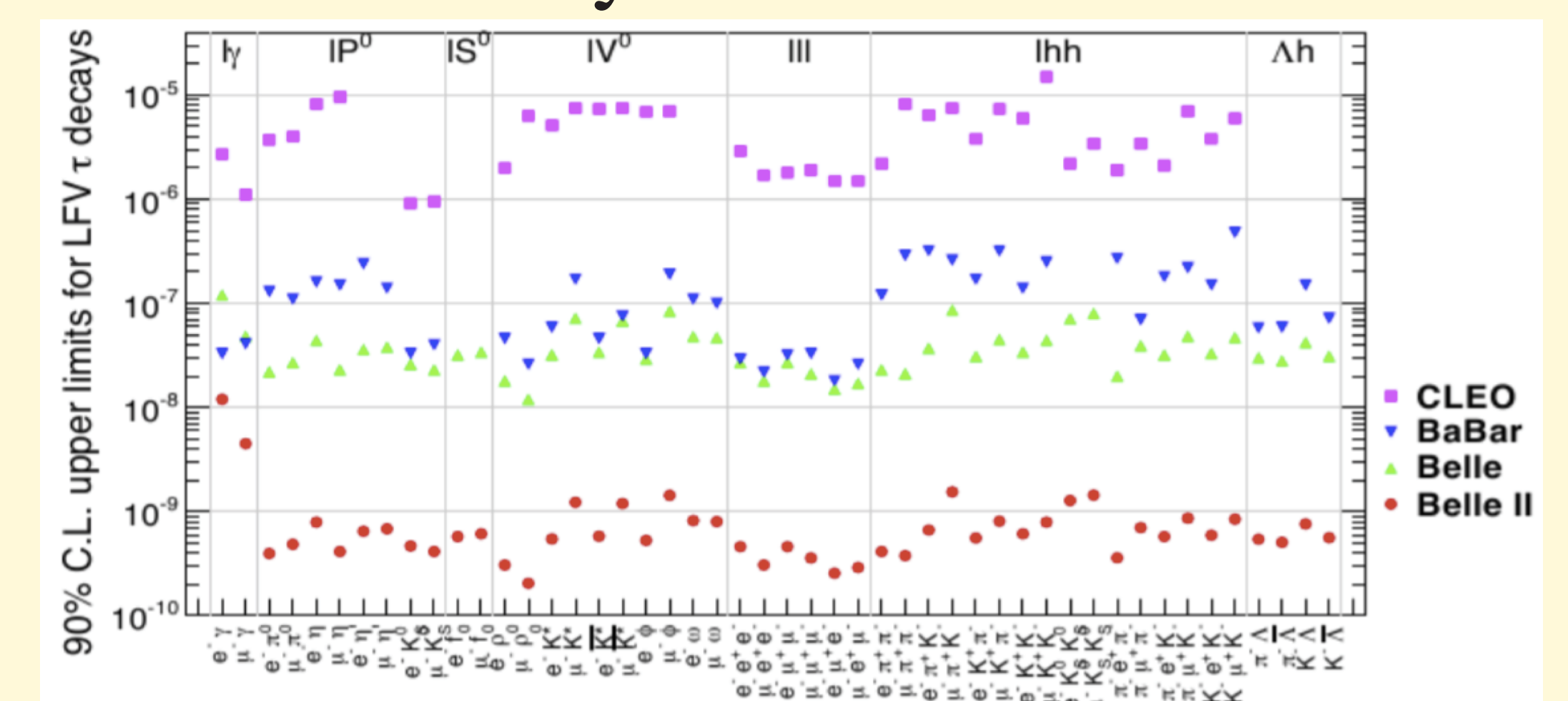
$R(D^{(*)})$ determination



Precision test of CKM unitarity

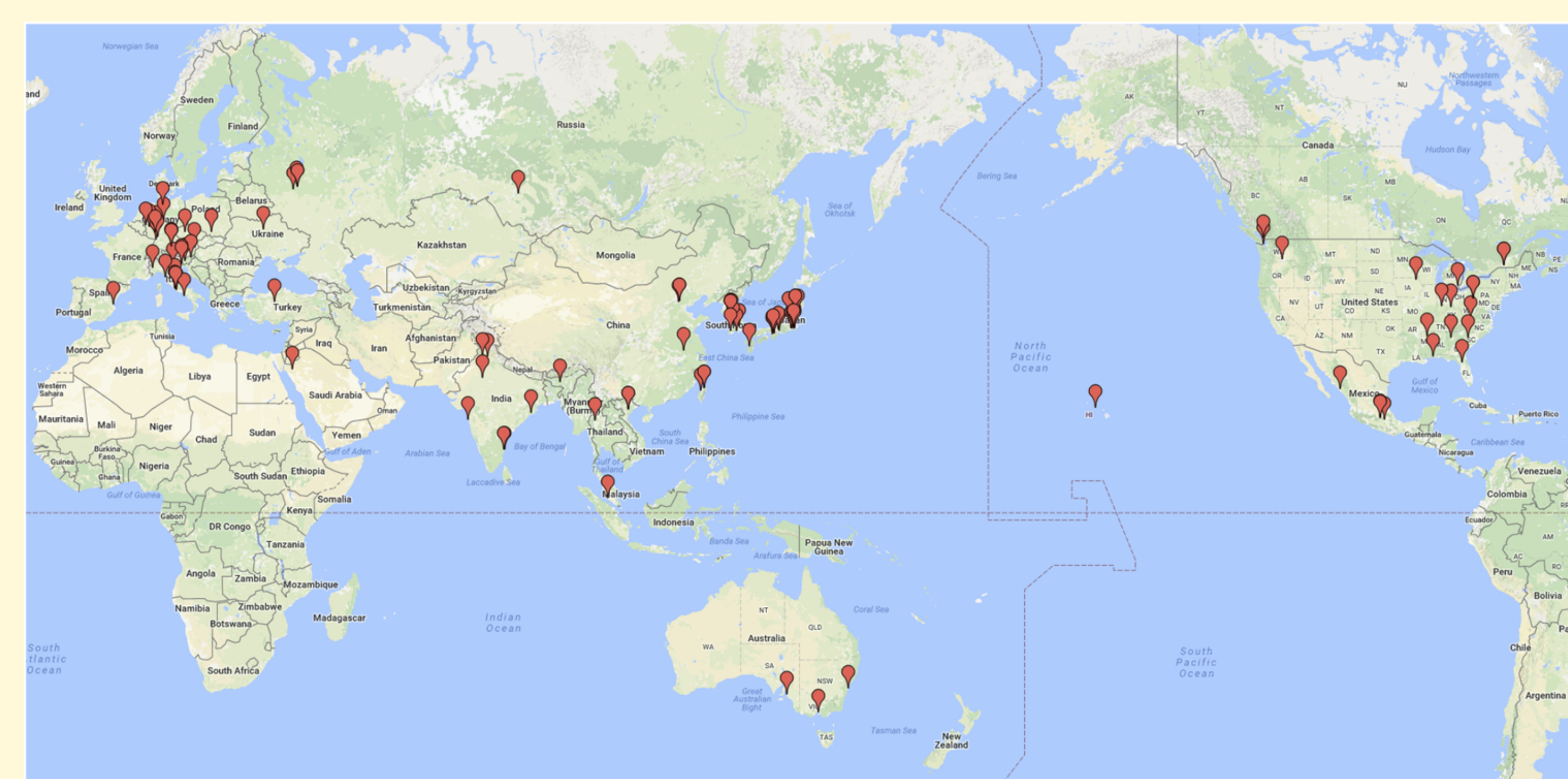


LFV in τ decays



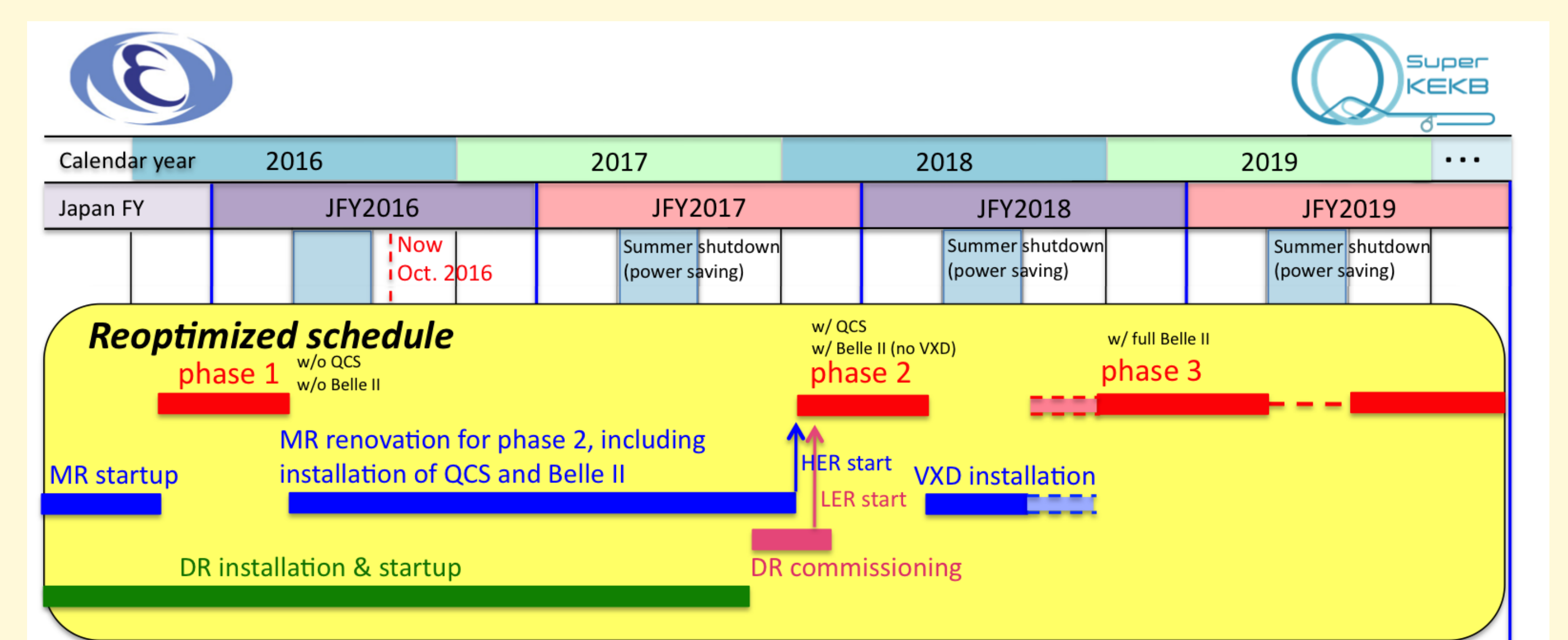
Other topics include: Radiative and electroweak B decays, charmless hadronic B decays, charm physics, study of quarkonium-like states, search for dark matter production (events with missing energy), ...

Belle II collaboration



≈ 750 collaborators in 101 institutions, 23 countries

Schedule



Early physics operation is expected during phase 2 (without inner detector), full physics starts end of 2018/beginning of 2019

References

- [1] T. Aushev *et al.*, “Physics at Super B Factory”, KEK Report 2009-12, BELLE2-REPORT-2016-002, arXiv:1002.5012 [hep-ex].
- [2] Z. Dolezal, S. Uno (eds.), “Belle II Technical Design Report”, KEK Report 2010-1, BELLE2-REPORT-2016-001.