

2023-03-09

ILC-CC Design Down-Select Review

Charge to the Review Panel

To be held at KEK, 4th – 6th April, 2023

Review Charge:

1. Review the crab cavity (CC) designs proposed, to assess their predicted compliance against the functional specifications for the ILC-250, the upgrade capability to the ILC-500, and the feasibility for higher energy (1TeV).
2. Review the design status of these CC solutions and to identify their risk in comparison to other comparable systems presently in operation or in development elsewhere in the world.
3. Review the proposed CC solutions for their choices of materials, fabrication processes, tuning concepts, power couplers, HOM couplers, SRF performance, etc.
4. Review the plan for the prototype development including possible cooperation (or consortium) with other laboratories and industry.
5. Provide appropriate advice for the criteria and further processes to be scoped for the final CC down-selection (post-prototype), aiming towards a unified system design to be integrated with the cryomodule.
6. Identify the 2 most appropriate crab cavity designs which can meet the operational requirements for ILC and which can be taken forward to prototype development and high power validation, in conjunction with its associated HOM coupler components, without helium jacket.
7. Provide suggestions for how best to progress the collaborative crab cavity developments, after the down-selection decision is to be made.