

Planning the EDR Phase

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Main Technical Milestones

- Undulator
 - Demonstration of RDR parameters in full scale cryomodule
 - Generation and use of 'real' undulator spectrums in all S2E simulations
 - Fully engineered undulator section - not just magnet but collimators, vac pumps, quads, correctors, etc
- Optical Matching Device
 - Design of QWT as fall back solution
 - Engineering study of flux concentrator followed by prototype to prove feasibility

Main Technical Milestones

- Target
 - Eddy current experiment with baseline target design cross checked against simulations
 - Further experimental work and prototypes to test water and vacuum seal solutions
 - Comprehensive stress analysis of target to prove survivability of final design
 - Resolution of survivability of uncooled windows
- Remote Handling
 - Integrated design of source remote handling system and procedures

Main Technical Milestones

- Beam Dynamics
 - Fully engineered and toleranced S2E optics layout
 - Positron target to DR
 - Undulator chicane
- Spin tracking
 - Simulations from target to DR only
- Polarisation
 - Design for low energy polarimeter (~200 to 500 MeV)
 - Scheme for positron polarisation reversal at 5Hz devised

Main Technical Milestones

- RF Systems
 - Demonstration of first NC linac module
 - SC Linac design?
- System Integration
 - Simulations from electron bunch to photons to positron production to DR that are fully self consistent and using the final EDR parameters
 - Engineering layouts of all of the source (e⁻ to DR) consistent with full ILC design
 - Component specifications

Main Technical Milestones

- Compton Source
 - Selection of scheme
 - Optical cavity demonstration
 - DR stacking solution confirmed
 - Laser demonstration
 - ...
- See later talks

EDR Milestones

- Oct 07: Work Packages, EOIs, Tasks & Deliverables developed
- Dec 07: EDR Scope definition: design depth and breadth, cost, schedule, staff
- Mar 08: Risk assessment & WBS definitions
- June 08: Freeze EDR positron source specific deliverables (installation, construction, ...)
- Dec 08: Freeze layout, full component and civil specifications
- Jan 09: EDR detailed component inventory
- May 09: First cost review
- Nov 09: Second cost review
- Aug 10: Deliver EDR and preconstruction work plan