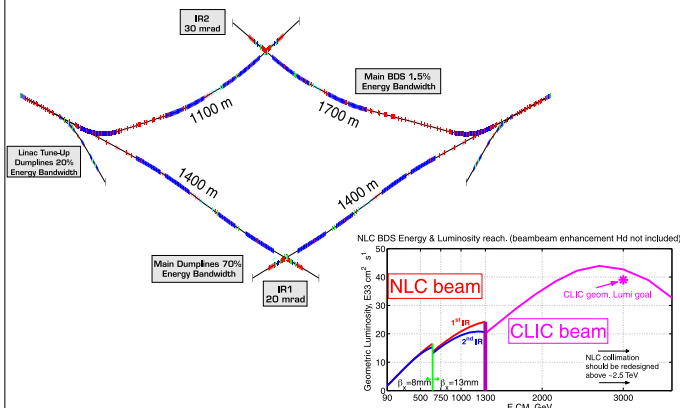


NLC Beam Delivery System

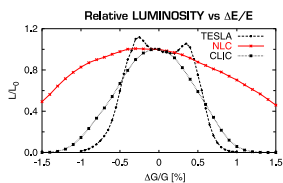
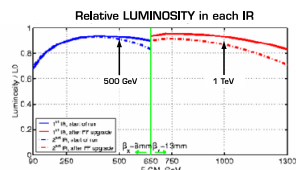
Complete and Flexible Design



Final Focus

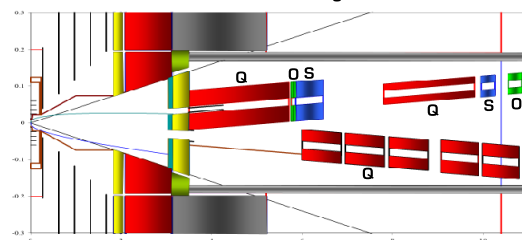
Compact Design based on Chromatic Correction at Final Doublet

- future upgrades to 5 TeVcm in space allotted
- 2nd IP has 99% (94%) luminosity at 500 GeV (1 TeV)
- large energy bandwidth



NLC Interaction Point

Well Studied Multiple Solutions To Each Challenge

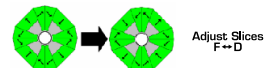
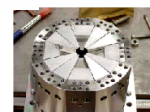
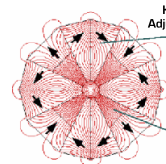


Final Doublet Magnets

- SC Magnet: Compact, Hi-Field & Adjustable → R&D: Vibration
- Permanent Magnet: Compact, Hi-Field & Stable → R&D: Variability & T-comp.



Kyoto University Adjustable COMPACT PM Quad



Benefits of Crossing Angle

Devoted 70% bandwidth EXTRACTION line with 20mm dispersion

Post IP measurements of Energy and Polarization

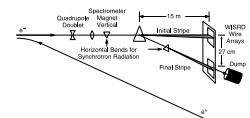
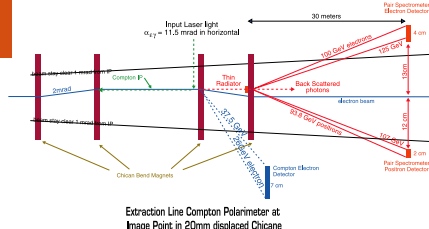
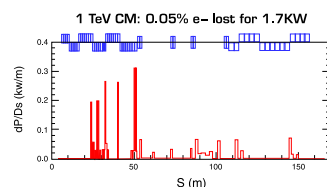
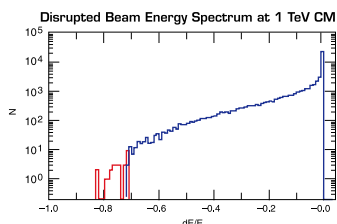
No lost disrupted beam at 500 GeV CM → Clean measurements

1 mrad stay free for Beamstrahlung photons carrying ~7% beam power

Independent apertures for incoming beam and outgoing debris

Low Radius Vertex Detector shadowed by quad aperture

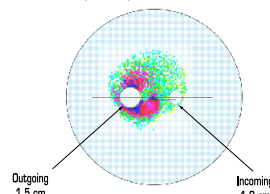
Crab Cavity phase stability limits angle to less than ~40 mrad



SLC-like Synchrotron Stripe Energy Monitor

- Incident Energy
- Energy Spread
- Disrupted Beam Energy Spectrum

40mrad (12.6cm) Pair-Lum-Mon at 3.15m



SR at IP

