Consideration on
Low energy operation of undulator based e+ source

ILC-CLIC e+ studies
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Low energy operation of undulator based e+ source

Issues: Physics

(1) Do we need scan at Ecm = 208 – 240 GeV?

(2) Do we need Z-pole (Ecm = 91 GeV) running (Giga-Z)?

(3) Do we need running at W-pair production (Ecm = 161 GeV)?

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Options: Accelerator

(1) Do not employ 10Hz operation. Employ 230m undulator. (Andriy)

We can make initial and operation cost reduction.

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(2) Employ 10Hz operation. Employ 147m undulator. (RDR solution)

We can make low energy running at Ecm = 91, 161, 208-240 GeV.

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Do we give up Giza-Z, W-pair, and 208 – 240 GeV? -> If No ->

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(a) Add 10Hz later.

-> Change all refrigerators and modulators (Klystron PSs).

Very expensive additional investment, not realistic.

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(a) Add 10Hz later.

-> Change all refrigerators and modulators (Klystron PSs).

Very expensive additional investment, not realistic.

(b) Apply 2.5+2.5 Hz operation.

-> We can go to any low energy with 1/2 luminosity.

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