# Undulator-Conventional Footprint Compatibility

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# **Past Discussions**

## **Undulator-Conventional Compatibility**

## Discussion@LCWS2013(Tokyo)

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1<sup>st</sup> step 300 Hz conventional e+ source

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#### **Remove the Conventional Source**

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2<sup>nd</sup> step undulator e+ source

#### Nick's Suggestion@ADI-CFS(Tokyo, April 2014)

**Both in the tunnel** 



# Try to follow Nick's Suggestion











# Twin-Tunnel The Tunnel is Wide.







#### The Undulator Source is Long.







#### **Use Not-Busy Areas**



#### **Conventional Source in Central Region Tunnel**



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Footprint Compatibility Both Sources in TDR Tunnel



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# **One more thing**

3. The conventional source removes the difficulty of the commissioning with the undulator source. With the conventional source, we can make full commissioning of the central region, one and half year before the finish of main linac construction. (TDR Vol.3 Part II, page 244, Fig. 14.3) We need not wait the e- main linac.

# Appendix Commissioning Issues



by the auxiliary source.



**Figure 14.3.** The construction and commissioning schedule for the mountain topography design variant. See Fig. 14.2 caption for details.

Are undulator e+ source and the commissioning plan in TDR consistent ?  $\rightarrow$  Maybe not: We can make the commissioning with <1% intensity beam by the auxiliary source. But we only able to make the full commissioning of e+ source, e+ DR, and e+ booster, after finishing the commissioning of full electron system including e- main linac.