

Voss Fest!

***Looking backward,
Looking forward.***

Burton Richter

4 September 2009

DESY

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and

Former Director

SLAC National Accelerator Laboratory

Robinson and Voss Change the World

MASSACHUSETTS INSTITUTE OF TECHNOLOGY · HARVARD UNIVERSITY

CAMBRIDGE ELECTRON ACCELERATOR

HARVARD UNIVERSITY
42 OXFORD STREET
CAMBRIDGE, MASS. 02138

CEAL-TM-149

POSSIBLE USE OF THE CEA DIRECTLY
AS A COLLIDING BEAM FACILITY

K. W. Robinson
G. A. Voss

October 22, 1965

General Design Parameters for 500 GeV Linear Collider

	TESLA	SBLC	NLC
RF frequency (GHz)	1.3	3.0	11.4
Accelerating Gradient Unloaded/Loaded (MV/m)	25/25	21/17	50/37
Active Linac Length (km)	20	30.2	14.2
Total Linac Length (km)	29	33	15.6
Peak Power per Meter (MW/m)	0.206	12.2	50
Total Number of Klystrons	604	2517	3936
Total Avg. RF Pwr. (MW)	54	51.6	30.6
Total AC Power (MW)	154	139	103

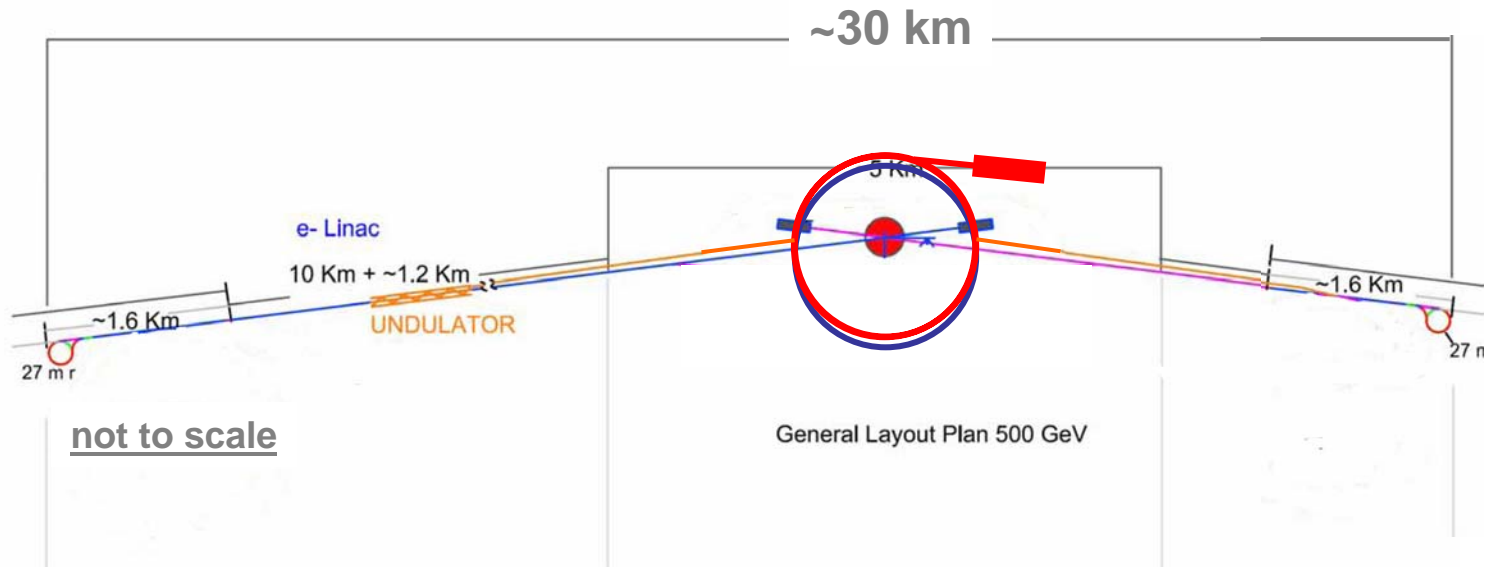
Source: ILC Technical Review Committee Report (1995)

LHC



Single IR with Push-Pull Detector

Baseline Configuration



Final RDR baseline

$$L = 2 \times 10^{34}$$

$$E^* = 500 \text{ GeV}$$

Integrated $L = 500 \text{ fb}^{-1}$ in 4 years

One I.R. Hall, push-pull for 2 detectors

10 km added each end to go to 1 TeV

ILC Overall

Timeline

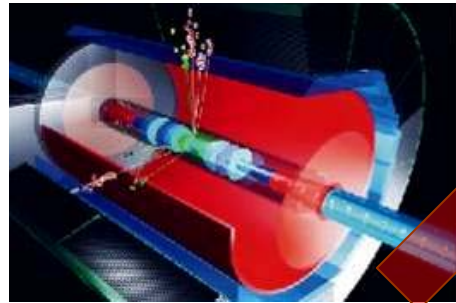
2005 2006 2007 2008 2009 2010



➔ **Baseline configuration**

➔ **Reference Design**

... ➔ **Engineering Design**



➔ **ILC R&D Program**

➔ **Expression of Interest to Host**

➔ **International Mgmt**