Electron Colliders Important for Testing Standard Model and Physics Beyond

	where	start	end	energy (GeV)	length/circumf. (km)	most relevant physics
Petra	DESY	1978	1986	23.5+23.5	2.3	discovery of gluons
CESR	Cornell/USA	1979	...	6+6	0.77	spectroscopy hadrons with b and c quarks
PEP	Stanford/USA	1980	1990	15+15	2.2	top search, indirect W/Z hint
Tristan	KEK/Japan	1987	1995	32+32	3.	top search
LEP	CERN	1989	2000	105+105	26.7	precision test of standard model
SLC	Stanford/USA	1989	1998	50+50	1.45+1.46	“
PEP-II	“	1999	...	9+3.1	2.2	CP violation in B
KEK-B	KEK/Japan	1999	...	8+3.5	3	“

Hadron Colliders Important for Testing Standard Model and Physics Beyond

	where	beam	start	end	energy (TeV)	length/circumf. (km)	most relevant physics
S$p\bar{p}$S	CERN	$p\bar{p}$	1981	1990	0.45+0.45	6.9	W,Z bosons
Tevatron	Fermilab/USA	$p\bar{p}$	1987	...	0.9+0.9	6.3	top quark
SSC	Texas/USA	pp	1996??		20+20 TeV	83.6	abandoned in 94
HERA	DESY	ep	1992	...	.03(e)+.92(p)	6.3	precise nucleon structure
RHIC	BNL/USA	AuAu pp	2000	...	19.7+19.7 0.25+0.25	3.8	Quark-Gluon plasma
LHC	CERN	pp PbPb	2007	...	7+7 562+562	26.7	Higgs, SUSY? ,... Quark-gluon plasma

Sources of Neutrinos Important for Testing Standard Model and Physics Beyond

source	reaction	energy range	type
solar	fusion reactions	typically below 20 MeV	ν_e
reactor	β-decay after fission	up to few MeV	ν_e
atmosphere	π- and μ-decay	GeV	ν_μ and ν_e
accelerators	μ-decay	up to 100 GeV	ν_μ