Silicon Tracker Specifications

General Integration

beam pipe radius, 0.5mm Be	2.0 cm (can not touch beam pipe)
pole tips, +-z	41 cm
Al Mylar around beam pipe	~ microns

Silicon Tracker

outer envelope radius	< 20 cm
inner envelope radius	> 2.0 cm and < 2.5 cm
silicon outer radius	18 cm
silicon inner radius	2.5 cm
maximum z extent	40 cm

Barrel Section		radius	length	strips/pixel	heat(W/cm^2)	area(cm^2)	power(W)	voltage
	layer 1	2.5 cm	21.8 cm	pixel	0.7 W	279	195	1.8V
	layer 2	5 cm	21.8 cm	pixel	0.7 W	557	390	1.8V
	layer 3	10 cm	31.8 cm	strip	0.35W	1963	687	2.5V
	layer 4	14 cm	38.2 cm	strip	0.35W	3403	1191	2.5V
					total	6202	2463	
Endcap (north and south)		z-start(+-)	radius	tilt = 22 deg				
	disk 1	20 cm	14.1 cm	pixel	0.1 W	1400	32	1.8V
	disk 2	26 cm	18 cm	pixel	0.1 W	2308.6	48.6	1.8V
	disk 3	32 cm	18 cm	pixel	0.1 W	2308.6	48.6	1.8V
	disk 4	38 cm	18 cm	pixel	0.1 W	2308.6	48.6	1.8V
					total	8325.8	177.8	

Radiation length budget (includes sensor, electronics and utilities)

barrel	goal is 1% per layer in rapidity range +- 1.0
endcap	goal is 1% between 10 and 35 deg

Area for services	(12% Si area)	optical fibers	cooling tubes	power cable
pixels	100 cm^2	2/12 cm^2	3 mm	
strips	644 cm^2			
endcaps (2)	100 cm^2	384	384	2

Operating temperature < 10 deg C

Stability(long and short term)	< 25 microns
Dimensional accuracy	< 25 microns internally
	100 microns relative to rest of PHENIX
Utility routing	radially at pole tips
Mounting off of pole tips	
Modularity	Barrel and endcap sections separate, can be mounted separately
	Both barrel and endcap portion are in halves separated horizontally (along a vertical line)
Enclosure	Environmental and electrical shielding enclosure just inside of r = 20 cm and z at 40 cm

current(amps)	
108	ALICE
217	ALICE
275	SVX4
476	SVX4
1076	
17.8	PHX
27	PHX
27	PHX
27	PHX
98.8	