3.1 COMPARISON OF TEV II WITH ISR

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Comparison of TeV II With the ISR.

	Tev II	ISR
Incident Momentum (cm)	$[(s)^{1/2}/2]$ 22 GeV/c	32 GeV/c
Incident Beam Types	$\pi^{\pm}$, $K^{\pm}$, p, $\bar{p}$, γ	p, $\bar{p}$
Target Types	p, A	p
Max p_T (rate limit)	p_T ~ 14 GeV/c X_t ~ 0.65	~18 ~0.6
Secondary Particle I.D.	θ 0° → 135° ϕ 0° → 2π	θ -45° → 45° ϕ = ± 45°
Jet Angular Coverage	θ 45° → 135° ϕ 0 → 2π	θ 45° → 135° ϕ 3/4 (2π)

Incident Momentum

Fermi National Accelerator Laboratory experiments have shown that π^- beams are more "efficient" than proton beams (of the same energy) in producing high p_T jets. It is expected that 1000-GeV protons may probe comparable physics as ~600 GeV π^-'s. Therefore, a π^- beam of ~1000 GeV may probe similar physics as that studied at the ISR.

Incident Target Types

It is also important to have π^- and p beams for nuclear targets; dimuon production shows differences in α (where $\sigma = A^{\alpha}$) when π^- and p initiated data are compared.