Fragmentation in e^+e^- Annihilation

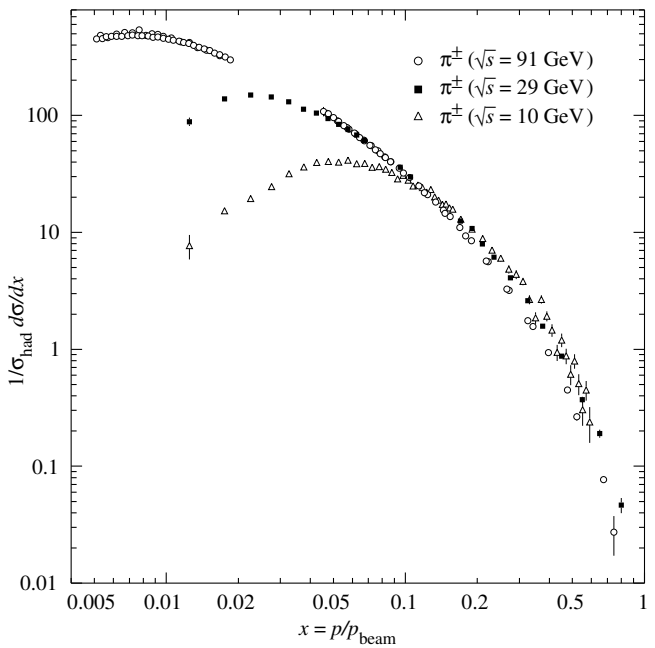

Figure 36.10: Fragmentation into $\pi^\pm$ in e^+e^- annihilations: Inclusive cross sections $(1/\sigma_{\rm had})(d\sigma/dx)$, with $x = p/p_{\rm beam}$. The indicated errors are statistical and systematic errors added in quadrature.

△: rate at $\sqrt{s}$ = 9.98 GeV; an overall uncertainty of 1.8%: **ARGUS**—H. Albrecht *et al.*, Z. Phys. **C44**, 547 (1989).

■: rate at $\sqrt{s}$ = 29 GeV **TPC**—H. Aihara *et al.*, Phys. Rev. Lett. **61**, 1263 (1988).

◯: rate for hadronic decays of the Z at $\sqrt{s}$ = 91.2 GeV **ALEPH**—D. Buskulic *et al.*, Z. Phys. **C66**, 355 (1995); **OPAL**—R. Akers *et al.*, Z. Phys. **C63**, 181 (1994). (Courtesy of O. Biebel, S. Bethke, and D. Lanske, RWTH, Aachen, 1995.)

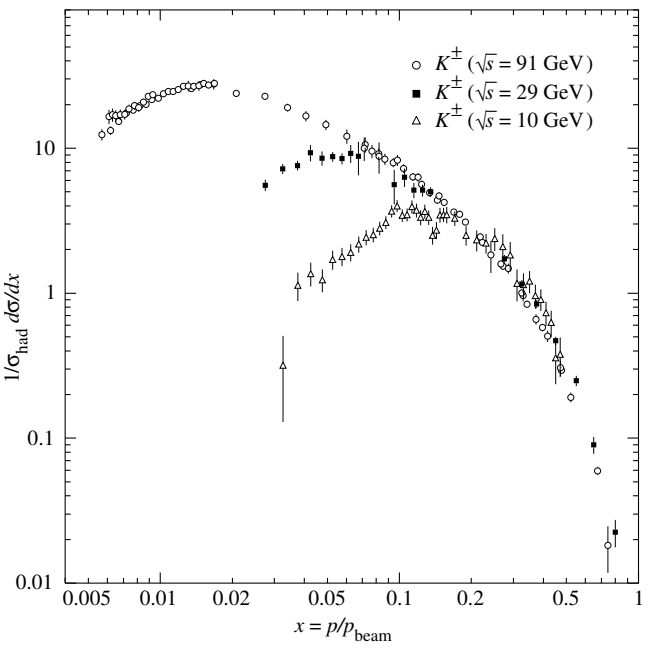

Figure 36.11: Fragmentation into $K^\pm$ in e^+e^- annihilations: Inclusive cross sections $(1/\sigma_{\rm had})(d\sigma/dx)$, with $x = p/p_{\rm beam}$. The indicated errors are statistical and systematic errors added in quadrature.

△: rate at $\sqrt{s}$ = 9.98 GeV; an overall uncertainty of 1.8%: **ARGUS**—H. Albrecht *et al.*, Z. Phys. **C44**, 547 (1989).

■: rate at $\sqrt{s}$ = 29 GeV **TPC**—H. Aihara *et al.*, Phys. Rev. Lett. **61**, 1263 (1988).

◯: rate for hadronic decays of the Z at $\sqrt{s}$ = 91.2 GeV **ALEPH**—D. Buskulic *et al.*, Z. Phys. **C66**, 355 (1995); **DELPHI**—P. Abreu *et al.*, Nucl. Phys. **B444**, 3 (1995); **OPAL**—R. Akers *et al.*, Z. Phys. **C63**, 181 (1994). (Courtesy of O. Biebel, S. Bethke, and D. Lanske, RWTH, Aachen, 1995.)

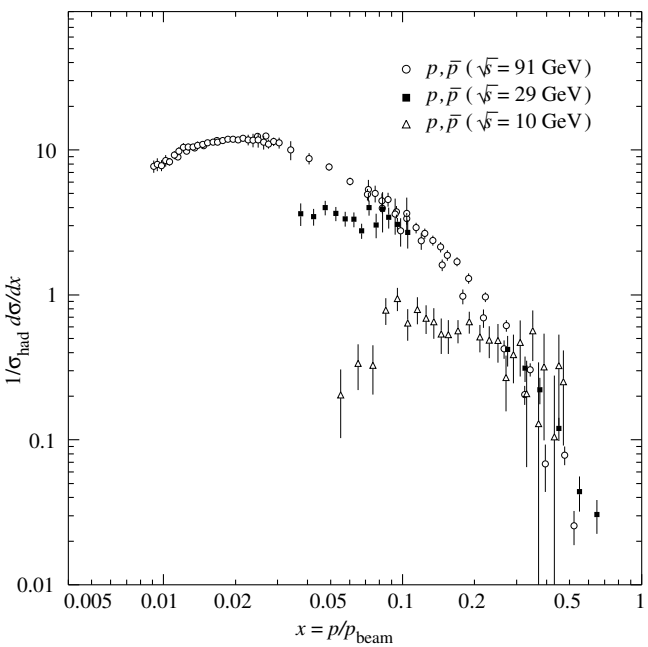

Figure 36.12: Fragmentation into $p\overline{p}$ in e^+e^- annihilations: Inclusive cross sections $(1/\sigma_{\rm had})(d\sigma/dx)$, with $x = p/p_{\rm beam}$. The indicated errors are statistical and systematic errors added in quadrature.

△: rate at $\sqrt{s}$ = 9.98 GeV; an overall uncertainty of 1.8%. This rate is obtained from the measured $\overline{p}$ rate by scaling with a factor of two: **ARGUS**—H. Albrecht *et al.*, Z. Phys. **C44**, 547 (1989).

■: rate at $\sqrt{s}$ = 29 GeV: **TPC**—H. Aihara *et al.*, Phys. Rev. Lett. **61**, 1263 (1988).

◯: rate for hadronic decays of the Z at $\sqrt{s}$ = 91.2 GeV: **ALEPH**—D. Buskulic *et al.*, Z. Phys. **C66**, 355 (1995). **DELPHI**—P. Abreu *et al.*, Nucl. Phys. **B444**, 3 (1995). **OPAL**—R. Akers *et al.*, Z. Phys. **C63**, 181 (1994). (Courtesy of O. Biebel, S. Bethke, and D. Lanske, RWTH, Aachen, 1995.)