7–Prong Decays

Only τ Decays with $\leq$6 hadrons in the Final State have been Observed

- Phase Space $\Rightarrow$ 12 π's possible
- High Mult. Modes Interesting for m_{ν_τ} Limits

New Results from CLEO & OPAL on $\tau^{\pm}\to 7\pi^{\pm}(\pi^0)\nu_\tau$

Main Exp. Challenges: ID 7 $h^{\pm}$ in Dense τ Env.

- OPAL: 2-Hit Res of Jet Chamber $\sim$ 2.5 mm
  - Study Overlapping Trks (high dE/dx)
- CLEO: Large Opening Ang for lower τ Boost
  - Study $q\bar{q}$ & $\tau\to$5-Prong

	$N_{\tau\tau}^{prod}$	N^{final}	N^{bgrd}	ε(%)	90%C.L. Limit
CLEO	4.2×10^{6}	0	2.83 ± 1.41	15.7	2.3×10^{-6}
OPAL	2.1×10^{5}	0	$0.5^{+1.0}_{-0.3}$	41.0	1.4×10^{-5}
HRS87					1.9×10^{-4}

Note: $7\pi^{\pm}\pi^{0}$ Mode give higher ε
$\Rightarrow$ Limit Unaffected by Extra π^0's