COT Hit Width Distributions

Chris Hays
Duke University

November 23, 2003

Data Sets

Samples

- $W \rightarrow \mu\nu$
- $W \rightarrow e\nu$ (no trigger track requirement)
- Cosmics from beam data (2 tracks/event)
- Cosmics with no beam (p_T >5 GeV, d_0 <2 cm)

$W \rightarrow \mu\nu$ CMUP only

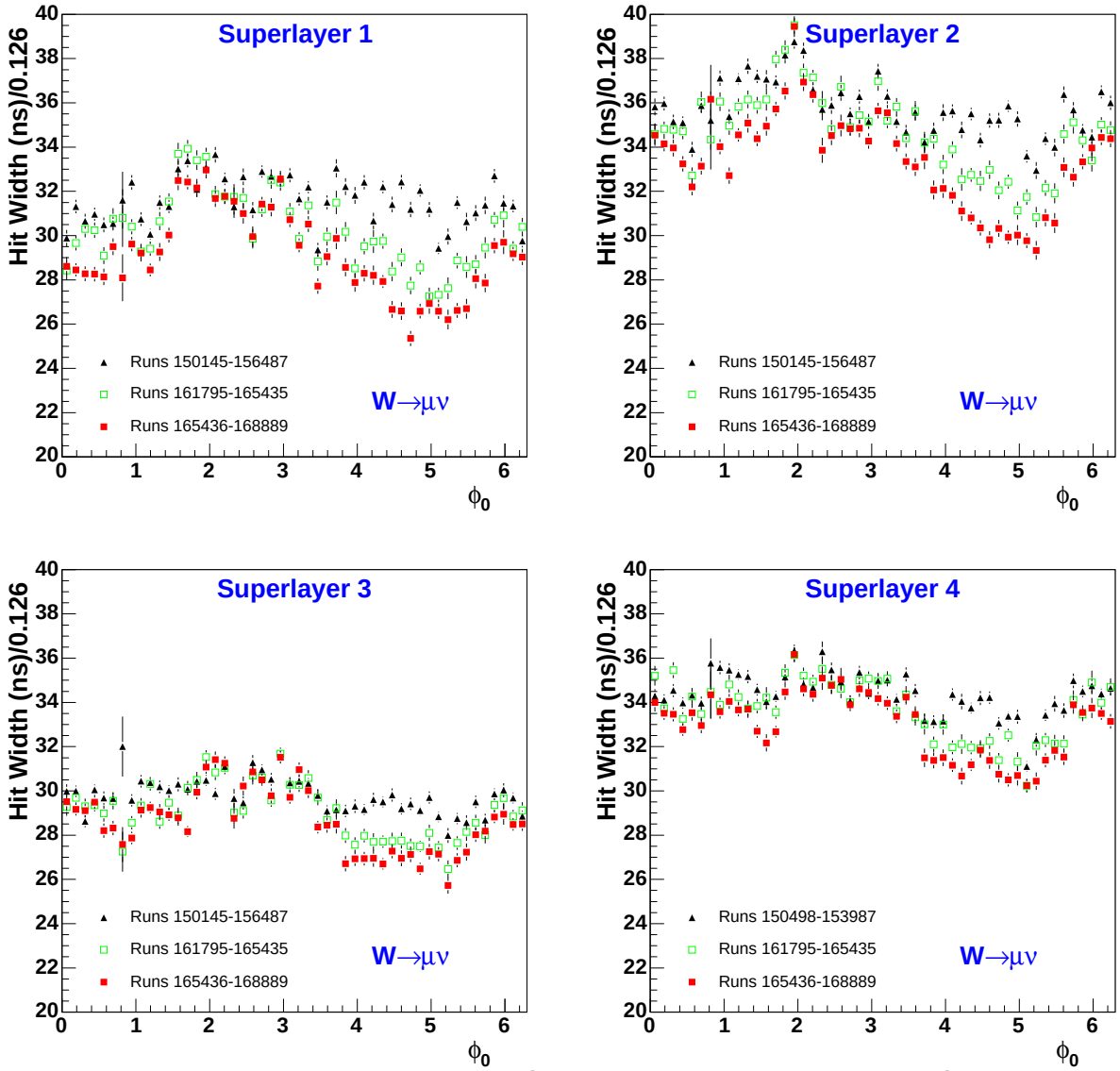

Figure 1: *The hit width versus ϕ_0 for superlayers 1-4 for $W \rightarrow \mu\nu$ events.*

$W \rightarrow \mu\nu$ CMUP only

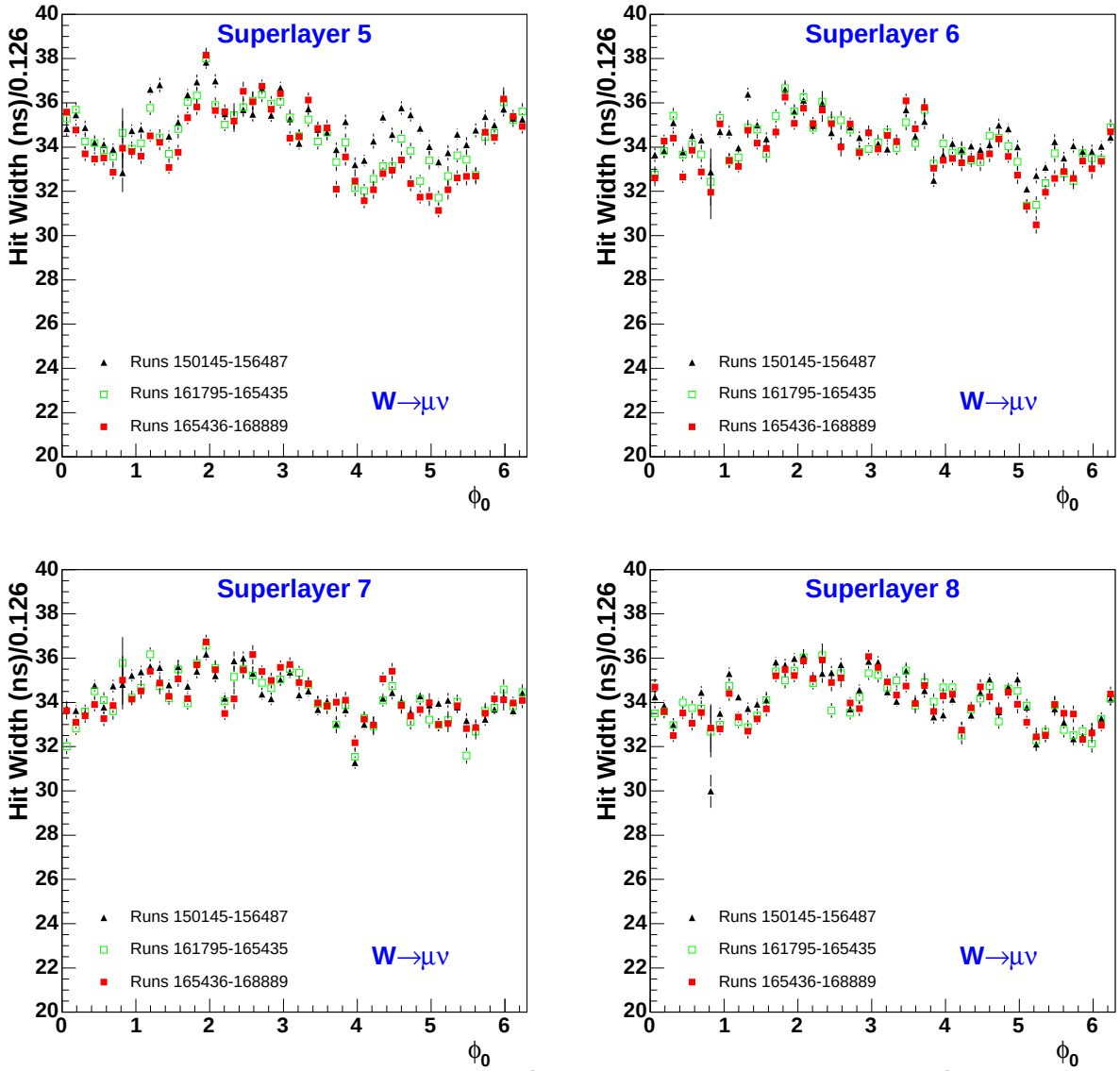

Figure 2: *The hit width versus ϕ_0 for superlayers 5-8 for $W \rightarrow \mu\nu$ events.*

$W \rightarrow e\nu$

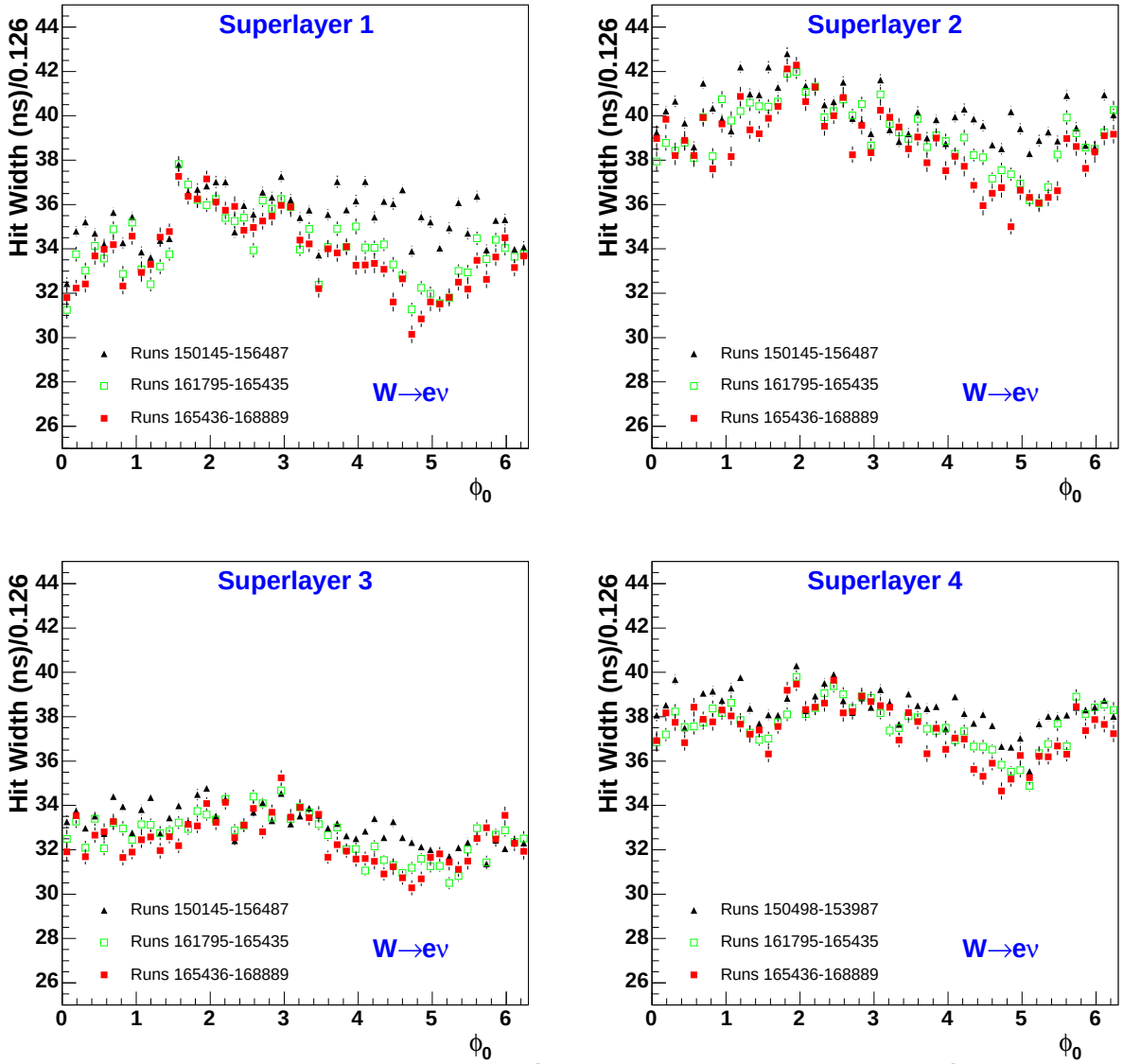

Figure 3: *The hit width versus ϕ_0 for superlayers 1-4 for $W \rightarrow e\nu$ events.*

$W \rightarrow e\nu$

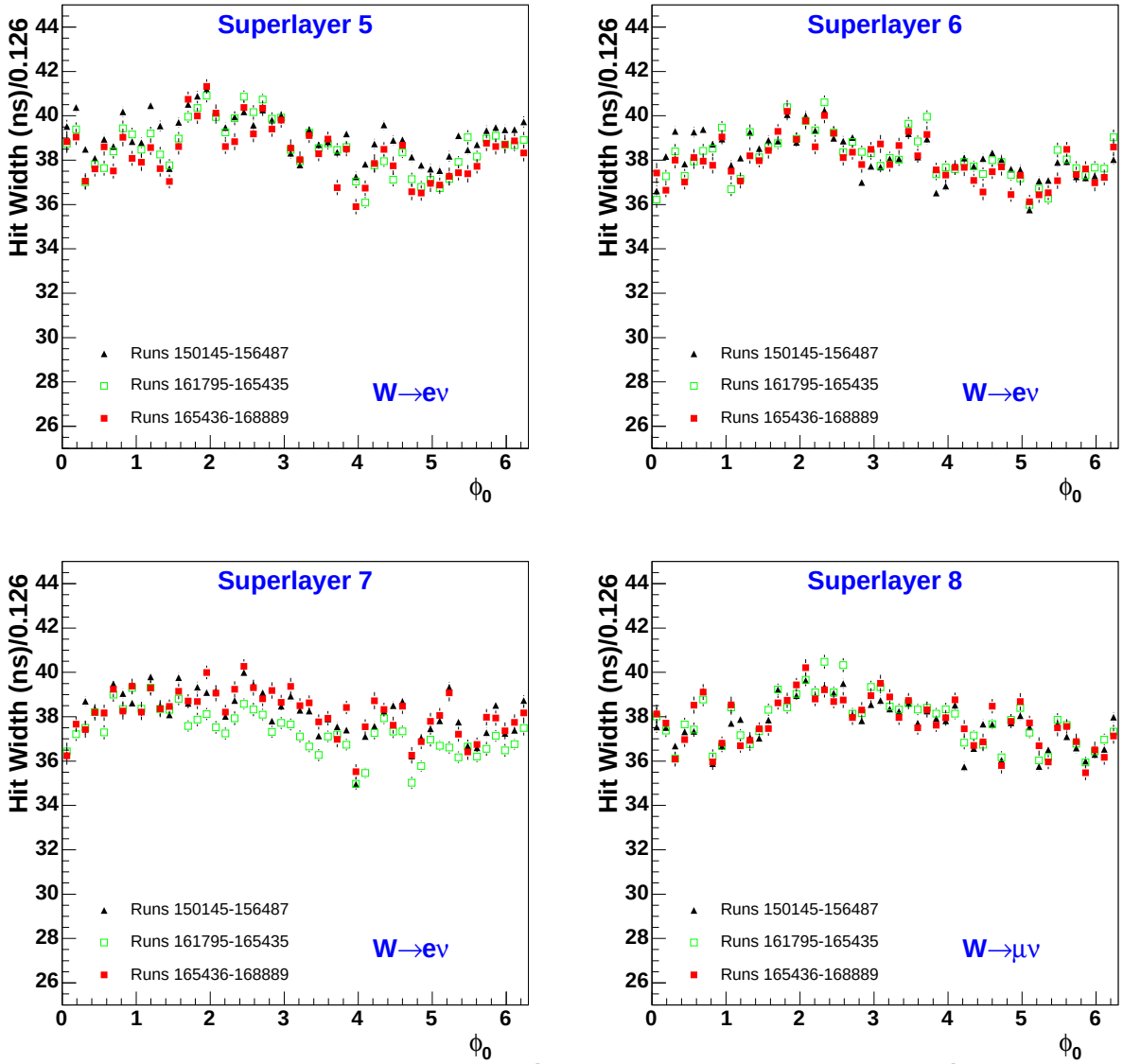

Figure 4: *The hit width versus ϕ_0 for superlayers 5-8 for $W \rightarrow e\nu$ events.*

Cosmics CMUP only

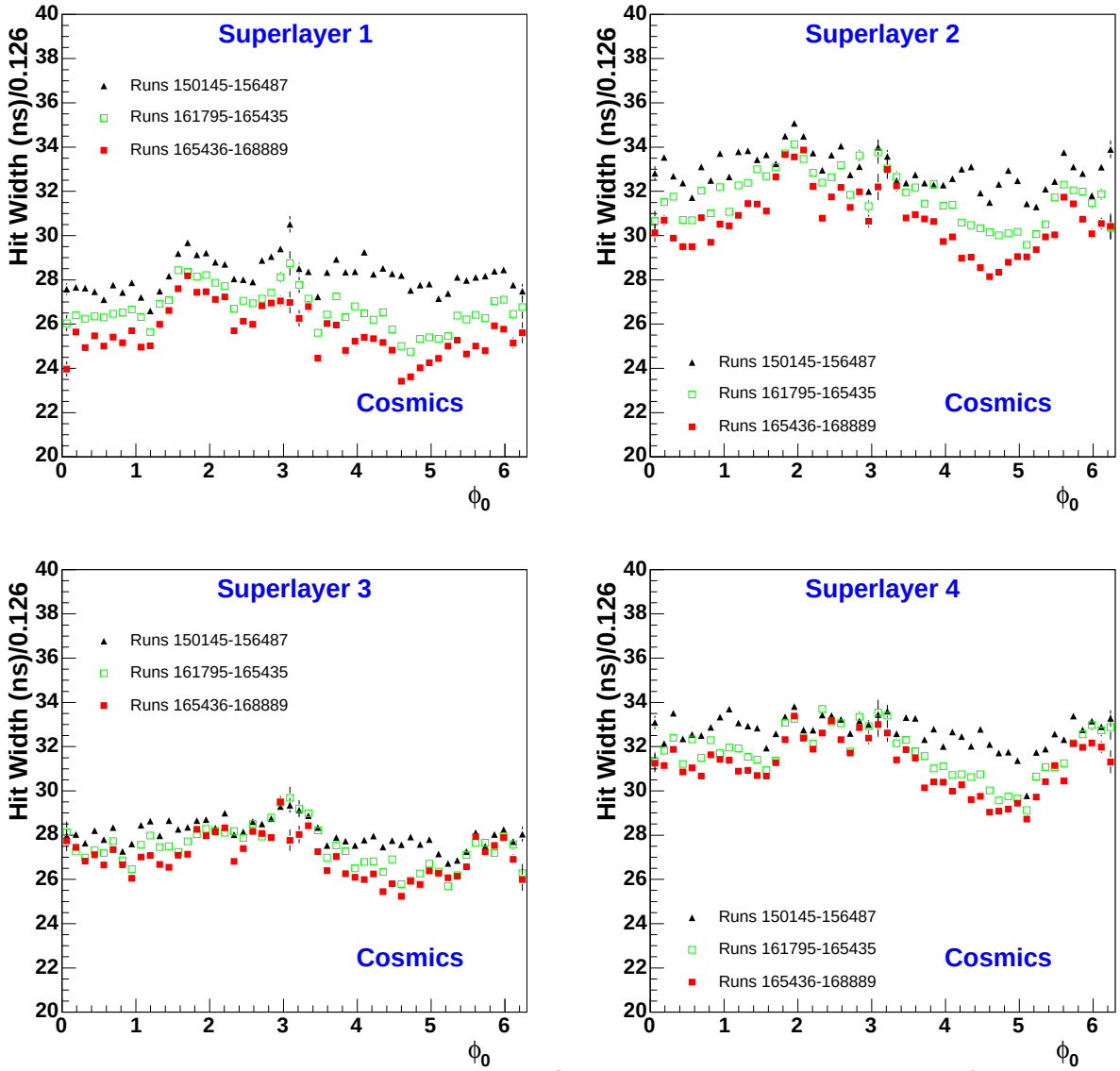

Figure 5: *The hit width versus ϕ_0 for superlayers 1-4 for cosmic events.*

Cosmics CMUP only

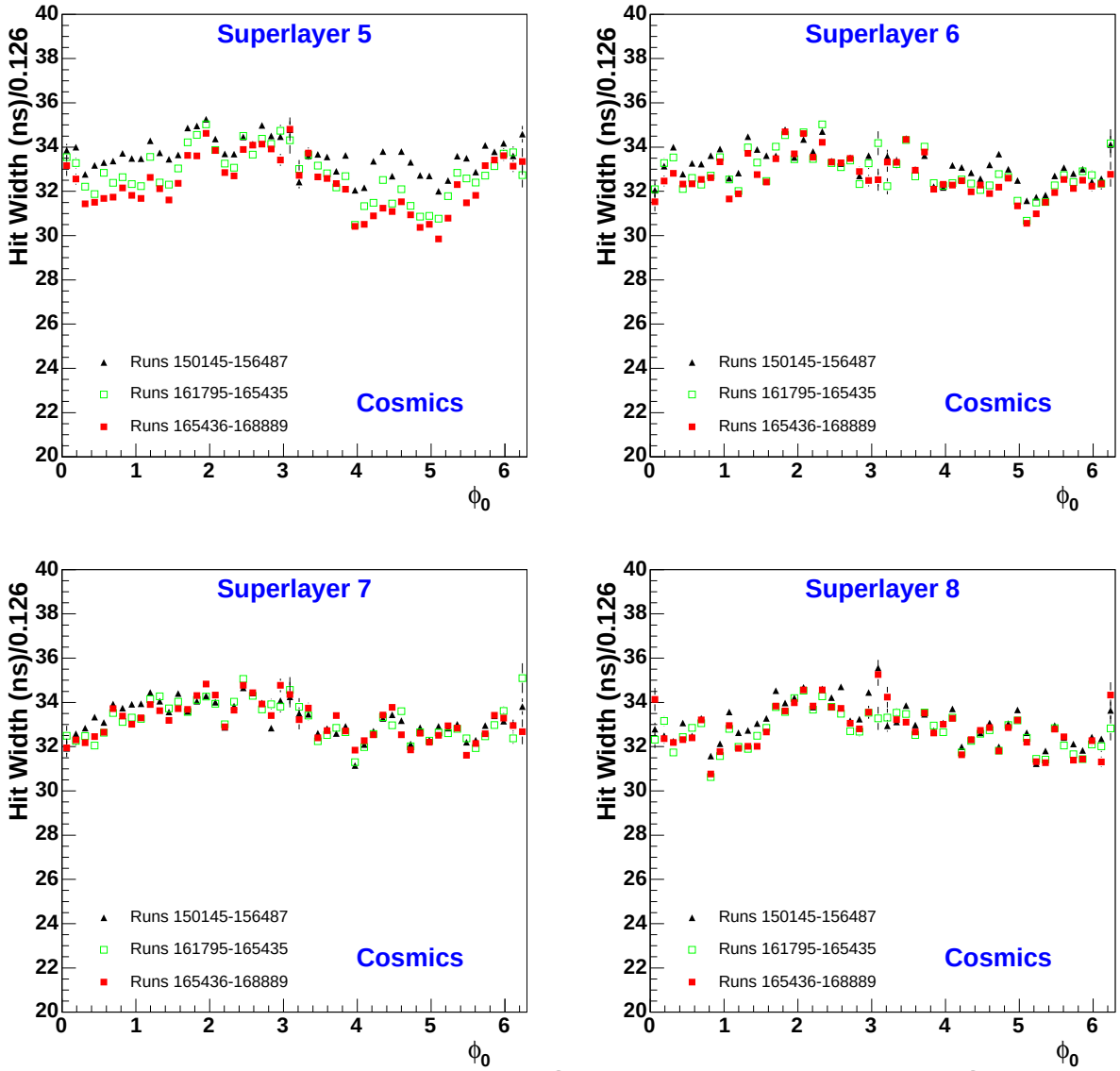

Figure 6: *The hit width versus ϕ_0 for superlayers 5-8 for cosmic events.*

Cosmics Without Beam

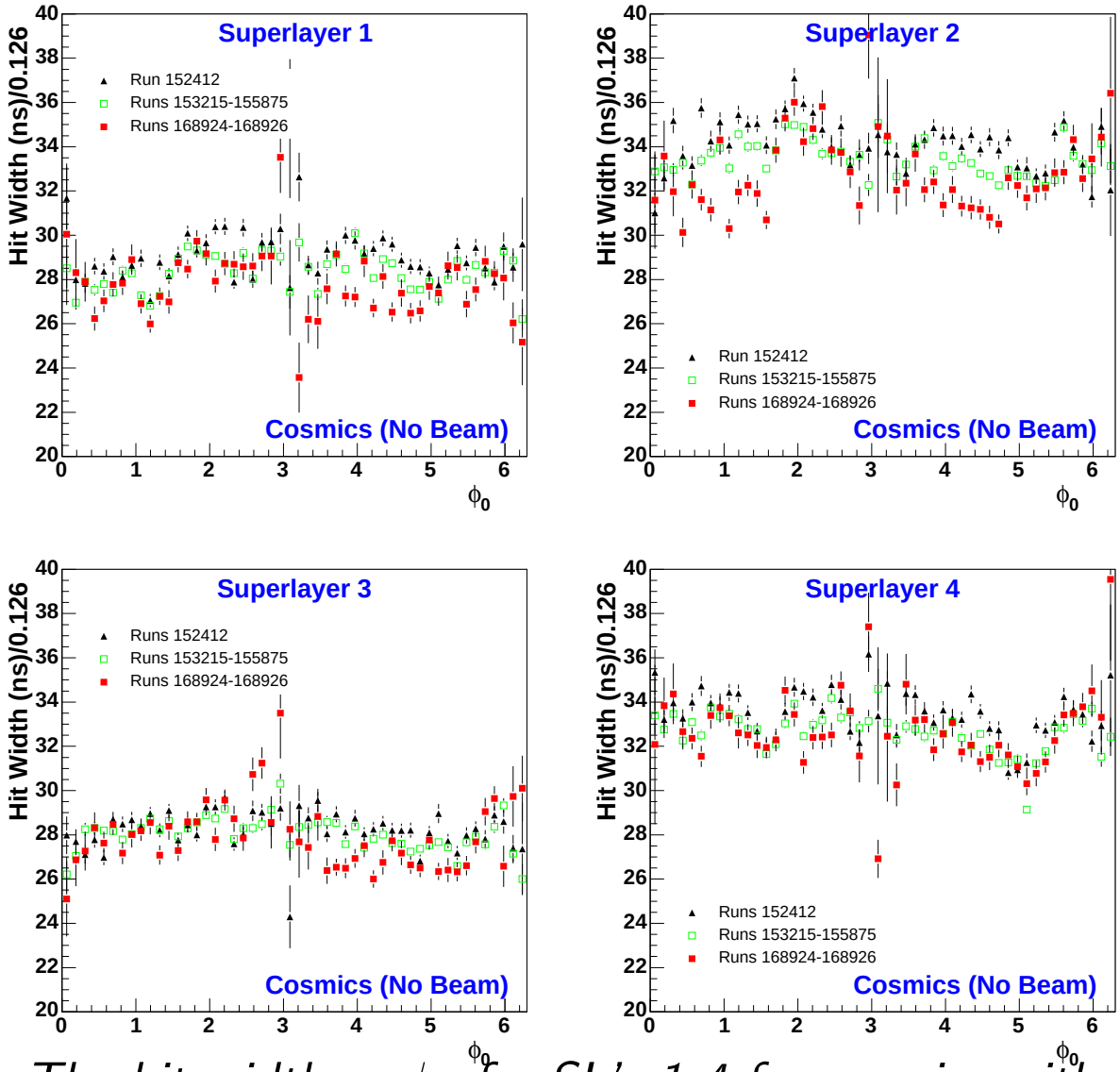

Figure 7: *The hit width vs ϕ_0 for SL's 1-4 for cosmics without beam.*

Cosmics Without Beam

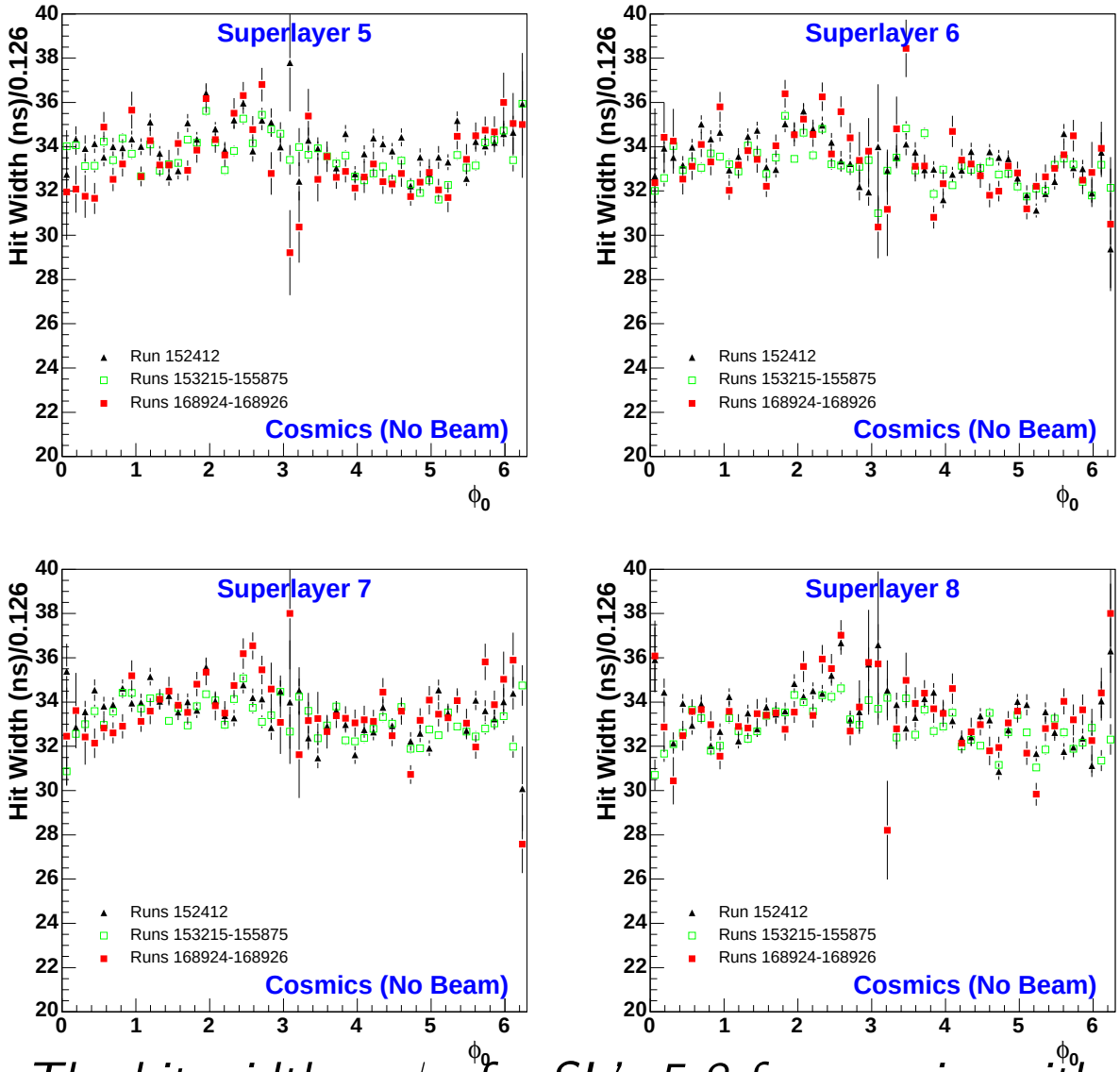

Figure 8: *The hit width vs ϕ_0 for SL's 5-8 for cosmics without beam.*

Conclusions

Hit widths clearly decreasing with time

- W muons, electrons show strong ϕ dependence
  - Trigger effect ruled out
- Cosmic muons show similar ϕ dependence
  - Clear effects even with beam off