Studies of final-state photon radiation in the process $p \bar{p} \rightarrow W^{\pm} \rightarrow \ell^{\pm}\nu$.

CATHERINE BERNACIAK, DOREEN WACKEROTH, University at Buffalo, The State University of New York — We study the effects of multiple soft, collinear photon radiation off a final state lepton in the process $p \bar{p} \rightarrow W^{\pm} \rightarrow \ell^{\pm}\nu$, as implemented in the MC program WGRAD3. EW virtual effects as well as up to two hard photons radiating off a final-state lepton are also included. These effects are compared with the MC program HORACE which also includes the complete $O(\alpha)$ EW radiative corrections to $p \bar{p} \rightarrow W^{\pm} \rightarrow \ell^{\pm}\nu$ and multiple photon radiation.

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