Signals

Physics Channel	Disappearance Tests	Appearance Tests	$\tau \to \mu$	$\tau \to e$	$\tau \to$ hadrons
$\nu_\mu \to \nu_e$	CC Rate/Spectrum	NC/CC			
$\nu_\mu \to \nu_\tau$	CC Rate/Spectrum	NC/CC	NC/CC	NC/CC, η_3	NC/CC
$\bar{\nu}_e \to \bar{\nu}_\tau$	CC Rate/Spectrum	WSM	WSM	NC/CC, η_3	NC/CC
$\bar{\nu}_e \to \bar{\nu}_\mu$	CC Rate/Spectrum	WSM			

Backgrounds

Physics Channel	Disappearance Tests	Appearance Tests	$\tau \to \mu$	$\tau \to e$	$\tau \to$ hadrons
$\nu_\mu \to \nu_e$	Beam ν_e	Beam ν_e			
$\nu_\mu \to \nu_\tau$				Beam ν_e	NC/CC
$\bar{\nu}_e \to \bar{\nu}_\tau$		WSM	WSM	Beam ν_e	Electron Mis-ID
$\bar{\nu}_e \to \bar{\nu}_\mu$		WSM			

Detector Properties

Physics Channel	Disappearance Tests	Appearance Tests	$\tau \to \mu$	$\tau \to e$	$\tau \to$ hadrons
$\nu_\mu \to \nu_e$	Muon ID/$\vec{p}$				
$\nu_\mu \to \nu_\tau$	Muon ID/$\vec{p}$		Muon ID/$\vec{p}$	e ID	Muon ID
$\bar{\nu}_e \to \bar{\nu}_\tau$			Muon ID/$\vec{p}$	e ID	e ID
$\bar{\nu}_e \to \bar{\nu}_\mu$		Muon ID/$\vec{p}$			

Limiting Systematic

Physics Channel	Disappearance Tests	Appearance Tests	$\tau \to \mu$	$\tau \to e$	$\tau \to$ hadrons
$\nu_\mu \to \nu_e$	μ MisRec	e Mis-ID, π^o			
$\nu_\mu \to \nu_\tau$	μ MisRec, π/K		π/K	Beam ν_e	NC
$\bar{\nu}_e \to \bar{\nu}_\tau$			WSM	Beam ν_e	e Mis-ID
$\bar{\nu}_e \to \bar{\nu}_\mu$		μ MisRec			

§1. NC/CC means neutral-to-charged current rate *vs.* hadronic energy

§2. η_3 means electron ID from short EM shower *vs.* long hadronic shower or seeing it in a fine-grained calorimeter

§3. Muon ID/$\vec{p}$ means identifying the charge and momentum of a muon