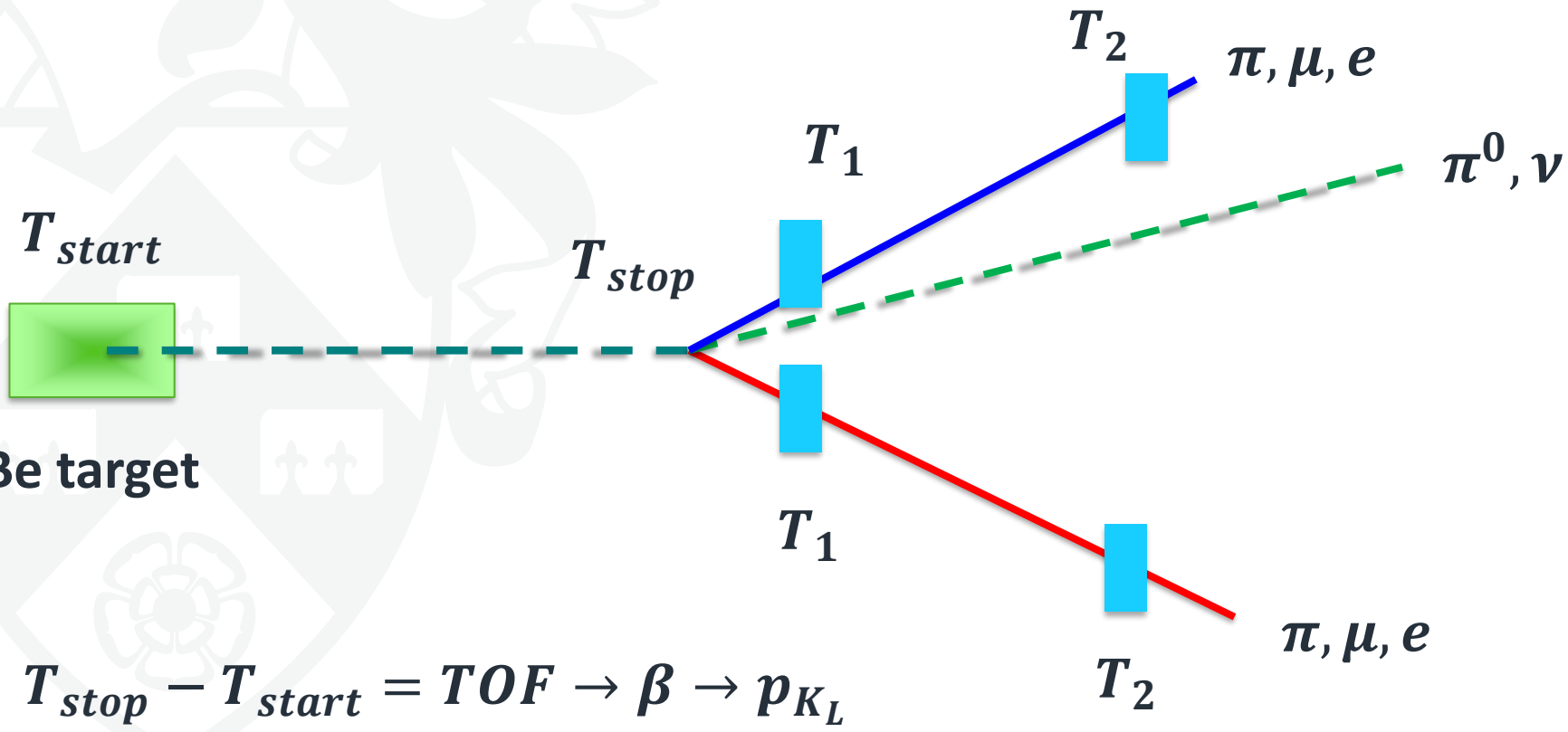
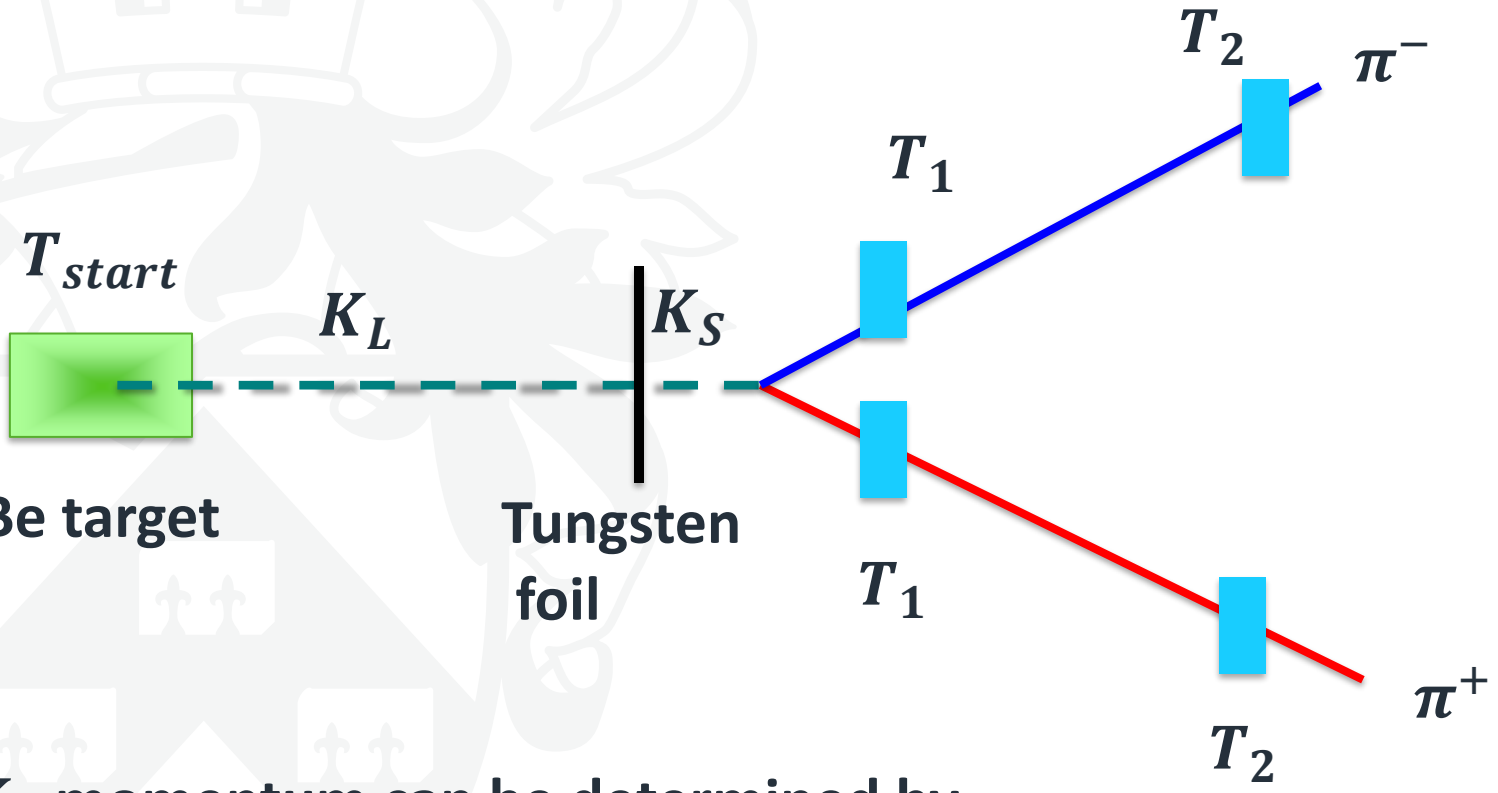
KL FM absolute normalisation

K_L monitoring



$$T_{stop} - T_{start} = TOF \rightarrow \beta \rightarrow p_{K_L}$$

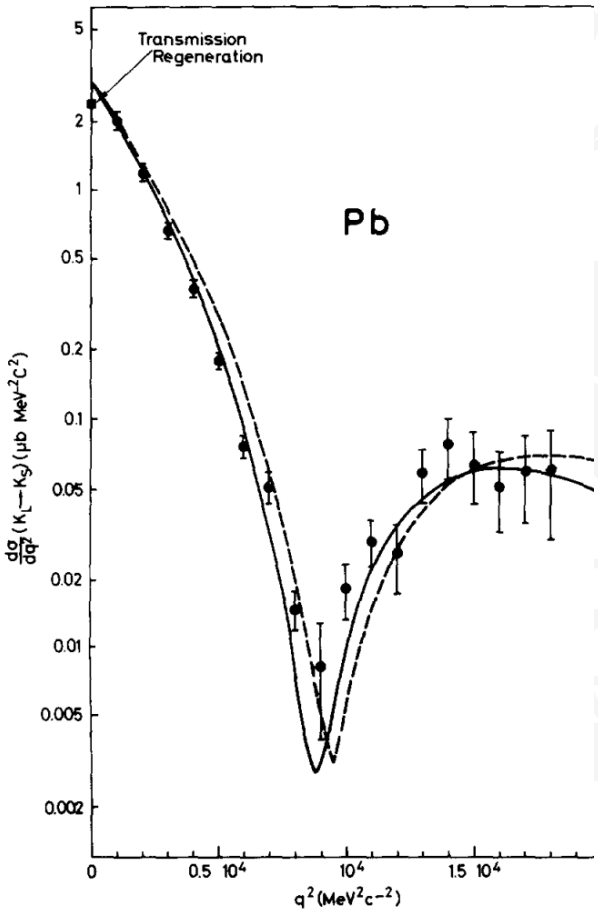
$K_L - K_s$ regeneration



K_L momentum can be determined by

- TOF
- $\pi^+ - \pi^-$ opening angle

$K_L - K_s$ regeneration



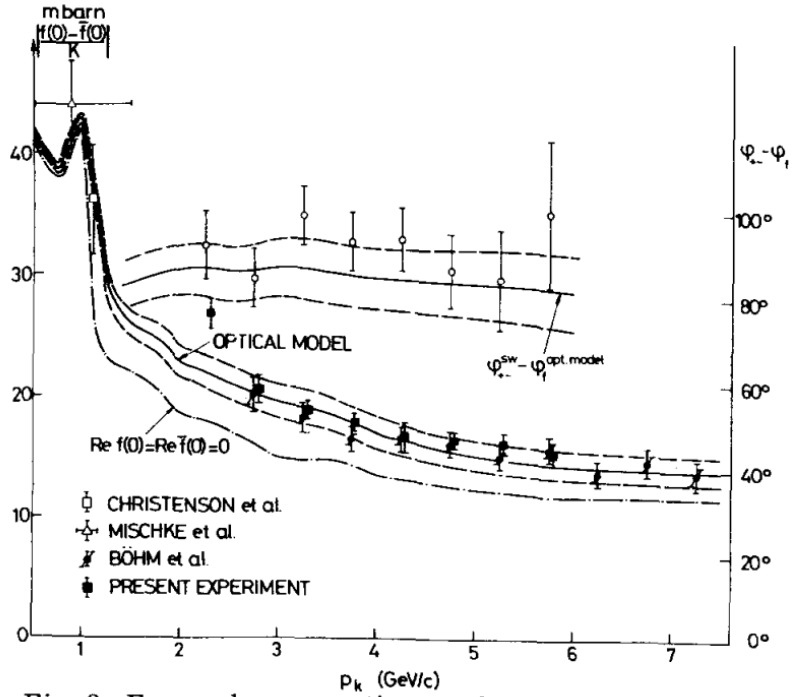
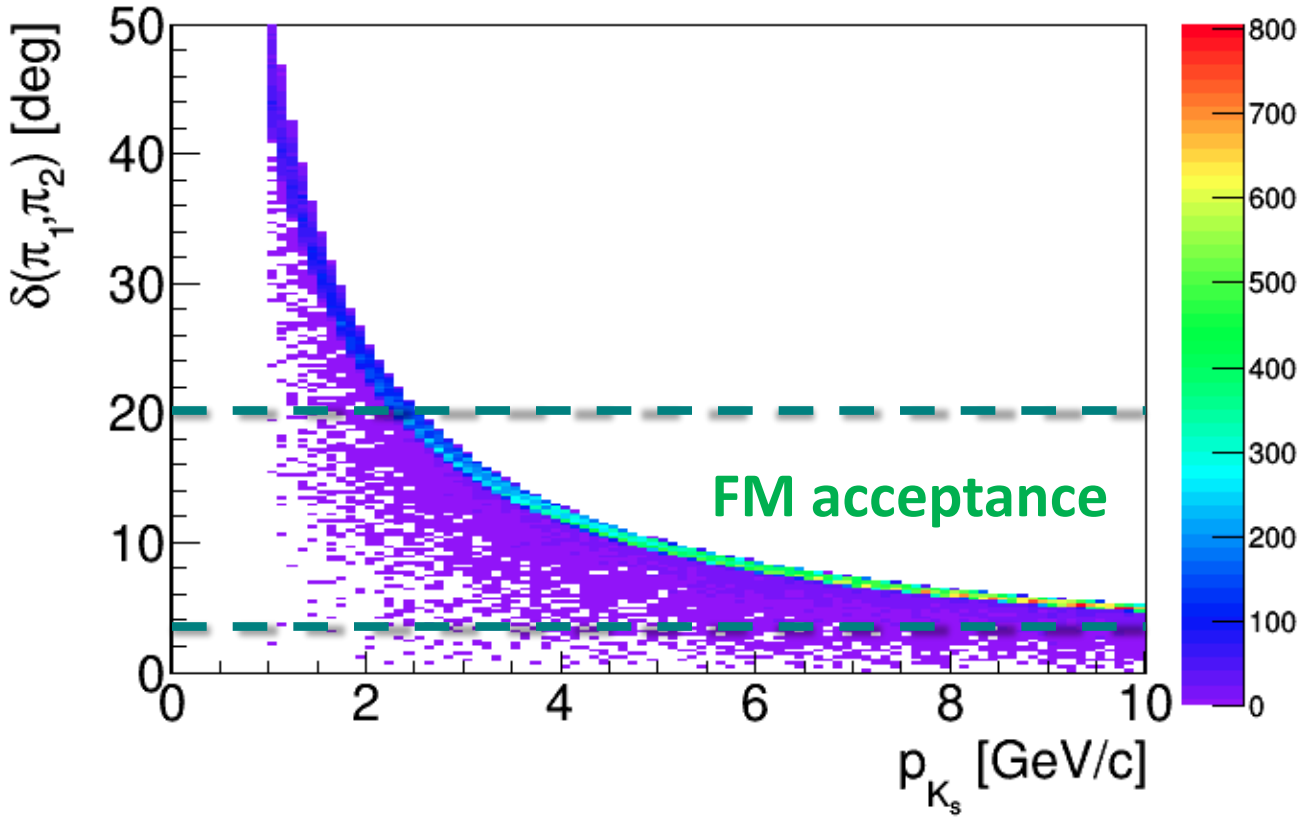


Fig. 3. Forward regeneration amplitude (left scale) and interference phase $\varphi_{+-} - \varphi_f(p)$ (right scale) as functions of momentum. The curve labelled $\varphi_{+-}^{SW} - \varphi_{+-}^{opt.}$ model

Cross-section is large

$$\Theta_{K_L} \cong \Theta_{K_S}$$

$K_L - K_s$ regeneration



- Absolute time calibration via $\delta_{\pi\pi}$ vs TOF
- Alternative method to extract kaon flux – systematics
- Reliable way to monitor high-energy K_L flux