電子銃の開発状況

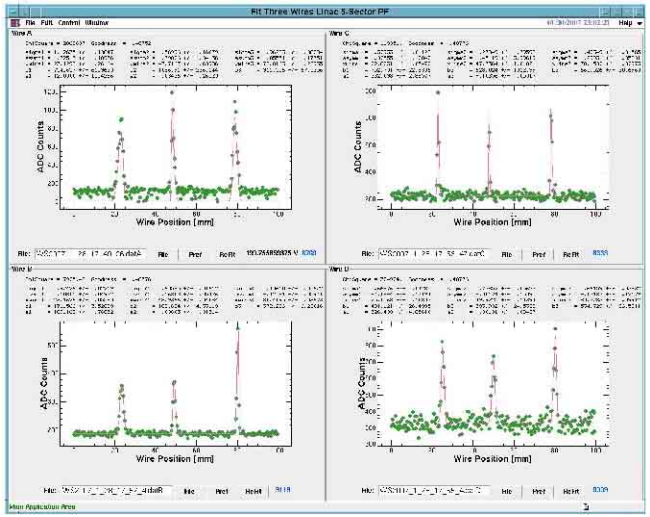
① CNT-gunのビーム加速
② DC・パルス兼用電子銃の状況

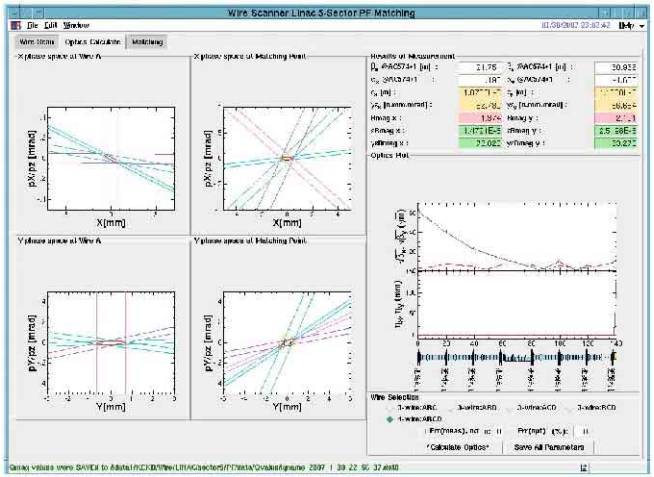
2007.2.20

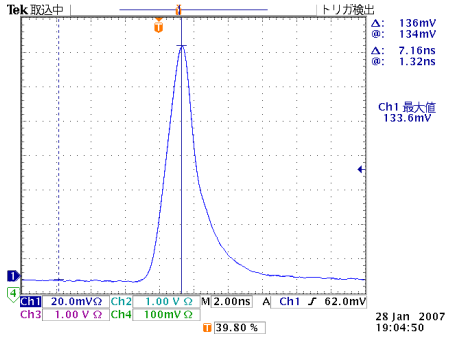
大沢　哲

CNT-gun beam emittance at 2.5GeV

Wire scanner signals







CNT-gun-beam (64 pC/pulse)

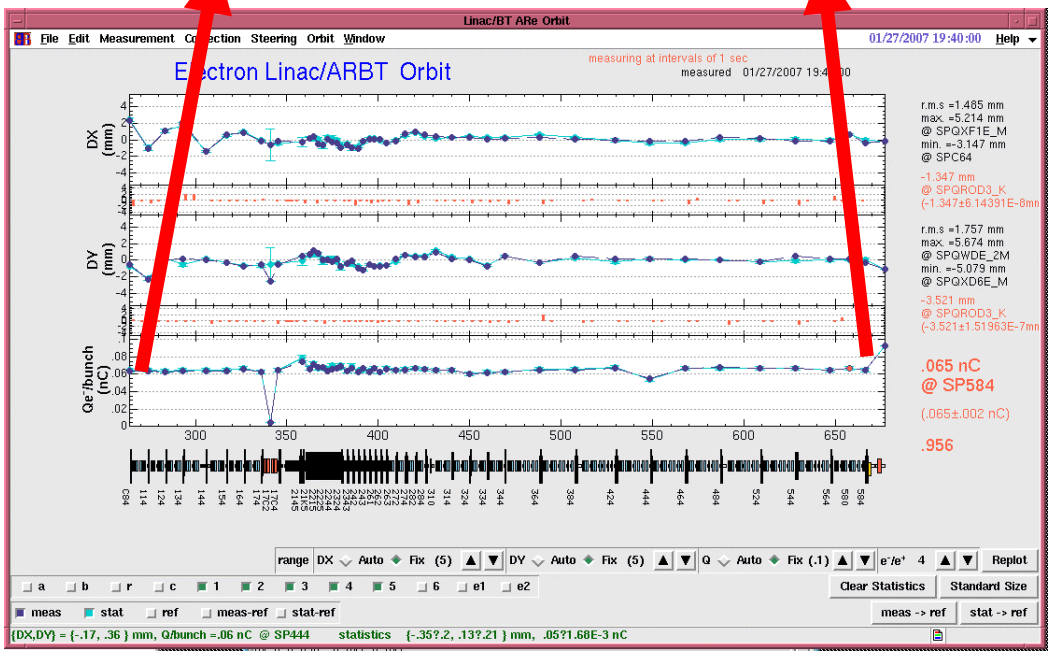
$\gamma\varepsilon_x = 52.8\ \pi\cdot mm\cdot mrad$

$\gamma\varepsilon_y = 56.7\ \pi\cdot mm\cdot mrad$

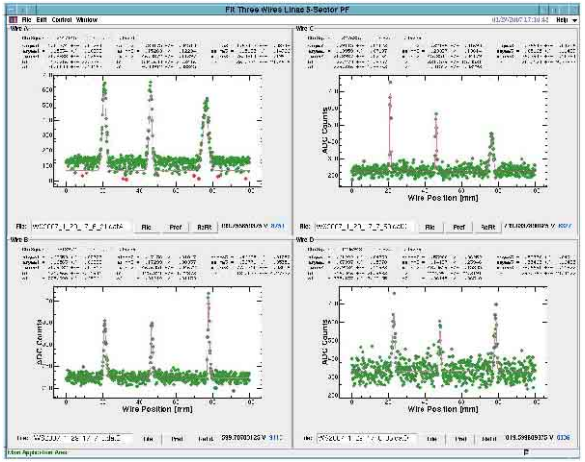
PF-beam (64 pC/pulse)

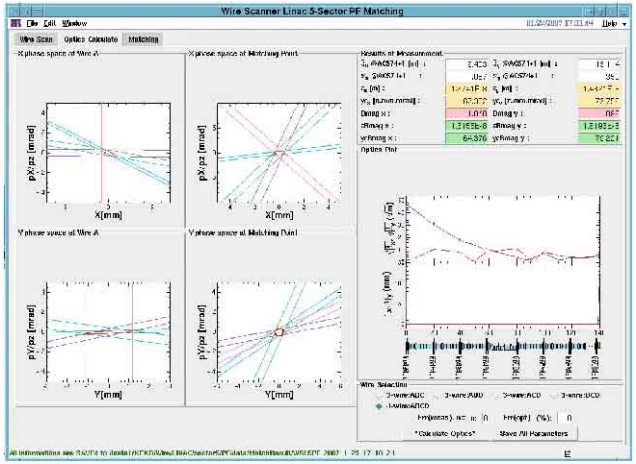
$\gamma\varepsilon_x = 68.1\ \pi\cdot mm\cdot mrad$

$\gamma\varepsilon_y = 69.0\ \pi\cdot mm\cdot mrad$



PF-beam emittance at 2.5GeV

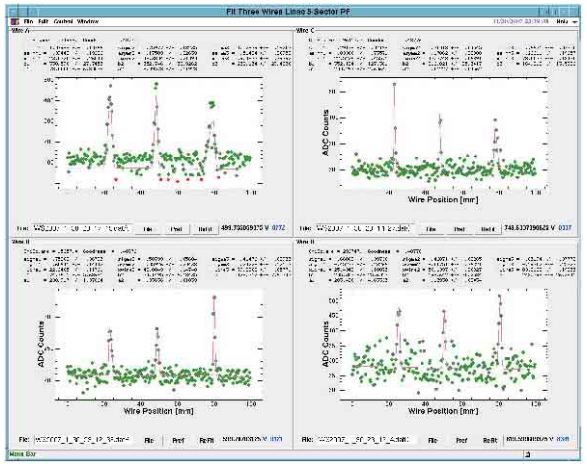


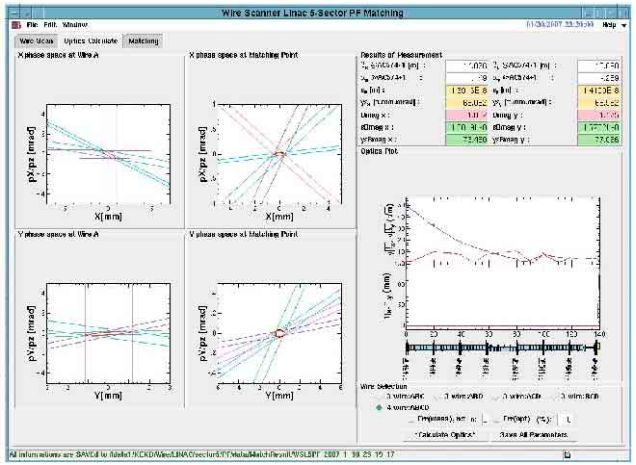


Q = 100 pC/pulse

$\gamma\varepsilon_x$ =62.3 π・mm・mrad

$\gamma\varepsilon_y$ =72.8 π・mm・mrad





Q = 64 pC/pulse

$\gamma\varepsilon_x$ =68.1 π・mm・mrad

$\gamma\varepsilon_y$ =69.0 π・mm・mrad

DC・パルス電子銃

- Aperture grid を使用
- HVはDC60kV
- ビーム電流0～100mA
- 回転ターゲットの照射試験
  （2007,3月予定）