

$$N = 1899 \text{ pixels}$$

$$N_{\text{cal}} = 1580 \text{ pixels}$$

$$\Delta x = \frac{h}{N_{\text{cal}}} = \frac{52 \text{ cm}}{1580 \text{ pixels}}$$

$$\Delta x \approx 0.033 \text{ cm/pixel}$$

$$L = N \Delta x = (1899)(0.033) \\ = 62.67 \text{ cm}$$

$$\Delta K = \frac{2\pi}{L} = \frac{2\pi}{62.67 \text{ cm}} \approx 0.100 \text{ cm}^{-1}$$

$$K = \left(\overset{\text{pixels}}{\downarrow} \sim 810 - \overset{\text{pixels}}{\downarrow} \sim 790 \right) (\sim 0.100 \text{ cm}^{-1})$$

$$K \approx 2 \text{ cm}^{-1}$$

$$\lambda = \frac{2\pi}{K}$$

$\lambda = \frac{2\pi}{\sim 2 \text{ cm}^{-1}} \approx 3.1 \text{ cm}$

Wavelength