


① → find at  $0^\circ$  & record all

② → swing gradually to  $-90^\circ$ , correcting in  $m_2$  & record  $m_2$

③ → .. .. .  $+90^\circ$  - - -

(using lg steps initially )

④ → record  $m_2$  @  $\pm 90$ , average & move  $m_2$  there, adjust  $Sam_x$  by same amount to get particle in view

Find sample with  $m_2$

⑤ → go to ~~110~~ and find particle with  $Sam_x$  difference

⑥ → add  $-x @ 90^\circ + x @ 0^\circ \rightarrow$  add to  $m_1$ , subtract from  $Sam_x$

⇒ should be close to centre of rotation

go to  $\pm 90$  & correct w/  $m_2$  (next steps 2 → 6 for fine tuning)

(may differ at low  $\theta$  due to misalignment in axes)

at  $\pm 90^\circ$   
 $m_1$  parallel to z  
 $m_2$  parallel to x

heading to  $-90^\circ$ :  $m_2 \downarrow$  moves sample  $\rightarrow$  on screen

heading to  $+90^\circ$ : click the arrow pointing in the direction the sample should move

at  $0^\circ$   
 $m_1$  parallel to x  
 $m_2$  parallel to z

$Sam_x$  moves camera       $Sam_y$  moves sample wrt cam