FSSR Alignment

* First pic
  + screws on bottom move whole spectrometer
  + screws on left move the crystal surface
  + The golden pin in the center is located at 150mm away from crystal
  + Expanded HeNe beam allows pre alignment by focusing on golden pin
  + Pre alignment should be done outside of the target chamber
    - Because when crystal first added, is not aligned with rest of spectrometer
    - Crystal is glued on glass substrate
    - Don’t know how is aligned in aluminum housing
  + Pin is center of rotation of detector arm
  + Setting of angle scale of detector to 0 means detector exactly opposite of crystal
  + There is a pin in the crystal housing, allows aligning of HeNe by matching shadow of brass pin on crystal pin. Also a hole inside the crystal housing
  + three screws on crystal holder are pulling, some are pushing
* Second pic
  + Inside target chamber
  + Use a small laser beam to show where source is coming from
  + Orientate by back reflecting diode laser back onto brass pin
  + Pin is lower height than laser
  + Makes sure that crystal is pointing to tcc
* Third pic
  + Set bragg angle
  + Possible to leave out this step for april experiment because is on an aluminum plate anyways
* Fourth pic
  + can use the thin HeNe beam to align center of crystal reflection with the center of the detector surface
  + Use slider stage to fulfil focusing condition on the detector
    - allows adjusting of distance a
  + Can install shutter to allow use of xray ccd camera to more accurately determine the focusing

übernächste Woche Donnerstag den 15.12

Energiebereich bei FSSR 1D märz Experiment (mit analytischen Gl. und Raytracing für die Auflösung)

Zentrale Energie (1650-1500)/2, andere Daten in Powerpoint overview Mica 2te Ordnung

sphärische Kristall in Inventor