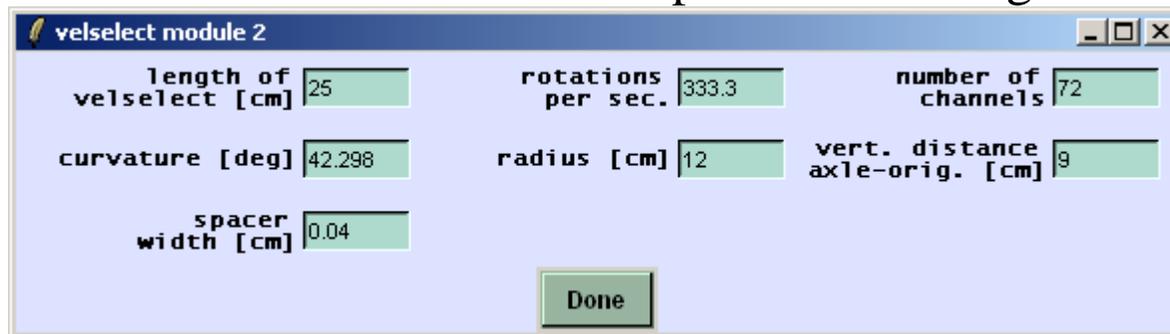


Task 2.2.1: Velocity Selector

1. Exchange the monochromator by a velocity selector and set selector parameters to
 - 72 channels of 25 cm length and 42.298° curvature
 - 333.3 rotation per second
 - radius of selector 12 cm, blade width 0.04 cm
 - chose proper distance beam and axle
2. Change source
 - Sent neutrons between 1 and 12 Å to a spot of 3 x 5 cm² (WxH) in a distance of 3 m
3. Run instrument and compare wavelength distribution with that of a monochromator
4. Run a series of 5 different rotational speeds in the range 10000 – 50000 rpm



The screenshot shows a software window titled "vselect module 2" with several input fields and a "Done" button. The parameters are as follows:

Parameter	Value
length of vselect [cm]	25
rotations per sec.	333.3
number of channels	72
curvature [deg]	42.298
radius [cm]	12
vert. distance axle-orig. [cm]	9
spacer width [cm]	0.04

Task 2.2.2: Disc Chopper

1. Exchange velocity selector by a disc chopper and set the following parameters
 - radius 50 cm
 - 2 openings of 10° (at positions 0° and 180°)
 - initial phase 90°
 - frequency 300 rpm

chopper file chop2x10.chp Browse BrowseN Edit

rounds / min. 300 offset [deg] 90 distance to prev. module [cm] 0

No of equ. windows 1

absorption ideal set zero time no treat neutrons passing by yes

set colour yes

Done

Task 2.2.2: Disc Chopper – File

Edit chop2x10.chp

number of windows: 2 radius [cm]: 50

vert. position of axle [cm]: -45 horiz. position of axle [cm]: 0

first window

window position [deg]: 0 window height [cm]: 12 window width [deg]: 10

left side deviation [deg]: 0 right side deviation [deg]: 0

2nd window (if at least 2 windows)

window position [deg]: 180 window height [cm]: 12 window width [deg]: 10

left side deviation [deg]: 0 right side deviation [deg]: 0

3rd window (only if 3 windows)

window position [deg]: window height [cm]: window width [deg]:

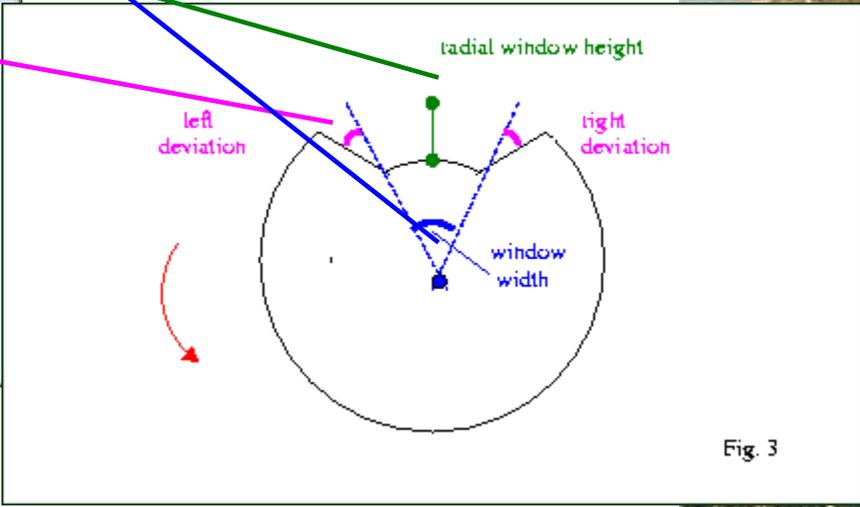
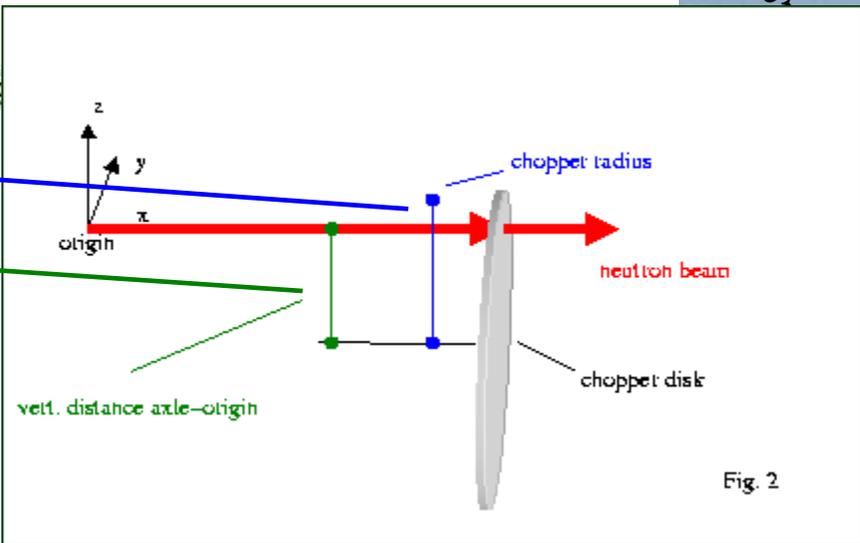
left side deviation [deg]: right side deviation [deg]:

4th window (only if 4 windows)

window position [deg]: window height [cm]: window width [deg]:

left side deviation [deg]: right side deviation [deg]:

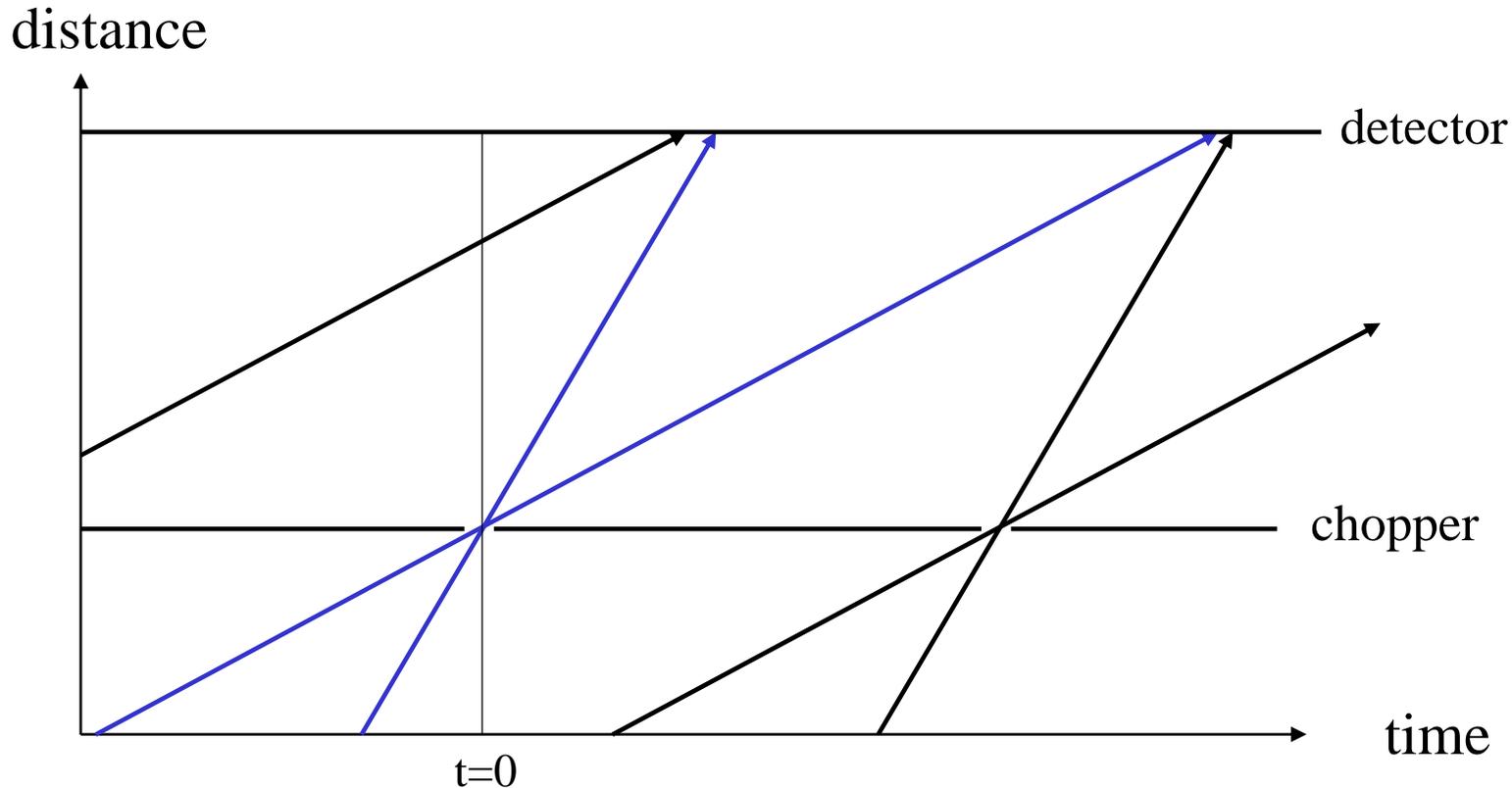
Check Save+Close Save As Cancel



Task 2.2.2: Disc Chopper

2. Change source

- Add proper time interval for the neutrons to start (in the source module) to select neutrons between 2 Å and 4 Å



Slits and Collimators

1. Apertures

- slit (rectangular, ideal)
- spacewindow (circular + rectangular, material in window and outside)
- spacewindow_multiple (several windows)

2. Collimators

- collimator_soller (simple, analytic)
- collimator (better)
- collimator_radial