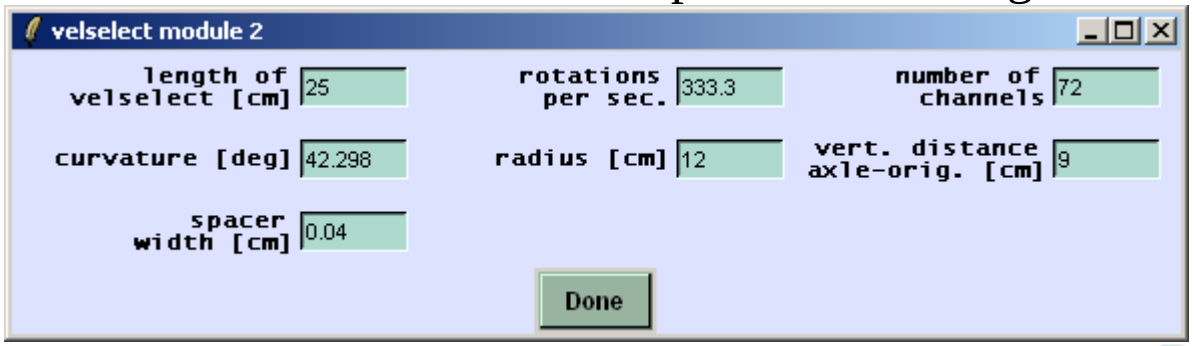
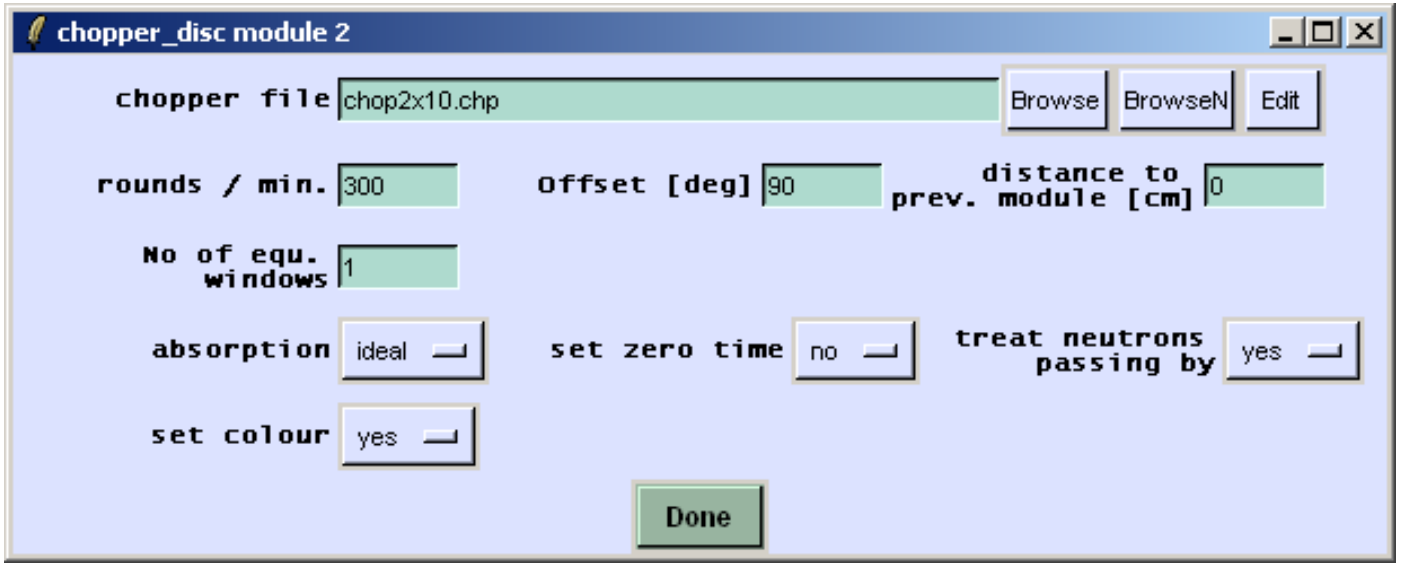
Task 2.2.1: Velocity Selector

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 cm^2 (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



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



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

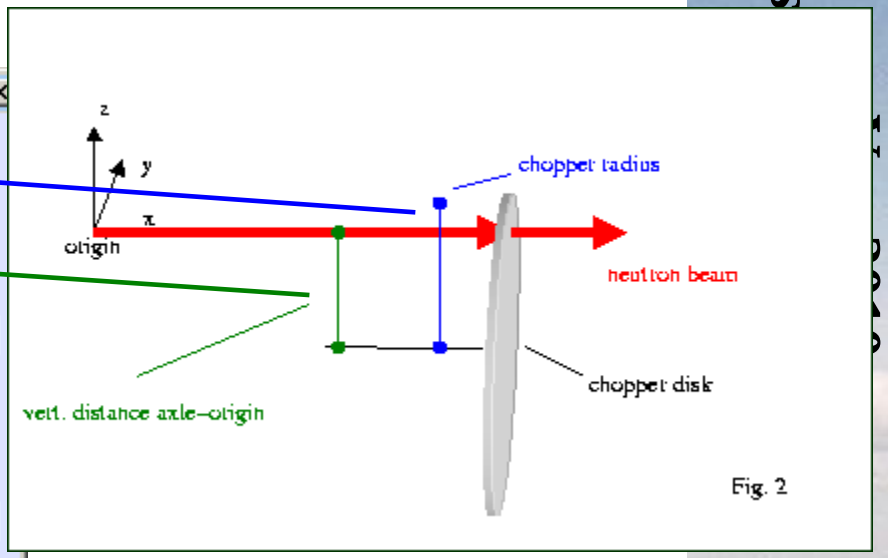


Fig. 2

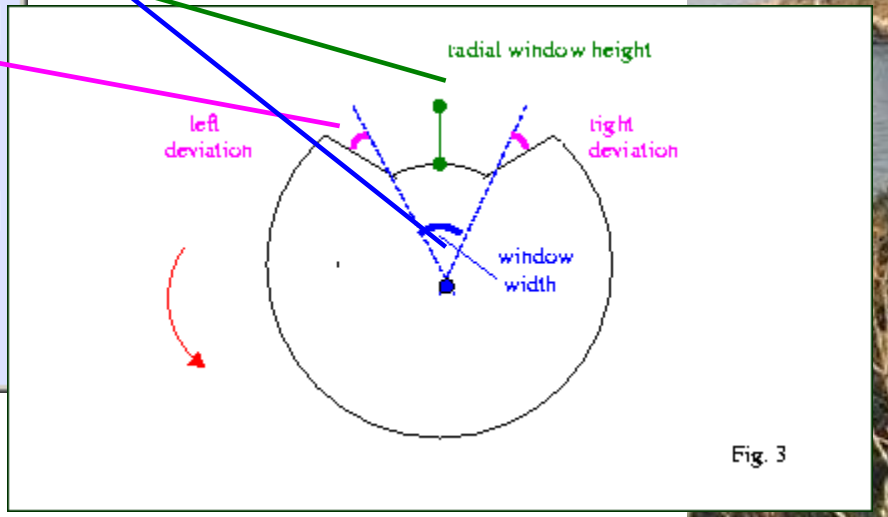
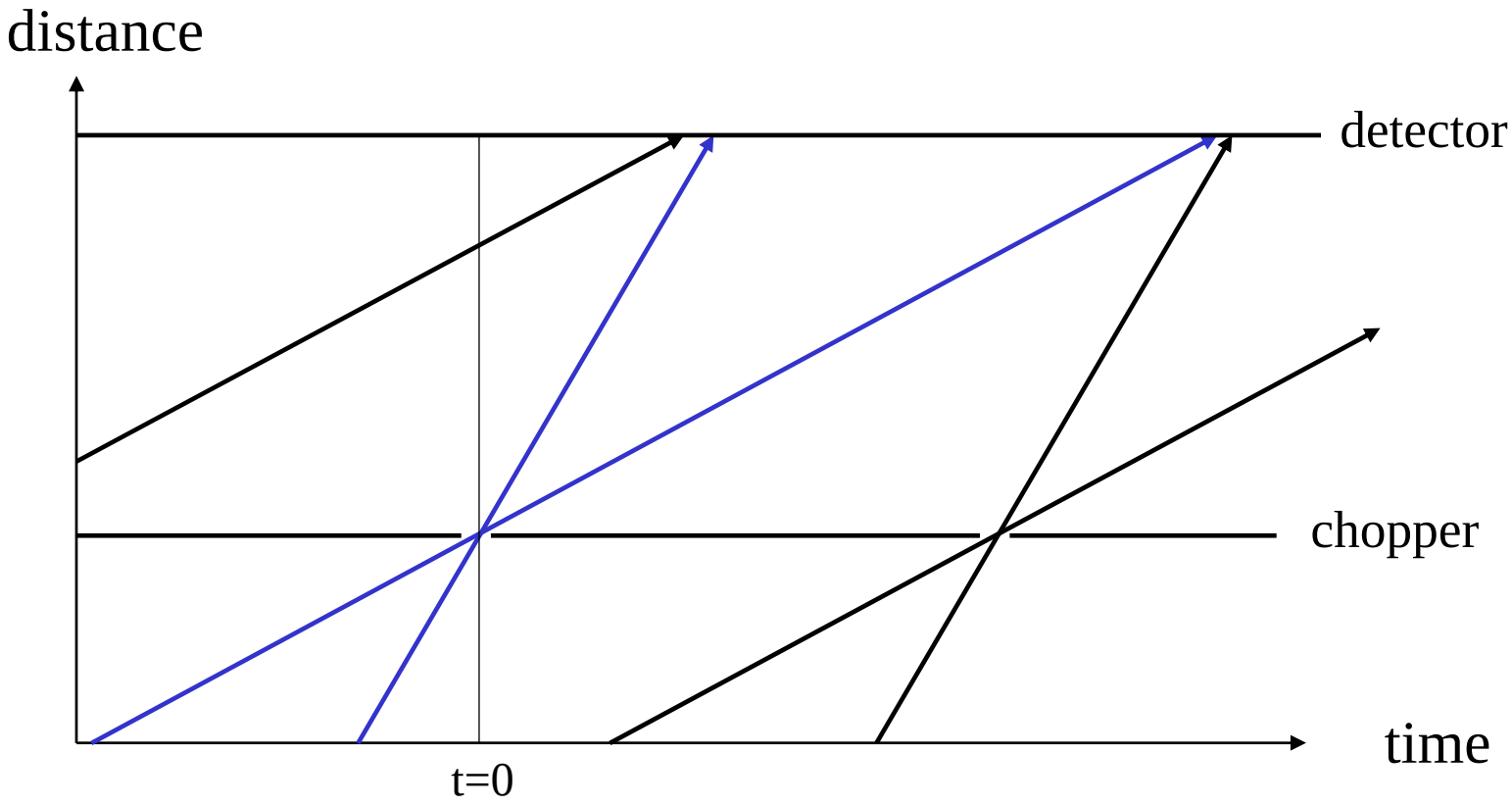


Fig. 3

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