Source and Main Beam Specifications

The table below gives the neutron flux for the six available beam ports at NRU. The beams are referred to by letter-number pairs, such as C2 or E3. These identifiers are also used for the spectrometers mounted at each beam port. The main beam (MB) monitor is located at the monochromator position. The MB monitor reading is in counts per second with the reactor running at full power. The main beam thermal flux was measured by gold-foil activation at the monochromator in each case.

Port	Source size† width × height	Source to mono-chromators	MB thermal flux (n /cm^2 / s)	CD ratio	
C2	2.625″ × 3.656″	260″	5.26E+09	16	

Port	Source size† width × height	Source to mono-chromators	MB thermal flux (n /cm^2 / s)	CD ratio	
C5	2.375″ × 6.125″	262″	4.85E+09	15.3	
D3	2.4″ × 6″	200″			
E3	4″ × 6.125″	221.5″	8.90E+09	112#	
L3	4.5″ × 12.172″	241.5″	1.35E+10	14.5	
N5	2.375″ × 6.125″	267″	4.24E+09	10.5	
T3		2.33E+09	24		

† All elliptical except for D3 where 6″ diameter circle is trimmed by MB collimator to an effective width of 2.4″.
‡ Derived from measured MB thermal flux and inverse-square law, and normalized to unit-area source.
$ MB filter unit set at “no-filter” position.
# Unusually high because of permanently installed RT sapphire filter in MB.
* DB monitor reading