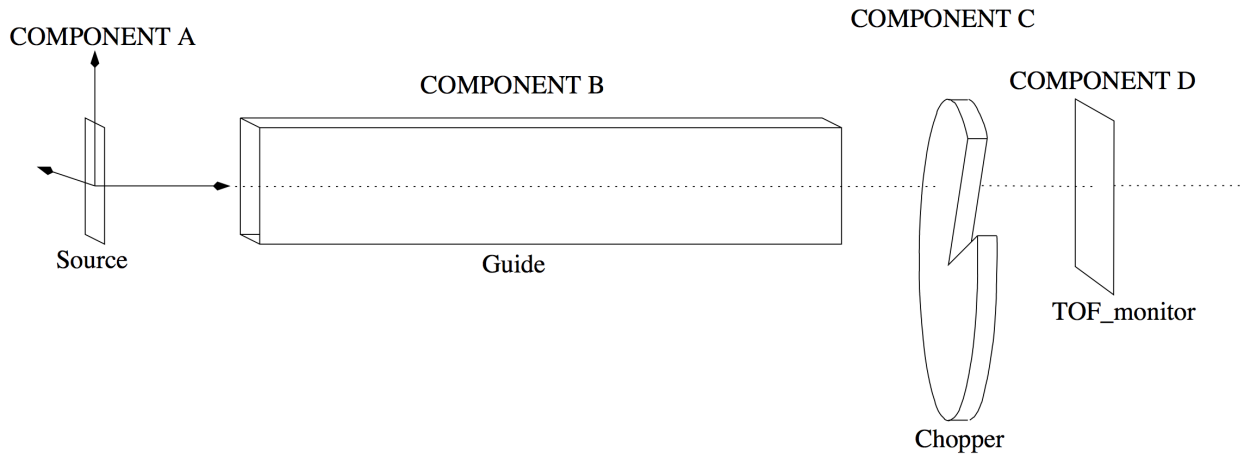


# How McStas works overview

## INSTRUMENT



The "tool layer" consists of programs manipulated by the McStas user:

mcgui, graphical user interface

mcplot, visualize histogram outp.

mcdisplay, visualize instrument

mcgui is used to assemble an instrument file, which is taken over by the McStas system

```
DEFINE INSTRUMENT Example(Param1=1, string Param2="two", ...)
```

```
COMPONENT A = Source(Parameters...)
```

```
AT (0, 0, 0) ABSOLUTE
```

```
COMPONENT B = Guide(Parameters...)
```

```
AT (0, 0, 1) RELATIVE A
```

```
COMPONENT C = DiskChopper(Parameters...)
```

```
AT (0, 0, 1) RELATIVE B
```

```
COMPONENT D = TOF_monitor(Parameters, filename="Tof.dat")
```

```
AT (0, 0, Param1) RELATIVE PREVIOUS
```

"Instrument file"

Source.comp – c-code

Guide.comp – c-code

DiskChopper.comp – c-code

TOF\_monitor.comp – c-code

Component library

Random  
numbers

I/O

Physical  
consts.

"Kernel and runtime c-code"

The McStas system generates an "ISO C file" and an executable from instrument file and c-codes

The simulation executable produces data output which can be visualized using the mcplot and mcdisplay tools