

## Setup

Obtain User Inputs

Create Geometry  
and Simulation  
Grid.

Includes the density and  
velocity structure of the  
outflow, with initial  
temperature/ionization  
assumption

## Ionization Cycles

repeat N times

Generate MC energy  
quanta ("r-packets")

Fly packets through  
wind. Record MC  
estimators.

Carry out thermal  
balance to obtain  
new temperature

Compute ion and  
level populations

Compute Macro-  
atom emissivities

## Spectral Cycles

repeat M times

Generate r-packets  
according to  
emissivities

Fly packets through  
wind

Compute observed  
photon weight at  
each viewing angle

Output: Synthetic  
Spectrum

