```
def shgyield(gamma, riF): # function for the final yield
    RiF = SCALE * M2TOCM2 * PREFACTOR * (ONEE ** 2) * \
                    np.absolute((1/nl) * gamma * riF)**2
    broadened = broad(RiF, SIGMA)
    return broadened


#### Init ####
PARAM = parse_input(sys.argv[1]) # parses input file
MODE = str(PARAM['mode']) # establishes mode
MULTIREF = str(PARAM['multiref']) # if multiple reflections are considered
```