```
rebin generated samples(x, data, num, shift)
                                         reconstruct(elim, check, idevf, itf)
                                         res(coeffs, x, d, t)
                                         res icorr(coeffs, x, t)
                                         save generated data(x, data, savefile)
                                         save result()
                                         testconv()
     gens class fort mpi.gens
                                           qens_fit_class_hist_noidata.runhistnoidata
     M: int
     WinFunc: str
                                                      alpha
     datadir
                                                      devf
     dataset
                                                      elim
     de
                                                      elimw
     figname: str
                                                      leastsq: bool
     odata: bool
     qsel: bool
                                                      numcycle: int
     quiet: bool
                                                      outall: list, ndarray
     save file
                                                      outfile
     selected_energy
                                                      tf
     selected spectra: ndarray
                                                      X
                                                      yd
     showplot: bool
                                           check_out(cyidx, _out)
     tin
                                           correction(x, yd, yt)
     tin real: ndarray
                                           cycle(variables)
     winparam: int
                                           decorrection(x, yd, yt)
     xvec : ndarray
                                           generate_data(idata)
     xvec_real : ndarray
                                           get xmlyd(variables)
     y: tuple
                                           loadfile()
add shift()
                                           modify out(cyidx, out)
add_shift_de()
                                           optimize(x, yd, yt, variables)
calc_sskernel f90()
                                           output()
calc_ssvkernel f90(WinFuncNo)
                                           plot distribution(binwidth1, binwidth2)
get xvec()
                                           plot distribution single(binwidth1, show)
plotter()
                                           preprocess()
run ssvkernel(num, isnovariablebw)
                                           reconstruct(x, yd, out)
save output(output file)
                                           res(coeffs, x, d, t)
save outputs(output file)
                                           savefile()
select spectra()
                            4
                        qens fit class kde.runkdenoidata
                                 M: int
                                 WinFunc: str
                                 alpha
                                 de
                                 devf
                                 dt
                                 elim
                                 elimw
                                 leastsq: bool
                                 numcycle: int
                                 outall: list
                                 outfile
                                 rank
                                 selected energy
                                 selected spectra
                                 tf
                                 tin
                                 tin real: ndarray
                                 winparam: int
                                 y: tuple
                                y_hist
                                 yd
            Gauss(x, w)
             baloon estimator()
            cycle()
            get_xmlyd()
            hist()
            kde(x, y, M, winparam, num, WinFunc, isnovariablebw)
            kde baloon(x, y)
            preprocess()
            run ssvkernel notused()
             gens balloon resample class. Sqens balloon resamples
                              Nb: int
                              bg: float
                              comm
                              elim: list
                              etl
                              gammas : ndarray
                              ishist: bool
                              isnovariablebw: bool
                              kyios
                              kyis : list
                              kyos
                              kys : list
                              leastsq: bool
                              num: int
                              odata: bool
                              orgfiles : list
                              orgmodifier: str
                              outall: ndarray, list
                              pklfile
                              prefixes: list
                              quiet: bool
                              rank
                              rsfiles: list
                              rsmodifier: str
                              runNos: list
                              size
                              spectrab
                              variables: list
                              X
                              y:str
                            CI of intensities()
                            CI of intensities io()
                            CalcBandW(orgfile, inb)
                            DefineFiles()
                            DoQf(inb)
                            DoQfandKDE(inb)
                            DoQfio(inb)
                            Gauss(x, w)
                            balloon(ky, sy)
                            check idata()
                            eachrunno(fidx, inb)
                            eachrunno io(fidx, inb)
                            getrsspectra(rsfile, inb)
                            io(kyo, kyi)
                            load_pkl(pklfile)
                            run()
                            run eachkde()
                            run_eachkde_io()
                            run_io()
            qens_balloon_resample_classmr.qens_balloon_resamples
                                Nb: int
                                bg: float
                                bins
                                comm
                                elim: list
                                gammas: ndarray
                                ishist: bool
                                ispltchk: bool
                                leastsq: bool
                                num: int
                                orgmodifier: str
                                prefixes: list
                                qidx
                                quiet: bool
                                rank
                                rsmodifier: str
                                runNos: list
                                size
                                spectrab
                                variables: list
                                y:str
                            CalcBandW(orgfile, inb)
                            DoQf(inb)
                            getbins()
                            getrsspectra(rsfile, inb)
                            rebin(x, y)
                            res(coeffs, x, d, t)
           gens balloon resample classm2r. Sqens balloon resamples
                                Nb: int
                                comm
                                elim: list
                                gammas : ndarray
                                ishist: bool
                                ispltchk: bool
                                leastsq: bool
                                num: int
                                orgfiles : list
                                orgmodifier: str
                                pklfile
                                prefixes: list
                                qidx
                                quiet: bool
                                rank
                                rsfiles: list
                                rsmodifier : str
                                runNos: list
                                size
                                variables: list
                             DefineFiles()
                             getrsspectra(rsfile, inb)
                  qens balloon resample classm2r class.Sqbr
                                      outfile
```

qens\_fit\_class.qens\_fit

elim : NoneType

leastsq: bool

optbgpeakratio

afteroptimize(out, s sq, variables, figname)

check generated samples(x, data)

generate data(idevf, itf, check, rebin)

check\_spectra()
checkdata()

correction()
decorrection()

convlore(f, gamma, x)
convloreorg(f, gamma, x)

fun lore(x, gamma)

get icorrdata(icorrfile)

kde hist(kvariables, hvariables)

optimize(variables, figname)

kde hist sub(tf, devf, kde, variables)

get\_data(infile)
get hdata(infile)

get\_idata(infile)
get sdata(infile)

limit(x, y, mergin)
limit2(x, y, elim)
multii(idevf, itf)

preprocess(doicorr) preprocessh(doicorr) preprocessnoi(doicorr) preprocesss(doicorr)

icorr()

interpolate()

quiet : bool showplot : bool

bg : float devf

gamma

k

out

tf x\_df x\_tf y\_df y\_tf