Author(s) : F. James, M. Roos
Submitter : F. James
Language : Fortran

Library: PACKLIB
Submitted: 03.05.1967
Revised: 15.01.1994

Function Minimization and Error Analysis

The MINUIT package performs minimization and analysis of the shape of a multi-parameter function. It is intended to be used on Chisquare or likelihood functions for fitting data and finding parameter errors and correlations. The more important options offered are:

- Variable metric (Fletcher) minimization
- Monte Carlo minimization
- Simplex (Nelder and Mead) minimization
- Parabolic error analysis (error matrix)
- MINOS (non-linear) error analysis
- Contour plotting
- Fixing and restoring parameters
- Global minimization

Structure:

SUBROUTINE subprograms
User Entry Names: MINTIO, MINUIT, MNCOMD, MNCONT, MNERRS, MNEXCM, MNINPU, MNINTR, MNPARS, MNREAD
Internal Entry Names: MNAMIN, MNBINS, MNCALF, MNCLER, MNCNTR, MNCRCK, MNCROS, MNCUVE, MNDERI, MNDXDI, MNEIG, MNEMAT, MNEVAL, MNEXIN, MNFIXP, MNFREE, MNGRAD, MNHELP, MNHESS, MNHES1, MNIMPR, MNINEX, MNINIT, MNLIMS, MNLINE, MNMATU, MNMIGR, MNMNOS, MNMNOT, MNPARM, MNPFIT, MNPINT, MNPLOT, MNPOUT, MNPRIN, MNPSDF, MNRAZZ, MNRN15, MNRSET, MNSAVE, MNSCAN, MNSEEK, MNSET, MNSETI, MNSIMP, MNSTAT, MNSTIN, MNTINY, MNUNPT, MNWARN, MNWERR, MNVERT, STAND

Usage:

MINUIT can be used either

as a “master” batch program which reads and executes commands appearing in the input data stream;

or

as a “master” interactive program which reads and executes commands given from the terminal;

or

as a Fortran callable “slave” package, called from the user program or from an intermediate package such as PAW or HBOOK;

or

any combination of the above.

See **Long Write-up** for details.

•