

Global Chi2 checking toy

- toy program proofDiag was made.
 - instead of chi2 function, parabola function is used
 - rotate the three dim. parabola
 - at some point first derivative and second derivative is calculated in rotated coordinate.
 - second derivative has off-diagonal component.
 - diagonalize it, using well known Jacobi method
 - the diagonalizing matrix can transform first derivative to the one in the initial coordinate
 - The minimum point=start-transformed first derivative/diagonal component
- this program should be converted to shell script
 - each parabola calculation corresponds to chi2 calculation initializing geometry using root or text file

eigen value is sorted in LAPACK?

- the toy program's matrix gen part is copy-pasted into sample program to use dspev which is fortran subroutine of LAPACK to diagonalize packed symmetrical matrix.
 - Double precision Symmetric Packed format matrix Eigen Vector search
- That routine is used in the global chi alignment code.
- The sorted eigen vector cannot be used to calculate minimum point. if sorted order is found, it is possible.
 - <http://natsci.kyokyo-u.ac.jp/~takasima/pukiwikiNew/index.php>