

```

    gccsrc/Kolmogorov41.ccFileReference
#include
h5si.-
h
#include
<yaml-cpp/yaml.-
h>
#include
<iostream>
#include
<fstream>
#include
< hdf5.-
h>
#include
<sstream>
#include
<blitz/array.-
h>
#include
<omp.-
h>
#include
<mpi.-
h>
#include
<sys/time.-
h>
#include
<limits.-
h>
#include
<unistd.-
h>
gcc_2b9e63f5c7d28def453cfba49b74859aReadpara()Functiontoopentheyamlfileandparsetheparameters.
gcc_16aede7be50f9f4215d24de0dad9179bwrite2D(Arraydouble, 2A, stringfile)Functiontowritethestructurefunctionsas
D hdf5file.
gcc_6e486782767b522541885ab5c5a7e32ewrite3D(Arraydouble, 3A, stringfile, intq)Functiontowritethestructurefunction
D hdf5file.
gcc_952e4e10ef79a9b18af65437730f1080write4D(Arraydouble, 4A, stringfile, intq)Functiontowritethestructurefunction
D hdf5file.
gcc_e3ae6d31f602caf58200506ae0d963a0read2D(Arraydouble, 2A, stringfile)Functiontoreada2-
Dfieldfromanhdf5file.
gcc_226edad97255b1ecf9cb6ccba f68922binttostr(intKolmogorov41gcc_86cf672daa4e0ad11ad10efc894d19c8num)Function
gcc_b0e9217b9dd150e770e3423b9a670447computetimeelapsed(timevalstart
t, timevalend
t, double&elapsed)Functiontocomputethetimeelapsed.
gcc_4ed42719c00a36bb33994eace7a5fcc1powInt(doublex, intn)Functionwhichconductsexponentiationwithanintegerasa
gcc_d4f02dee0a6ff4dd152134cfdf2f5ccacread3D(Arraydouble, 3A, stringfile)Functiontoreada3-
Dfieldfromanhdf5file.
gcc_aea f80f44d91adffaf51dca33da5a8b1bSFunc2D(Arraydouble, 2Ux, Arraydouble, 2Uz, Arraydouble, 2&S
F
Node, Arraydouble, 2&S
F
Node
p, Arraydouble, 2&counter
Node)Functiontocalculatestructurefunctionsusing2-
Dvelocityfield.
gcc_7045c373a28e9e12d84552f406ab1839SFunc2D(Arraydouble, 2Ux, Arraydouble, 2Uz, Arraydouble, 2&S
F
Node, Arraydouble, 2&S
F
p
Node, Arraydouble, 2&counter
Node, Arraydouble, 3&S
F
Grid2
D
pll
Node, Arraydouble, 3&S
F
Grid2
D
perp
Node, Arraydouble, 3&counter
Grid2
D
Node)Functiontocalculatestructurefunctionsusing2-
Dvelocityfieldasfunctionof(lx, lz)inadditiontothestructurefunctionsasfunctionof(l).
gcc_c0484229466aa1bb410a8432aebb0f3fSFunc2D(Arraydouble, 2Ux, Arraydouble, 2Uz, Arraydouble, 2&S
F
Node, Arraydouble, 2&counter
Node)Alesscomputationallyintensivefunctiontocalculateonlythelongitudinalstructurefunctionsusing2-
Dvelocityfield.
gcc_a690ba615c6dd5cb4e4cb8968a2f91bbSFunc2D(Arraydouble, 2Ux, Arraydouble, 2Uz, Arraydouble, 2&S
F
Node, Arraydouble, 2&counter
Node, Arraydouble, 3&S
F
Grid2
D
pll
Node, Arraydouble, 3&counter
Grid2
D
Node)Alesscomputationallyintensivefunctiontocalculateonlythelongitudinalstructurefunctionsasfunctionof(lx, lz)

```