Artemis

Reference Manual

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Version 7.2
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AVERTISSEMENT / CAUTION

Contents

1. Detail list of keywords

1.1 ACCOUNT NUMBER

Type : String
Dimension : -1
Mnemo
DEFAULT VALUE : ”
French keyword : NUMERO DE COMPTE
Account number to which the cost of computation shall be charged.

1.2 ALPHA

Type : Real
Dimension : 0
Mnemo ALFABJ
DEFAULT VALUE : 1.0
French keyword : ALPHA
Fixes the coefficient Alpha used in the formulation of the dissipation coefficient through breaking proposed by Battjes & Janssen, 1978 for random waves.

1.3 AUTOMATIC CALCULATION OF PHASE

Type : Logical
Dimension : 0
Mnemo LPHASEAUTO
DEFAULT VALUE : NON
French keyword : CALCUL AUTOMATIQUE DE LA PHASE
TRUE : AUTOMATIC CALCULATION OF INCIDENTE PHASE (based on reference water depth)

1.4 AUTOMATIC TETAP CALCULATION

Type : Logical
Dimension : 0
Mnemo LANGAUTO
DEFAULT VALUE : NON
French keyword : CALCUL AUTOMATIQUE DE TETAP

TRUE : AUTOMATIC CALCULATION OF TETAP (based on velocity direction)

1.5 BEGINNING PERIOD FOR PERIOD SCANNING

Type : Real
Dimension : 0
Mnemo PERDEB
DEFAULT VALUE : 0.
French keyword : `PERIODE DE DEBUT POUR LE BALAYAGE EN PERIODE`
Used with the option : PERIOD SCANNING = YES Fixes the minimum value (in sec) of the period range to be used for the period scanning.

1.6 BIDON STRING

Type : String
Dimension : 0
Mnemo
DEFAULT VALUE : ”
French keyword : `CHAINE BIDON`
Character Array of size : 4 Reserved to introduce new character strings (new file names...).

1.7 BINARY DATA FILE 1

Type : String
Dimension : 0
Mnemo NOMBI1
DEFAULT VALUE : ”
French keyword : `FICHIER DE DONNEES BINAIRE 1`
Data file, written in binary mode, at the disposal of the user. Data of this file must be read on unit 24.

1.8 BINARY DATA FILE 1 FORMAT

Type : String
Dimension : -1
Mnemo ART_FILES(ARTBI1)
DEFAULT VALUE : ’SERAFIN’
French keyword : `FORMAT DU FICHIER DE DONNEES BINAIRE 1`
Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.9 BINARY DATA FILE 2

Type : String
Dimension : 0
Mnemo NOMBI2
DEFAULT VALUE : ”
French keyword : `FICHIER DE DONNEES BINAIRE 2`
Data file, written in binary mode, at the disposal of the user. Data of this file must be read on unit 25.

1.10 BINARY DATA FILE 2 FORMAT

Type :	String
Dimension :	-1
Mnemo	ART_FILES(ARTBI2)
DEFAULT VALUE :	'SERAFIN'
French keyword :	FORMAT DU FICHIER DE DONNEES BINAIRE 2

Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.11 BINARY RESULTS FILE

Type :	String
Dimension :	0
Mnemo	NOMRBI
DEFAULT VALUE :	”
French keyword :	FICHIER DES RESULTATS BINAIRE

Results file, written in binary mode, at the disposal of the user. Data of this file must be written on unit 28.

1.12 BOTTOM FRICTION LAW

Type :	Integer
Dimension :	0
Mnemo	FORMFR
DEFAULT VALUE :	1
French keyword :	FORMULATION DU FROTTEMENT DE FOND

Used with the option FRICTION = YES. Fixes the formulation used for bottom friction law : 1 : Kostense et al., 1986 2 : Putnam & Johnson, 1949.

1.13 BOTTOM TOPOGRAPHY FILE

Type :	String
Dimension :	0
Mnemo	NOMFON
DEFAULT VALUE :	”
French keyword :	FICHIER DES FONDS

Name of a potential bathymetry file. If this key-word is specified, the bathymetry which it is defining is accounted for.

1.14 BOTTOM TOPOGRAPHY SMOOTHING

Type :	Integer
Dimension :	0
Mnemo	LISFON
DEFAULT VALUE :	0
French keyword :	LISSAGES DU FOND

Number of smoothings done on the topography. Each smoothing, using a mass matrix, is conservative. It is used when bathymetric data provide too irregular results after interpolation.

1.15 BOUNDARY CONDITIONS FILE

Type : String
Dimension : 0
Mnemo NOMDYN
DEFAULT VALUE : ”
French keyword : FICHIER DES CONDITIONS AUX LIMITES
Name of the boundary conditions file. It is automatically built by STBTEL or by the mesh generator MATISSE.

1.16 BREAKING

Type : Logical
Dimension : 0
Mnemo DEFERL
DEFAULT VALUE : NON
French keyword : DEFERLEMENT
Yes, if one wants to account for breaking process (see also reals of index 18, 19, 20, 21, 22, 23, and integer of index 12, 13).

1.17 BREAKING LAW

Type : Integer
Dimension : 0
Mnemo IBREAK
DEFAULT VALUE : 1
French keyword : FORMULATION DU DEFERLEMENT
Specifies the formulation choosen for calculating the dissipation coefficient through breaking. Only effective for Monochromatic wave mode. 1 : Formulation of Battjes & Janssen, 1978 2 : Formulation of Dally et al., 1984 In random wave mode, the formulation of B & J, 1978 is the only one to be used.

1.18 CHAINING TOMAWAC 1

Type : Logical
Dimension : 0
Mnemo CHAINTWC
DEFAULT VALUE : NON
French keyword : CHAINAGE TOMAWAC 1
Yes, if one wants to use a spectrum from TOMAWAC on the incident boundary.

1.19 CHECKING THE MESH

Type : Logical
Dimension : 0
Mnemo CHECK_MESH
DEFAULT VALUE : NO
French keyword : VERIFICATION DU MAILLAGE
if this key word is equal to yes, a call to subroutine checkmesh will look for errors in the mesh, superimposed points, etc.

1.20 CPU TIME

Type :	String
Dimension :	0
Mnemo	
DEFAULT VALUE :	'10'
French keyword :	TEMPS MACHINE CRAY

CPU time (in sec) specified for a computation on CRAY. Warning : it is written as a Character.

1.21 CURRENT

Type :	Logical
Dimension :	0
Mnemo	COURANT
DEFAULT VALUE :	NON
French keyword :	COURANT

TRUE : WAVE REFRACTION DUE TO CURRENT IS DESCRIBED USING KOSTENSE MODEL (1988)

1.22 DEBUGGER

Type :	Integer
Dimension :	0
Mnemo	DEBUG
DEFAULT VALUE :	0
French keyword :	DEBUGGER

If 1, calls of subroutines will be printed in the listing

1.23 DEFAULT EXECUTABLE

Type :	String
Dimension :	1
Mnemo	EXEDEF
DEFAULT VALUE :	'builds|PPP|bin|artemisMMMVVV.exe'
French keyword :	EXECUTABLE PAR DEFAUT

Default executable for ARTEMIS

1.24 DEFAULT PARALLEL EXECUTABLE

Type :	String
Dimension :	1
Mnemo	EXEDEFPARA
DEFAULT VALUE :	'builds|PPP|bin|artemisMMMVVV.exe'
French keyword :	EXECUTABLE PARALLELE PAR DEFAUT

Default parallel executable for Artemis

1.25 DESCRIPTION DES LIBRARIES

Type : String
Dimension : 6
Mnemo LINKLIBS
DEFAULT VALUE : 'builds|PPP|lib|artemisMMMVVV.LLL;
builds|PPP|lib|biefMMMVVV.LLL;
builds|PPP|lib|hermesMMMVVV.LLL;
builds|PPP|lib|damoMMMVVV.LLL;
builds|PPP|lib|parallelMMMVVV.LLL;
builds|PPP|lib|specialMMMVVV.LLL'
French keyword : DESCRIPTION DES LIBRAIRIES
ARTEMIS LIBRARIES description

1.26 DIAMETER50

Type : Real
Dimension : 0
Mnemo DIAM50
DEFAULT VALUE : 0.10E-3
French keyword : DIAMETRE50
DIAM50 is the maximum grain diameter, in m, which defines 50

1.27 DIAMETER90

Type : Real
Dimension : 0
Mnemo DIAM90
DEFAULT VALUE : 0.15E-3
French keyword : DIAMETRE90
DIAM90 is the maximum grain diameter, in m, which defines 90

1.28 DICTIONARY

Type : String
Dimension : -1
Mnemo
DEFAULT VALUE : 'artemis.dico'
French keyword : DICTIONNAIRE
Key word dictionary.

1.29 DIRECTION OF WAVE PROPAGATION

Type : Real
Dimension : 0
Mnemo TETAH
DEFAULT VALUE : 0.0
French keyword : DIRECTION DE PROPAGATION DE LA HOULE
Fixes the direction towards the incident waves at boundaries go to. It is counted in degress and positively in the trigonometric sense relatively to the x axis. This value is prescribed as a constant value along all the wave incident type boundaries. If one wants to specify a non uniform value, the user has to specify the value TETAB in the sub-routine BORH.

1.30 DISCRETIZATION IN SPACE

Type : Integer
Dimension : 0
Mnemo DISESP
DEFAULT VALUE : 1
French keyword : DISCRETISATION EN ESPACE
NOT ACTIVE FOR THE MOMENT

1.31 DISSIPATION RELAXATION

Type : Real
Dimension : 0
Mnemo RELDIS
DEFAULT VALUE : 0.5
French keyword : RELAXATION SUR LA DISSIPATION
Fixes the relaxation coefficient used between two sub-iterations for the computation of the dissipation term.

1.32 ENDING PERIOD FOR PERIOD SCANNING

Type : Real
Dimension : 0
Mnemo PERFIN
DEFAULT VALUE : 0.
French keyword : PERIODE DE FIN POUR LE BALAYAGE EN PERIODE
Used with the option : PERIOD SCANNING = YES Fixes the maximum value (in sec) of the period range to be used for the period scanning.

1.33 FLUID KINEMATIC VISCOSITY

Type : Real
Dimension : 0
Mnemo VISCO
DEFAULT VALUE : 1.0E-6
French keyword : VISCOSITE CINEMATIQUE DU FLUIDE
Kinematic viscosity of the fluid (water) in m2/s.

1.34 FLUID SPECIFIC MASS

Type : Real
Dimension : 0
Mnemo MVEAU
DEFAULT VALUE : 1000.0
French keyword : MASSE VOLUMIQUE DU FLUIDE
Fluid specific weight (water) in Kg/m3.

1.35 FORMATTED DATA FILE 1

Type : String
Dimension : 0
Mnemo NOMFO1
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES FORMATE 1
Data file, written in ASCII mode, at the disposal of the user. Data of this file must be read on unit 26.

1.36 FORMATTED DATA FILE 2

Type : String
Dimension : 0
Mnemo NOMFO2
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES FORMATE 2
Data file, written in ASCII mode, at the disposal of the user. Data of this file must be read on unit 27.

1.37 FORMATTED RESULTS FILE

Type : String
Dimension : 0
Mnemo NOMRFO
DEFAULT VALUE : ”
French keyword : FICHIER DES RESULTATS FORMATE
Results file, written in ASCII mode, at the disposal of the user. Data of this file must be written on unit 29.

1.38 FORTRAN FILE

Type : String
Dimension : 0
Mnemo NOMFOR
DEFAULT VALUE : ’DEFAUT’
French keyword : FICHIER FORTRAN
Name of the FORTRAN file used for the computation.

1.39 FRICTION

Type : Logical
Dimension : 0
Mnemo FROTTE
DEFAULT VALUE : NON
French keyword : FROTTEMENT
Yes, if one wants to include dissipation through bottom friction in the computation.

1.40 FRICTION COEFFICIENT

Type : Real
Dimension : 0
Mnemo FFON
DEFAULT VALUE : 0.
French keyword : COEFFICIENT DE FROTTEMENT

Do not confuse with the FRICTION FACTOR. Not used in ARTEMIS. It is let here for consistence with TELEMAC2D.

1.41 FRICTION FACTOR

Type : Real
Dimension : 0
Mnemo FWCOEF
DEFAULT VALUE : 0.
French keyword : FACTEUR DE FROTTEMENT

Used with the option FRICTION FACTOR IMPOSED = YES. Fixes the value of the friction factor uniform over the domain.

1.42 FRICTION FACTOR IMPOSED

Type : Logical
Dimension : 0
Mnemo ENTFW
DEFAULT VALUE : NON
French keyword : FACTEUR DE FROTTEMENT IMPOSE

Used with the option FRICTION = YES. Yes, enables the user to impose a friction factor, by a key-word for a constant value (see real of index 29) or by programming in the FWSPEC subroutine for non-uniform value. If Not, ARTEMIS automatically computes the friction factor assuming that the bottom is sandy and uses the characteristics of sediment and of motion.

1.43 GAMMA

Type : Real
Dimension : 0
Mnemo GAMMA
DEFAULT VALUE : 3.3
French keyword : GAMMA

Used with otion : MONODIRECTIONAL RANDOM WAVE = YES or MULTIDIRECTIONAL RANDOM WAVE = YES Fixes the gamma value tor the JONSWAP wave energy spectrum : GAMMA = 1 : Pierson-Moskowitz GAMMA = 3.3 : mean JONSWAP spectrum (default value).

1.44 GAMMAS

Type : Real
Dimension : 0
Mnemo GAMMAS
DEFAULT VALUE : 0.88
French keyword : GAMMAS

Fixes the coefficient Gammas used in the criterion of the critical breaking wave height. Do not confuse with coefficient Gamma used in the JONSAP spectrum.

1.45 GDALLY

Type : Real
Dimension : 0
Mnemo GDALLY
DEFAULT VALUE : 0.4
French keyword : GDALLY

Fixes the Gamma coefficient used in the formulation of Dally et al., 1984, for the dissipation coefficient in surf-breaking. Do not confuse with the coefficient GAMMA used in the JONSWAP formulae and coefficient gammas used to determine the breaking wave height criterion.

1.46 GEOMETRY FILE

Type : String
Dimension : 0
Mnemo NOMGEO
DEFAULT VALUE : ”
French keyword : FICHIER DE GEOMETRIE

Name of the file which contains the computational mesh.

1.47 GEOMETRY FILE BINARY

Type : String
Dimension : 0
Mnemo BINGEO
DEFAULT VALUE : ’STD’
French keyword : BINAIRE DU FICHIER DE GEOMETRIE

Type of binary mode used for geometry file writing. It depends on the machine used for the file generation. Possible values are : - IBM : for a file created on IBM, - I3E : for a file created on HP, - STD : enables to take the default binary type associated to the machine on which the user is working. It then concerns usual READ and WRITE instructiions.

1.48 GEOMETRY FILE FORMAT

Type : String
Dimension : -1
Mnemo ART_FILES(ARTGEO)
DEFAULT VALUE : ’SERAFIN’
French keyword : FORMAT DU FICHIER DE GEOMETRIE

Geometry file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.49 GEOMETRY FILE STANDARD

Type : Integer
Dimension : 0
Mnemo STDGEO
DEFAULT VALUE : 3
French keyword : STANDARD DU FICHIER DE GEOMETRIE

Adapts the reading of the GEOMETRY FILE to the specific standard : - 1 : regular mesh on standard LEONARD - 2 : any mesh on standard RUBENS - 3 : any mesh on standard SELAFIN

1.50 GRAPHIC PRINTOUT PERIOD

Type : Integer
Dimension : 0
Mnemo LEOPRD
DEFAULT VALUE : 1
French keyword : PERIODE DE SORTIE GRAPHIQUE
Fixes the period, in number of wave periods, for the writing of the VARIABLES FOR GRAPHIC PRINTOUTS (see this key-word) in the RESULTS FILE

1.51 GRAVITY ACCELERATION

Type : Real
Dimension : 0
Mnemo GRAV
DEFAULT VALUE : 9.81
French keyword : ACCELERATION DE LA PESANTEUR
Fixes the gravity acceleration value.

1.52 HYDRAULIC REGIME IMPOSED

Type : Logical
Dimension : 0
Mnemo ENTREG
DEFAULT VALUE : NON
French keyword : REGIME HYDRAULIQUE IMPOSE
Used with the option FRICTION = YES. Enables to impose the hydraulic regime in the case of an automatic calculation of the friction factor for sandy beds.

1.53 HYDRAULIC REGIME TYPE

Type : Integer
Dimension : 0
Mnemo REGIDO
DEFAULT VALUE : 1
French keyword : TYPE DU REGIME HYDRAULIQUE
Used with option HYDRAULIC REGIME IMPOSED = YES. Determines the type of the hydraulic regime (laminar, smooth-turbulent, rough-turbulent, transient).

1.54 INFORMATIONS ABOUT SOLVER

Type : Logical
Dimension : 0
Mnemo INFORG
DEFAULT VALUE : OUI
French keyword : INFORMATIONS SUR LE SOLVEUR
Gives the iterations number which was necessary for the solver to converge.

1.55 INITIAL CONDITIONS

Type : String
Dimension : 0
Mnemo CDTINI
DEFAULT VALUE : 'ZERO ELEVATION'
French keyword : CONDITIONS INITIALES

Enables to define the initial conditions on water depths. Allowable values are : - ZERO ELEVATION : fixes the free surface level to 0. Water depths are then equal to the difference between free surface level and bottom level. - CONSTANT ELEVATION : fixes the free surface level to the value specified by the key-word INITIAL WATER LEVEL. Water level are then computed as before. - ZERO DEPTH : initializes the water depths to 0. - CONSTANT DEPTH : initializes the water depths to the value specified by the key-word INITIAL DEPTH. - SPECIAL : initial conditions on water depths are to be precised in the sub-routine CONDIH.

1.56 INITIAL DEPTH

Type : Real
Dimension : 0
Mnemo HAUTIN
DEFAULT VALUE : 0.
French keyword : HAUTEUR INITIALE

Value specified when using the option : INITIAL CONDITIONS : CONSTANT DEPTH.

1.57 INITIAL WATER LEVEL

Type : Real
Dimension : 0
Mnemo COTINI
DEFAULT VALUE : 0.
French keyword : COTE INITIALE

Used with the option INITIAL CONDITIONS : CONSTANT ELEVATION.

1.58 INSTANT FOR READING TOMAWAC SPECTRUM

Type : Real
Dimension : 0
Mnemo TPSTWC
DEFAULT VALUE : 0.
French keyword : INSTANT DE LECTURE DU SPECTRE TOMAWAC

Give the instant of the TOMAWAC computation at which we want to import the spectrum for ARTEMIS

1.59 KDALLY

Type : Real
Dimension : 0
Mnemo KDALLY
DEFAULT VALUE : 0.1
French keyword : KDALLY

Fixes the coefficient K used in the formulation of the dissipation coefficient proposed by Dally et al. 1984.

1.60 LAW OF BOTTOM FRICTION

Type :	Integer
Dimension :	0
Mnemo	KFROT
DEFAULT VALUE :	0
French keyword :	`LOI DE FROTTEMENT SUR LE FOND`

Not used in ARTEMIS. It is kept for consistence with TELEMAC2D

1.61 LIBRARIES

Type :	String
Dimension :	0
Mnemo	
DEFAULT VALUE :	'artemis,telemac,util,damo,bief,hp'
French keyword :	`BIBLIOTHEQUES`

Set of libraries required for an ARTEMIS computation.

1.62 LIST OF FILES

Type :	String
Dimension :	15
Mnemo	
DEFAULT VALUE :	'STEERING FILE; DICTIONARY; FORTRAN FILE; GEOMETRY FILE; BOUNDARY CONDITIONS FILE; RESULTS FILE; BOTTOM TOPOGRAPHY FILE; BINARY DATA FILE 1; BINARY DATA FILE 2; FORMATTED DATA FILE 1; FORMATTED DATA FILE 2; BINARY RESULTS FILE; FORMATTED RESULTS FILE; REFERENCE FILE; TOMAWAC DATA FILE 1'
French keyword :	`LISTE DES FICHIERS`

List of files

1.63 LISTING PRINTOUT

Type :	Logical
Dimension :	0
Mnemo	LISTIN
DEFAULT VALUE :	OUI
French keyword :	`SORTIE LISTING`

If NOT is specified for this key-word, the printout listing just contains the head and the sentence END OF PROGRAM. It is adviced not to use this way.

1.64 LISTING PRINTOUT PERIOD

Type : Integer
Dimension : 0
Mnemo LISPRD
DEFAULT VALUE : 1
French keyword : PERIODE DE SORTIE LISTING
Fixes the period, in number of wave periods, for the writing of the VARIABLES TO BE PRINTED (see this key-word)

1.65 MATRIX STORAGE

Type : Integer
Dimension : 0
Mnemo OPTASS
DEFAULT VALUE : 3
French keyword : STOCKAGE DES MATRICES
1 : classical EBE 2 : assembled EBE 3 : edge by edge beware, with option 2, a special numbering of points is required

1.66 MATRIX-VECTOR PRODUCT

Type : Integer
Dimension : 0
Mnemo PRODUC
DEFAULT VALUE : 1
French keyword : PRODUIT MATRICE-VECTEUR
1 : Classical Product 2 : New Frontal Product

1.67 MAXIMUM ANGLE OF PROPAGATION

Type : Real
Dimension : 0
Mnemo TETMAX
DEFAULT VALUE : 180.
French keyword : ANGLE MAXIMUM DE PROPAGATION
Used with the option : MULTIDIRECTIONAL RANDOM WAVE = YES Fixes the maximum value (in deg) of the directions range. It is counted positively in the trigonometric sense relatively to the x axis.

1.68 MAXIMUM NUMBER OF ITERATIONS FOR SOLVER

Type : Integer
Dimension : 0
Mnemo NITMAX
DEFAULT VALUE : 60000
French keyword : MAXIMUM D'ITERATIONS POUR LE SOLVEUR
Algorithms used for solving the matrix system are iterative. It is then necessary to limit the maximum number of iterations

1.69 MAXIMUM OF SUB-ITERATIONS

Type :	Integer
Dimension :	0
Mnemo	NITDIS
DEFAULT VALUE :	15
French keyword :	MAXIMUM DE SOUS-ITERATIONS

Fixes the maximum number of sub-iterations for the computation of dissipation.

1.70 MAXIMUM OF SUB-ITERATIONS FOR TETAP

Type :	Integer
Dimension :	0
Mnemo	NITTP
DEFAULT VALUE :	15
French keyword :	MAXIMUM DE SOUS-ITERATIONS POUR TETAP

Fixes the maximum number of sub-iterations for the automatic computation of tetap

1.71 MAXIMUM SPECTRAL PERIOD

Type :	Real
Dimension :	0
Mnemo	PMAX
DEFAULT VALUE :	200.
French keyword :	PERIODE MAXIMUM DU SPECTRE

Maximum period value requested in seconds if it is necessary to alter the energy spectrum for the computation of the periods in the case of random waves (see PERALE).

1.72 MEMORY SPACE

Type :	String
Dimension :	0
Mnemo	
DEFAULT VALUE :	'1500000W'
French keyword :	PLACE MEMOIRE CRAY

Memory space (in words of 8 bytes) reserved for a computation on CRAY.

1.73 MINIMUM ANGLE OF PROPAGATION

Type :	Real
Dimension :	0
Mnemo	TETMIN
DEFAULT VALUE :	-180.
French keyword :	ANGLE MINIMUM DE PROPAGATION

Used with the option : MULTIDIRECTIONAL RANDOM WAVE = YES Fixes the minimum value (in deg) of the directions range. It is counted positively in the trigonometric sense relatively to the x axis.

1.74 MINIMUM SPECTRAL PERIOD

Type : Real
Dimension : 0
Mnemo PMIN
DEFAULT VALUE : 0.02
French keyword : PERIODE MINIMUM DU SPECTRE
Minimum period value requested in seconds if it is necessary to alter the energy spectrum for the computation of the periods in the case of random waves (see PERALE).

1.75 MINIMUM VALUE FOR H

Type : Real
Dimension : 0
Mnemo HMIN
DEFAULT VALUE : 1.E-7
French keyword : VALEUR MINIMUM DE H
Fixes the minimum value of H Non active at the moment.

1.76 MONODIRECTIONAL RANDOM WAVE

Type : Logical
Dimension : 0
Mnemo ALEMON
DEFAULT VALUE : NON
French keyword : HOULE ALEATOIRE MONODIRECTIONNELLE
Yes, if one wants to run computation in random monodirectional waves (see reals key-words of index 12, 13 and integer of index 10).

1.77 MULTIDIRECTIONAL RANDOM WAVE

Type : Logical
Dimension : 0
Mnemo ALEMUL
DEFAULT VALUE : NON
French keyword : HOULE ALEATOIRE MULTIDIRECTIONNELLE
Yes, if one wants to run computation in random multidirectional waves (see reals key-words of index 12, 13 and integer of index 10).

1.78 NUMBER OF DIRECTIONS

Type : Integer
Dimension : 0
Mnemo NDALE
DEFAULT VALUE : 5
French keyword : NOMBRE DE DIRECTIONS DE DISCRETISATION
Used with the option : MULTIDIRECTIONAL RANDOM WAVE = YES It fixes the number of iso-energy bands which discretizes the wave directional spectrum.

1.79 NUMBER OF DIRECTIONS IN TOMAWAC SPECTRUM

Type : Integer
Dimension : 0
Mnemo NDTWC
DEFAULT VALUE : 0
French keyword : NOMBRE DE DIRECTION DANS LE SPECTRE TOMAWAC
Give the number of direction in the TOMAWAC imported spectrum

1.80 NUMBER OF FREQUENCIES IN TOMAWAC SPECTRUM

Type : Integer
Dimension : 0
Mnemo NFTWC
DEFAULT VALUE : 0
French keyword : NOMBRE DE FREQUENCES DANS LE SPECTRE TOMAWAC
Give the number of frequences in the TOMAWAC imported spectrum

1.81 NUMBER OF PERIODS

Type : Integer
Dimension : 0
Mnemo NPALE
DEFAULT VALUE : 5
French keyword : NOMBRE DE PERIODES DE DISCRETISATION
Used with otion : MONODIRECTIONAL RANDOM WAVE = YES or MULTIDIRECTIONAL RANDOM WAVE = YES It fixes the number of iso-energy frequency bands which discretize the enrgy spectrum.

1.82 NUMBER OF PRIVATE VARIABLES

Type : Integer
Dimension : 0
Mnemo NPRIV
DEFAULT VALUE : 0
French keyword : NOMBRE DE VARIABLES PRIVEES
Give the number of private variables

1.83 ORIGIN COORDINATES

Type : Integer
Dimension : 2
Mnemo I_ORIG,J_ORIG
DEFAULT VALUE : 0;0
French keyword : COORDONNEES DE L'ORIGINE
Value in metres, used to avoid large real numbers, added in Selafin format, but so far no other treatment

1.84 ORIGINAL DATE OF TIME

Type : Integer
Dimension : 3
Mnemo MARDAT
DEFAULT VALUE : 0;0;0
French keyword : DATE DE L'ORIGINE DES TEMPS
Give the date of the time origin of the model when taking into account the tide generating force.

1.85 ORIGINAL HOUR OF TIME

Type : Integer
Dimension : 3
Mnemo MARTIM
DEFAULT VALUE : 0;0;0
French keyword : HEURE DE L'ORIGINE DES TEMPS
Give the time of the time origin of the model when taking into account the tide generating force.

1.86 PARALLEL PROCESSORS

Type : Integer
Dimension : 0
Mnemo NCSIZE
DEFAULT VALUE : 0
French keyword : PROCESSEURS PARALLELES
NUMBER OF PROCESSORS FOR PARALLEL PROCESSING 0 : 1 machine, compiling without parallel library 1 : 1 machine, compiling with a parallel library 2 : 2 processors or machines in parallel etc....

1.87 PARTITIONING TOOL

Type : String
Dimension : -1
Mnemo
DEFAULT VALUE : 'METIS'
French keyword : PARTITIONNEUR
PARTITIONING TOOL SELECTION 1 : METIS 2 : SCOTCH 3 : PARMETIS 4 : PTSCOTCH etc...

1.88 PASSWORD

Type : String
Dimension : 0
Mnemo
DEFAULT VALUE : ''
French keyword : MOT DE PASSE CRAY
Password associated to the CRAY Userid.

1.89 PEAK PERIOD

Type : Real
Dimension : 0
Mnemo PERPIC
DEFAULT VALUE : 10.0
French keyword : PERIODE DE PIC
Used with otion : MONODIRECTIONAL RANDOM WAVE = YES or MULTIDIRECTIONAL RANDOM WAVE = YES Fixes the peak period (in sec) of the energy spectrum

1.90 PERIOD SCANNING

Type : Logical
Dimension : 0
Mnemo BALAYE
DEFAULT VALUE : NON
French keyword : BALAYAGE EN PERIODE
Yes, if one wants to run computations by scanning a period range (resonance computations, see also reals of index 8, 9, and 10).

1.91 PHASE REFERENCE COORDINATES

Type : Real
Dimension : 2
Mnemo X_PHREF,Y_PHREF
DEFAULT VALUE : 0;0
French keyword : COORDONNEES DE REFERENCE POUR LA PHASE
Coordinates of reference point for phase.Will not change the wave height computed

1.92 PRECONDITIONING

Type : Integer
Dimension : 0
Mnemo IPRECO
DEFAULT VALUE : 2
French keyword : PRECONDITIONNEMENT
Enables to apply preconditionning the matrix system to accelerate the convergence of the solver. - 0 : no preconditionning - 2 : diagonal preconditionning - 3 : block-diagonal preconditionning - 5 : diagonal preconditionning in absolute value - 7 : Element Crout preconditionning. Few of them can be combined (numbers 2 or 3 with the other) To combine some preconditionning, impose the product of the previous numbers : example 6 means preconditionnig 2 and 3 applied.

1.93 PRIORITY

Type : String
Dimension : 0
Mnemo
DEFAULT VALUE : 'JOUR'
French keyword : PRIORITE
Type of invoice requested for CRAY computation : there are 3 possibilities : jour, nuit, and weekend.

1.94 RAPIDLY VARYING TOPOGRAPHY

Type : Integer
Dimension : 0
Mnemo IPENTCO
DEFAULT VALUE : 0
French keyword : VARIATION RAPIDE DE LA BATHYMETRIE
EXTENSION OF MILD-SLOPE EQUATION WITH SECOND ORDER BOTTOM EFFECTS 0=> MILD-SLOPE EQUATION 1=> GRADIENT SECOND ORDER TERM : grad(H) **2 2=> CURVATURE SECOND ORDER TERM : laplacian(H) 3=> GRADIENT + CURVATURE SECOND ORDER TERMS Model used for functions E1 and E2 expression : Chamberlain et Porter 1995

1.95 REFERENCE FILE

Type : String
Dimension : -1
Mnemo NOMREF
DEFAULT VALUE : ”
French keyword : FICHIER DE REFERENCE
Binary-coded result file for validation. The results to be entered into this file shall be written on channel

1.96 REFERENCE FILE FORMAT

Type : String
Dimension : -1
Mnemo ?????
DEFAULT VALUE : ’SERAFIN’
French keyword : FORMAT DU FICHIER DE REFERENCE
Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.97 REFERENCE WATER DEPTH FOR AUTOMATIC PHASE

Type : Real
Dimension : 0
Mnemo DEPREF
DEFAULT VALUE : -1.0
French keyword : PROFONDEUR DE REFERENCE POUR LA PHASE AUTOMATIQUE
WATER DEPTH FOR AUTOMATIC INCIDENT PHASE CALCULATION. TRY TO PUT THE INCIDENT WAVE BOUNDARY ON A REGULAR TOPOGRAPHY ZONE. THE REFERENCE WATER DEPTH SHOULD BE REPRESENTATIVE OF THE WATER DEPTH ON THE BOUNDARY

1.98 RELAXATION COEFFICIENT

Type : Real
Dimension : 0
Mnemo
DEFAULT VALUE : 1.4
French keyword : COEFFICIENT DE RELAXATION

TODO: WRITE HELP FOR THAT KEYWORD

1.99 RELAXATION ON TETAP

Type : Real
Dimension : 0
Mnemo RELTP
DEFAULT VALUE : 1.
French keyword : `RELAXATION SUR TETAP`

Fixes the relaxation coefficient used between two sub-iterations for the computation of automatic tetap.

1.100 RELEASE

Type : String
Dimension : 0
Mnemo
DEFAULT VALUE : 'V7P2'
French keyword : `NUMERO DE VERSION`

Number of the release of the ARTEMIS TELEMAC2D UTILE DAMO BIEF and HP libraries. If this number begins by D, it corresponds to the Debug option (example : DV3P0). If this number begins by F, it corresponds to the Flowtrace option.

1.101 RESULTS FILE

Type : String
Dimension : 0
Mnemo NOMRES
DEFAULT VALUE : ''
French keyword : `FICHIER DES RESULTATS`

Name of the results file corresponding to the computations and which contains the variables specified by the key-word VARIABLES FOR GRAPHIC PRINTOUTS.

1.102 RESULTS FILE BINARY

Type : String
Dimension : 0
Mnemo BINRES
DEFAULT VALUE : 'STD'
French keyword : `BINAIRE DU FICHIER DES RESULTATS`

Binary type used to write on the results file. This type depends on the machine used to create this file. Allowed values are the same as used for the geometry file.

1.103 RESULTS FILE FORMAT

Type : String
Dimension : -1
Mnemo ?????
DEFAULT VALUE : 'SERAFIN'
French keyword : `FORMAT DU FICHIER DE RESULTATS`

Results file format. Possible values are: - SERAFIN : classical single precision format in

Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.104 RESULTS FILE STANDARD

Type : Integer
Dimension : 0
Mnemo STDRES
DEFAULT VALUE : 3
French keyword : STANDARD DU FICHIER DES RESULTATS
Specific standard of the results file : - 1 : regular mesh on standard LEONARD - 2 : any mesh on standard RUBENS - 3 : any mesh on standard SELAFIN

1.105 RIPPLES COEFFICIENT

Type : Real
Dimension : 0
Mnemo RICOEF
DEFAULT VALUE : 0.7
French keyword : COEFFICIENT DE RIDES
Fixes the ripples coefficient used in the formulae of Van Rijn to calculate the friction factor.

1.106 S EXPONENT

Type : Real
Dimension : 0
Mnemo EXPOS
DEFAULT VALUE : 20.
French keyword : EXPOSANT S
Used with the option : MULTIDIRECTIONAL RANDOM WAVE = YES Fixes the maximum value of exponent S in the Goda formula used to express the directional wave energy spreading. See GODA Y., Random Seas and Design of Maritime Structures - Univ. of Tokyo Press, 1987.

1.107 SEDIMENT SPECIFIC WEIGHT

Type : Real
Dimension : 0
Mnemo MVSED
DEFAULT VALUE : 2650.0
French keyword : MASSE VOLUMIQUE DU SEDIMENT
Sediment specific weight in Kg/m3.

1.108 SKIN ROUGHNESS ONLY

Type : Logical
Dimension : 0
Mnemo ENTRUG
DEFAULT VALUE : NON
French keyword : RUGOSITE DE PEAU SEULE
Used with the option FRICTION = YES. Enables to restrict the total roughness to the skin roughnes in the case of an automatic calculation of the friction factor for sandy beds.

1.109 SOLVER

Type :	Integer
Dimension :	0
Mnemo	ISOLVE
DEFAULT VALUE :	8
French keyword :	SOLVEUR

Enables to choose the solver used for solving the matrix system. They are : 1 : conjugate gradient 2 : conjugate residual 3 : conjugate gradient on the normal equation 4 : minimum error 5 : squarred conjugate gradient (not programmed) 6 : CGSTAB conjugate gradient 7 : GMRES 8 : direct solver

1.110 SOLVER ACCURACY

Type :	Real
Dimension :	0
Mnemo	EPSI
DEFAULT VALUE :	1.E-4
French keyword :	PRECISION DU SOLVEUR

Accuracy requested for the linear system solver.

1.111 SOLVER OPTION

Type :	Integer
Dimension :	0
Mnemo	ISOLVE
DEFAULT VALUE :	3
French keyword :	OPTION DU SOLVEUR

Defines the dimension of the Krylov space when using the solver 7 (GMRES)

1.112 STEERING FILE

Type :	String
Dimension :	0
Mnemo	NOMCAS
DEFAULT VALUE :	”
French keyword :	FICHIER DES PARAMETRES

Name of the steering file used for the computation.

1.113 STEP FOR PERIOD SCANNING

Type :	Real
Dimension :	0
Mnemo	PERPAS
DEFAULT VALUE :	0.
French keyword :	PAS POUR LE BALAYAGE EN PERIODE

Used with the option : PERIOD SCANNING = YES Fixes the value of the period step (in sec) to be used for the period scanning.

1.114 SUB-ITERATIONS ACCURACY FOR CURRENT

Type : Real
Dimension : 0
Mnemo EPSDIR
DEFAULT VALUE : 1.E-2
French keyword : PRECISION SUR LES SOUS-ITERATIONS POUR COURANT
Fixes the accuracy requested for sub-iterations necessary to determine the wave vector.

1.115 SUB-ITERATIONS ACCURACY FOR DISSIPATION

Type : Real
Dimension : 0
Mnemo EPSDIS
DEFAULT VALUE : 1.E-2
French keyword : PRECISION SUR LES SOUS-ITERATIONS POUR LA DISSIPATION
Fixes the accuracy requested for sub-iterations necessary to determine the dissipation coefficients.

1.116 SUB-ITERATIONS ACCURACY FOR TETAP

Type : Real
Dimension : 0
Mnemo EPSTP
DEFAULT VALUE : 1.E-2
French keyword : PRECISION SUR LES SOUS-ITERATIONS POUR TETAP
Fixes the accuracy requested for sub-iterations necessary to determine value of TETAP (criterion on cos(TETAP).

1.117 TITLE

Type : String
Dimension : 0
Mnemo TITCAS
DEFAULT VALUE : 'NO TITLE IN THE STEERING FILE'
French keyword : TITRE
Title of the studied case.

1.118 TOMAWAC DATA FILE 1

Type : String
Dimension : 0
Mnemo NOMTC1
DEFAULT VALUE : ''
French keyword : FICHIER DE DONNEES TOMAWAC 1
Data file, written in binary mode, given a tomawac spectrum. Data of this file must be read on unit 30.

1.119 TOMAWAC DATA FILE 1 FORMAT

Type :	String
Dimension :	-1
Mnemo	ART_FILES(ARTTC1)
DEFAULT VALUE :	'SERAFIN'
French keyword :	FORMAT DU FICHIER DE DONNEES TOMAWAC 1

Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

1.120 USER CRAY

Type :	String
Dimension :	0
Mnemo	
DEFAULT VALUE :	''
French keyword :	USER CRAY

Userid CRAY of the user.

1.121 VALIDATION

Type :	Logical
Dimension :	0
Mnemo	VALID
DEFAULT VALUE :	NO
French keyword :	VALIDATION

This option is primarily used for the validation documents. The PREVIOUS COMPUTATION FILE is then considered as a reference which the computation is going to be compared with. The comparison is made by the subroutine VALIDA, which can be modified as to so as to include, for example,a comparison with an exact solution.

1.122 VARIABLES FOR GRAPHIC PRINTOUTS

Type :	String
Dimension :	0
Mnemo	SORTIE
DEFAULT VALUE :	'HS,PHAS,ZS,ZF'
French keyword :	VARIABLES POUR LES SORTIES GRAPHIQUES

Names of the variables that the user wants to write in the results file. Separators between variable names can be choosen free. The allowable values are : - HS=wave height - PHAS=wave phase - U0=velocity u (free surface at t=0) - V0=velocity v (free surface at t=0) - ZS=free surface elevation (at t=0) - ZF=bottom elevation - HW=still water height - C=phase velocity - CG=group velocity - K=wave number - PHIR=real potential - PHII=imaginal potential - D=prive(1,1) - E=prive(1,2) - F=prive(1,3) - G=prive(1,4) - T01=first mean spectral period - T02=second mean spectral period - TM=third mean spectral period - FX=force along X - FY=force along Y - INC=wave incidence radian - QB=breaking rate - SXX=SXX stress - SXY=SXY stress - SYY=SYY stress The user has 4 free variables at his/her disposal to create other variables by him/herself. These variables have to be computed in the CALRES subroutine, and the name that we want to attribute has to be precibed in the NOMVAR sub-routine. The 4 free variable fields are : - D, E, F, G which corresponds to the private arrays PRIVE(1,1),

PRIVE(1,2), PRIVE(1,3) and PRIVE (1,4). Contrarily to the previous variables, these are conserved all through the computation, and can be used again. Do not forget to specify the number of private arrays you want to use in the principal programme (variable NPRIV).

1.123 VARIABLES TO BE PRINTED

Type : String
Dimension : 0
Mnemo VARIMP
DEFAULT VALUE : ”
French keyword : VARIABLES A IMPRIMER

Name of variables taht the user whishes to write on the screen. Possibilities are the same as for graphic outputs.

1.124 VECTOR LENGTH

Type : Integer
Dimension : 0
Mnemo LVMAC
DEFAULT VALUE : 1
French keyword : LONGUEUR DU VECTEUR

VECTOR LENGTH ON VECTOR MACHINES

1.125 WAVE HEIGHTS SMOOTHING

Type : Logical
Dimension : 0
Mnemo LISHOU
DEFAULT VALUE : NON
French keyword : LISSAGE DES HAUTEURS DE HOULE

YES when one wants to smooth the wave heights to improve the radiation stresses computation (only used in regular wave mode). Default value = NO.

1.126 WAVE PERIOD

Type : Real
Dimension : 0
Mnemo PER
DEFAULT VALUE : 10.
French keyword : PERIODE DE LA HOULE

Defines the wave period for monochromatic mode.

1.127 ZERO

Type : Real
Dimension : 0
Mnemo ZERO
DEFAULT VALUE : 1.E-12
French keyword : ZERO

Non active at the moment.

2. List of keywords classified according to type

2.1 BOTTOM FRICTION

BOTTOM FRICTION LAW
DIAMETER50
DIAMETER90
FLUID KINEMATIC VISCOSITY
FLUID SPECIFIC MASS
FRICTION
FRICTION COEFFICIENT
FRICTION FACTOR
FRICTION FACTOR IMPOSED
HYDRAULIC REGIME IMPOSED
HYDRAULIC REGIME TYPE
LAW OF BOTTOM FRICTION
RIPPLES COEFFICIENT
SEDIMENT SPECIFIC WEIGHT
SKIN ROUGHNESS ONLY

2.2 BREAKING

ALPHA
BREAKING
BREAKING LAW
GDALLY
KDALLY

2.3 CHAINING

CHAINING TOMAWAC 1
INSTANT FOR READING TOMAWAC SPECTRUM
NUMBER OF DIRECTIONS IN TOMAWAC SPECTRUM
NUMBER OF FREQUENCIES IN TOMAWAC SPECTRUM

2.4 COMPUTATION ENVIRONMENT

ACCOUNT NUMBER
CPU TIME
DICTIONARY
LIBRARIES
MEMORY SPACE
PASSWORD
PRIORITY
USER CRAY
VECTOR LENGTH

2.5 COMPUTATIONAL INFORMATION

DEFAULT EXECUTABLE
DEFAULT PARALLEL EXECUTABLE
DESCRIPTION DES LIBRARIES
RELEASE
TITLE

2.6 CONTROL

ORIGIN COORDINATES

2.7 CURRENT

CURRENT
SUB-ITERATIONS ACCURACY FOR CURRENT

2.8 DISSIPATION

ALPHA
BOTTOM FRICTION LAW
BREAKING
BREAKING LAW
DIAMETER50
DIAMETER90
DISSIPATION RELAXATION
FLUID KINEMATIC VISCOSITY
FLUID SPECIFIC MASS
FRICTION
FRICTION COEFFICIENT
FRICTION FACTOR
FRICTION FACTOR IMPOSED
GAMMAS
GDALLY
HYDRAULIC REGIME IMPOSED

HYDRAULIC REGIME TYPE
KDALLY
LAW OF BOTTOM FRICTION
MAXIMUM OF SUB-ITERATIONS
MAXIMUM OF SUB-ITERATIONS FOR TETAP
RELAXATION ON TETAP
RIPPLES COEFFICIENT
SEDIMENT SPECIFIC WEIGHT
SKIN ROUGHNESS ONLY
SUB-ITERATIONS ACCURACY FOR DISSIPATION

2.9 DONNEES

BEGINNING PERIOD FOR PERIOD SCANNING
ENDING PERIOD FOR PERIOD SCANNING
MAXIMUM ANGLE OF PROPAGATION
MINIMUM ANGLE OF PROPAGATION
NUMBER OF DIRECTIONS
S EXPONENT
STEP FOR PERIOD SCANNING

2.10 EQUATIONS,SMOOTHINGS

BOTTOM TOPOGRAPHY SMOOTHING

2.11 FORMULATION

BOTTOM FRICTION LAW
BREAKING LAW

2.12 FORMULATION DE BATTJES

ALPHA

2.13 FORMULATION OF DALLY

GDALLY
KDALLY

2.14 FORMULATION OF FW

FRICTION FACTOR
FRICTION FACTOR IMPOSED

2.15 FORMULATION OF REGIME

HYDRAULIC REGIME IMPOSED
HYDRAULIC REGIME TYPE

2.16 FORMULATION OF RUGOSITE

SKIN ROUGHNESS ONLY

2.17 GENERAL

CHECKING THE MESH
ORIGINAL DATE OF TIME
PARTITIONING TOOL

2.18 INCIDENT WAVE PHASE

AUTOMATIC CALCULATION OF PHASE

2.19 INFORMATION

BIDON STRING
DIAMETER50
DIAMETER90
DIRECTION OF WAVE PROPAGATION
DISCRETIZATION IN SPACE
DISSIPATION RELAXATION
FLUID KINEMATIC VISCOSITY
FLUID SPECIFIC MASS
MAXIMUM OF SUB-ITERATIONS
MAXIMUM OF SUB-ITERATIONS FOR TETAP
MINIMUM VALUE FOR H
ORIGINAL HOUR OF TIME
PHASE REFERENCE COORDINATES
RELAXATION ON TETAP
RIPPLES COEFFICIENT
SEDIMENT SPECIFIC WEIGHT
SUB-ITERATIONS ACCURACY FOR CURRENT
SUB-ITERATIONS ACCURACY FOR DISSIPATION
SUB-ITERATIONS ACCURACY FOR TETAP
WAVE PERIOD
ZERO

2.20 INFORMATION,SOLVER

INFORMATIONS ABOUT SOLVER
LISTING PRINTOUT
RELAXATION COEFFICIENT
VALIDATION

2.21 INITIAL CONDITIONS EQUATIONS

INITIAL CONDITIONS
INITIAL DEPTH
INITIAL WATER LEVEL

2.22 INPUT-OUTPUT, FILES

BINARY DATA FILE 1 FORMAT
BINARY DATA FILE 2 FORMAT
GEOMETRY FILE FORMAT
REFERENCE FILE FORMAT
RESULTS FILE FORMAT
TOMAWAC DATA FILE 1 FORMAT

2.23 INPUT-OUTPUT, INFORMATION

DEFAULT EXECUTABLE
DEFAULT PARALLEL EXECUTABLE
DESCRIPTION DES LIBRARIES
DICTIONARY
ORIGIN COORDINATES

2.24 INPUT-OUTPUT,FILES

BINARY DATA FILE 1
BINARY DATA FILE 2
BINARY RESULTS FILE
BOTTOM TOPOGRAPHY FILE
BOUNDARY CONDITIONS FILE
FORMATTED DATA FILE 1
FORMATTED DATA FILE 2
FORMATTED RESULTS FILE
FORTRAN FILE
GEOMETRY FILE
GEOMETRY FILE BINARY
GEOMETRY FILE STANDARD
LIST OF FILES
REFERENCE FILE
RESULTS FILE

RESULTS FILE BINARY
RESULTS FILE STANDARD
STEERING FILE
TOMAWAC DATA FILE 1

2.25 INPUT-OUTPUT,GRAPHICS AND LISTING

GRAPHIC PRINTOUT PERIOD
INFORMATIONS ABOUT SOLVER
LISTING PRINTOUT
LISTING PRINTOUT PERIOD
RELAXATION COEFFICIENT
VALIDATION
WAVE HEIGHTS SMOOTHING

2.26 INPUT-OUTPUT,INFORMATION

ACCOUNT NUMBER
CPU TIME
LIBRARIES
MEMORY SPACE
PASSWORD
PRIORITY
RELEASE
TITLE
USER CRAY
VECTOR LENGTH

2.27 MONODIRECTIONAL RANDOM WAVE

MONODIRECTIONAL RANDOM WAVE

2.28 MULTIDIRECTIONAL RANDOM WAVE

MAXIMUM ANGLE OF PROPAGATION
MINIMUM ANGLE OF PROPAGATION
MULTIDIRECTIONAL RANDOM WAVE
NUMBER OF DIRECTIONS
S EXPONENT

2.29 NAMES

BINARY DATA FILE 1
BINARY DATA FILE 2
BINARY RESULTS FILE

BOTTOM TOPOGRAPHY FILE
BOUNDARY CONDITIONS FILE
FORMATTED DATA FILE 1
FORMATTED DATA FILE 2
FORMATTED RESULTS FILE
FORTRAN FILE
GEOMETRY FILE
LIST OF FILES
REFERENCE FILE
RESULTS FILE
STEERING FILE
TOMAWAC DATA FILE 1

2.30 NUMERICAL PARAMETERS

DEBUGGER
MATRIX STORAGE
MATRIX-VECTOR PRODUCT
NUMBER OF PRIVATE VARIABLES
ORIGINAL DATE OF TIME
PARALLEL PROCESSORS
PARTITIONING TOOL

2.31 NUMERICAL PARAMETERS,SOLVER

BIDON STRING
DISCRETIZATION IN SPACE
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER
PRECONDITIONING
SOLVER
SOLVER ACCURACY
SOLVER OPTION
ZERO

2.32 PERIOD SCANNING

BEGINNING PERIOD FOR PERIOD SCANNING
ENDING PERIOD FOR PERIOD SCANNING
PERIOD SCANNING
STEP FOR PERIOD SCANNING

2.33 PHASE

AUTOMATIC CALCULATION OF PHASE

2.34 PHASE DEFINITION

PHASE REFERENCE COORDINATES
REFERENCE WATER DEPTH FOR AUTOMATIC PHASE

2.35 PHYSICAL CONSTANTS

GRAVITY ACCELERATION

2.36 PHYSICAL PARAMETERS

BEGINNING PERIOD FOR PERIOD SCANNING
DIRECTION OF WAVE PROPAGATION
ENDING PERIOD FOR PERIOD SCANNING
GAMMA
MAXIMUM ANGLE OF PROPAGATION
MAXIMUM SPECTRAL PERIOD
MINIMUM ANGLE OF PROPAGATION
MINIMUM SPECTRAL PERIOD
MINIMUM VALUE FOR H
MONODIRECTIONAL RANDOM WAVE
MULTIDIRECTIONAL RANDOM WAVE
NUMBER OF DIRECTIONS
NUMBER OF PERIODS
ORIGINAL HOUR OF TIME
PEAK PERIOD
PERIOD SCANNING
S EXPONENT
STEP FOR PERIOD SCANNING
WAVE PERIOD

2.37 RANDOM WAVE

GAMMA
MAXIMUM SPECTRAL PERIOD
MINIMUM SPECTRAL PERIOD
NUMBER OF PERIODS
PEAK PERIOD

2.38 REFERENCE WATER DEPTH

REFERENCE WATER DEPTH FOR AUTOMATIC PHASE

2.39 REFLEXION ANGLE

AUTOMATIC TETAP CALCULATION

2.40 RESULTS

VARIABLES FOR GRAPHIC PRINTOUTS
VARIABLES TO BE PRINTED

2.41 STANDARD

GEOMETRY FILE STANDARD
RESULTS FILE STANDARD

2.42 TETAP

AUTOMATIC TETAP CALCULATION

2.43 TETAP CONVERGENCE

SUB-ITERATIONS ACCURACY FOR TETAP

2.44 TOMAWAC

CHAINING TOMAWAC 1
INSTANT FOR READING TOMAWAC SPECTRUM
NUMBER OF DIRECTIONS IN TOMAWAC SPECTRUM
NUMBER OF FREQUENCIES IN TOMAWAC SPECTRUM

2.45 TOPOGRAPHY EFFECTS,EXTENDED MILD-SLOPE EQUATION

RAPIDLY VARYING TOPOGRAPHY

2.46 TYPE OF BINARY

GEOMETRY FILE BINARY
RESULTS FILE BINARY

3. Glossary

3.1 English/French glossary

ACCOUNT NUMBER	NUMERO DE COMPTE
ALPHA	ALPHA
AUTOMATIC CALCULATION OF PHASE	CALCUL AUTOMATIQUE DE LA PHASE
AUTOMATIC TETAP CALCULATION	CALCUL AUTOMATIQUE DE TETAP
BEGINNING PERIOD FOR PERIOD SCANNING	PERIODE DE DEBUT POUR LE BALAYAGE EN PERIODE
BIDON STRING	CHAINE BIDON
BINARY DATA FILE 1	FICHIER DE DONNEES BINAIRE 1
BINARY DATA FILE 1 FORMAT	FORMAT DU FICHIER DE DONNEES BINAIRE 1
BINARY DATA FILE 2	FICHIER DE DONNEES BINAIRE 2
BINARY DATA FILE 2 FORMAT	FORMAT DU FICHIER DE DONNEES BINAIRE 2
BINARY RESULTS FILE	FICHIER DES RESULTATS BINAIRE
BOTTOM FRICTION LAW	FORMULATION DU FROTTEMENT DE FOND
BOTTOM TOPOGRAPHY FILE	FICHIER DES FONDS
BOTTOM TOPOGRAPHY SMOOTHING	LISSAGES DU FOND
BOUNDARY CONDITIONS FILE	FICHIER DES CONDITIONS AUX LIMITES
BREAKING	DEFERLEMENT
BREAKING LAW	FORMULATION DU DEFERLEMENT
CHAINING TOMAWAC 1	CHAINAGE TOMAWAC 1
CHECKING THE MESH	VERIFICATION DU MAILLAGE
CPU TIME	TEMPS MACHINE CRAY
CURRENT	COURANT
DEBUGGER	DEBUGGER
DEFAULT EXECUTABLE	EXECUTABLE PAR DEFAUT
DEFAULT PARALLEL EXECUTABLE	EXECUTABLE PARALLELE PAR DEFAUT
DESCRIPTION DES LIBRARIES	DESCRIPTION DES LIBRAIRIES
DIAMETER50	DIAMETRE50

DIAMETER90	DIAMETRE90
DICTIONARY	DICTIONNAIRE
DIRECTION OF WAVE PROPAGATION	DIRECTION DE PROPAGATION DE LA HOULE
DISCRETIZATION IN SPACE	DISCRETISATION EN ESPACE
DISSIPATION RELAXATION	RELAXATION SUR LA DISSIPATION
ENDING PERIOD FOR PERIOD SCANNING	PERIODE DE FIN POUR LE BALAYAGE EN PERIODE
FLUID KINEMATIC VISCOSITY	VISCOSITE CINEMATIQUE DU FLUIDE
FLUID SPECIFIC MASS	MASSE VOLUMIQUE DU FLUIDE
FORMATTED DATA FILE 1	FICHIER DE DONNEES FORMATE 1
FORMATTED DATA FILE 2	FICHIER DE DONNEES FORMATE 2
FORMATTED RESULTS FILE	FICHIER DES RESULTATS FORMATE
FORTRAN FILE	FICHIER FORTRAN
FRICTION	FROTTEMENT
FRICTION COEFFICIENT	COEFFICIENT DE FROTTEMENT
FRICTION FACTOR	FACTEUR DE FROTTEMENT
FRICTION FACTOR IMPOSED	FACTEUR DE FROTTEMENT IMPOSE
GAMMA	GAMMA
GAMMAS	GAMMAS
GDALLY	GDALLY
GEOMETRY FILE	FICHIER DE GEOMETRIE
GEOMETRY FILE BINARY	BINAIRE DU FICHIER DE GEOMETRIE
GEOMETRY FILE FORMAT	FORMAT DU FICHIER DE GEOMETRIE
GEOMETRY FILE STANDARD	STANDARD DU FICHIER DE GEOMETRIE
GRAPHIC PRINTOUT PERIOD	PERIODE DE SORTIE GRAPHIQUE
GRAVITY ACCELERATION	ACCELERATION DE LA PESANTEUR
HYDRAULIC REGIME IMPOSED	REGIME HYDRAULIQUE IMPOSE
HYDRAULIC REGIME TYPE	TYPE DU REGIME HYDRAULIQUE
INFORMATIONS ABOUT SOLVER	INFORMATIONS SUR LE SOLVEUR
INITIAL CONDITIONS	CONDITIONS INITIALES
INITIAL DEPTH	HAUTEUR INITIALE
INITIAL WATER LEVEL	COTE INITIALE
INSTANT FOR READING TOMAWAC SPECTRUM	INSTANT DE LECTURE DU SPECTRE TOMAWAC
KDALLY	KDALLY
LAW OF BOTTOM FRICTION	LOI DE FROTTEMENT SUR LE FOND
LIBRARIES	BIBLIOTHEQUES
LIST OF FILES	LISTE DES FICHIERS
LISTING PRINTOUT	SORTIE LISTING
LISTING PRINTOUT PERIOD	PERIODE DE SORTIE LISTING
MATRIX STORAGE	STOCKAGE DES MATRICES
MATRIX-VECTOR PRODUCT	PRODUIT MATRICE-VECTEUR
MAXIMUM ANGLE OF PROPAGATION	ANGLE MAXIMUM DE PROPAGATION
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER	MAXIMUM D'ITERATIONS POUR LE SOLVEUR

MAXIMUM OF SUB-ITERATIONS	MAXIMUM DE SOUS-ITERATIONS
MAXIMUM OF SUB-ITERATIONS FOR TETAP	MAXIMUM DE SOUS-ITERATIONS POUR TETAP
MAXIMUM SPECTRAL PERIOD	PERIODE MAXIMUM DU SPECTRE
MEMORY SPACE	PLACE MEMOIRE CRAY
MINIMUM ANGLE OF PROPAGATION	ANGLE MINIMUM DE PROPAGATION
MINIMUM SPECTRAL PERIOD	PERIODE MINIMUM DU SPECTRE
MINIMUM VALUE FOR H	VALEUR MINIMUM DE H
MONODIRECTIONAL RANDOM WAVE	HOULE ALEATOIRE MONODIRECTIONNELLE
MULTIDIRECTIONAL RANDOM WAVE	HOULE ALEATOIRE MULTIDIRECTIONNELLE
NUMBER OF DIRECTIONS	NOMBRE DE DIRECTIONS DE DISCRETISATION
NUMBER OF DIRECTIONS IN TOMAWAC SPECTRUM	NOMBRE DE DIRECTION DANS LE SPECTRE TOMAWAC
NUMBER OF FREQUENCIES IN TOMAWAC SPECTRUM	NOMBRE DE FREQUENCES DANS LE SPECTRE TOMAWAC
NUMBER OF PERIODS	NOMBRE DE PERIODES DE DISCRETISATION
NUMBER OF PRIVATE VARIABLES	NOMBRE DE VARIABLES PRIVEES
ORIGIN COORDINATES	COORDONNEES DE L'ORIGINE
ORIGINAL DATE OF TIME	DATE DE L'ORIGINE DES TEMPS
ORIGINAL HOUR OF TIME	HEURE DE L'ORIGINE DES TEMPS
PARALLEL PROCESSORS	PROCESSEURS PARALLELES
PARTITIONING TOOL	PARTITIONNEUR
PASSWORD	MOT DE PASSE CRAY
PEAK PERIOD	PERIODE DE PIC
PERIOD SCANNING	BALAYAGE EN PERIODE
PHASE REFERENCE COORDINATES	COORDONNEES DE REFERENCE POUR LA PHASE
PRECONDITIONING	PRECONDITIONNEMENT
PRIORITY	PRIORITE
RAPIDLY VARYING TOPOGRAPHY	VARIATION RAPIDE DE LA BATHYMETRIE
REFERENCE FILE	FICHIER DE REFERENCE
REFERENCE FILE FORMAT	FORMAT DU FICHIER DE REFERENCE
REFERENCE WATER DEPTH FOR AUTOMATIC PHASE	PROFONDEUR DE REFERENCE POUR LA PHASE AUTOMATIQUE
RELAXATION COEFFICIENT	COEFFICIENT DE RELAXATION
RELAXATION ON TETAP	RELAXATION SUR TETAP
RELEASE	NUMERO DE VERSION
RESULTS FILE	FICHIER DES RESULTATS
RESULTS FILE BINARY	BINAIRE DU FICHIER DES RESULTATS
RESULTS FILE FORMAT	FORMAT DU FICHIER DE RESULTATS

RESULTS FILE STANDARD	STANDARD DU FICHIER DES RESULTATS
RIPPLES COEFFICIENT	COEFFICIENT DE RIDES
S EXPONENT	EXPOSANT S
SEDIMENT SPECIFIC WEIGHT	MASSE VOLUMIQUE DU SEDIMENT
SKIN ROUGHNESS ONLY	RUGOSITE DE PEAU SEULE
SOLVER	SOLVEUR
SOLVER ACCURACY	PRECISION DU SOLVEUR
SOLVER OPTION	OPTION DU SOLVEUR
STEERING FILE	FICHIER DES PARAMETRES
STEP FOR PERIOD SCANNING	PAS POUR LE BALAYAGE EN PERIODE
SUB-ITERATIONS ACCURACY FOR CURRENT	PRECISION SUR LES SOUS-ITERATIONS POUR COURANT
SUB-ITERATIONS ACCURACY FOR DISSIPATION	PRECISION SUR LES SOUS-ITERATIONS POUR LA DISSIPATION
SUB-ITERATIONS ACCURACY FOR TETAP	PRECISION SUR LES SOUS-ITERATIONS POUR TETAP
TITLE	TITRE
TOMAWAC DATA FILE 1	FICHIER DE DONNEES TOMAWAC 1
TOMAWAC DATA FILE 1 FORMAT	FORMAT DU FICHIER DE DONNEES TOMAWAC 1
USER CRAY	USER CRAY
VALIDATION	VALIDATION
VARIABLES FOR GRAPHIC PRINTOUTS	VARIABLES POUR LES SORTIES GRAPHIQUES
VARIABLES TO BE PRINTED	VARIABLES A IMPRIMER
VECTOR LENGTH	LONGUEUR DU VECTEUR
WAVE HEIGHTS SMOOTHING	LISSAGE DES HAUTEURS DE HOULE
WAVE PERIOD	PERIODE DE LA HOULE
ZERO	ZERO

3.2 French/English glossary

ACCELERATION DE LA PESANTEUR	GRAVITY ACCELERATION
ALPHA	ALPHA
ANGLE MAXIMUM DE PROPAGATION	MAXIMUM ANGLE OF PROPAGATION
ANGLE MINIMUM DE PROPAGATION	MINIMUM ANGLE OF PROPAGATION
BALAYAGE EN PERIODE	PERIOD SCANNING
BIBLIOTHEQUES	LIBRARIES
BINAIRE DU FICHIER DE GEOMETRIE	GEOMETRY FILE BINARY
BINAIRE DU FICHIER DES RESULTATS	RESULTS FILE BINARY
CALCUL AUTOMATIQUE DE LA PHASE	AUTOMATIC CALCULATION OF PHASE
CALCUL AUTOMATIQUE DE TETAP	AUTOMATIC TETAP CALCULATION
CHAINAGE TOMAWAC 1	CHAINING TOMAWAC 1
CHAINE BIDON	BIDON STRING

COEFFICIENT DE FROTTEMENT	FRICTION COEFFICIENT
COEFFICIENT DE RELAXATION	RELAXATION COEFFICIENT
COEFFICIENT DE RIDES	RIPPLES COEFFICIENT
CONDITIONS INITIALES	INITIAL CONDITIONS
COORDONNEES DE L'ORIGINE	ORIGIN COORDINATES
COORDONNEES DE REFERENCE POUR LA PHASE	PHASE REFERENCE COORDINATES
COTE INITIALE	INITIAL WATER LEVEL
COURANT	CURRENT
DATE DE L'ORIGINE DES TEMPS	ORIGINAL DATE OF TIME
DEBUGGER	DEBUGGER
DEFERLEMENT	BREAKING
DESCRIPTION DES LIBRAIRIES	DESCRIPTION DES LIBRARIES
DIAMETRE50	DIAMETER50
DIAMETRE90	DIAMETER90
DICTIONNAIRE	DICTIONARY
DIRECTION DE PROPAGATION DE LA HOULE	DIRECTION OF WAVE PROPAGATION
DISCRETISATION EN ESPACE	DISCRETIZATION IN SPACE
EXECUTABLE PAR DEFAUT	DEFAULT EXECUTABLE
EXECUTABLE PARALLELE PAR DEFAUT	DEFAULT PARALLEL EXECUTABLE
EXPOSANT S	S EXPONENT
FACTEUR DE FROTTEMENT	FRICTION FACTOR
FACTEUR DE FROTTEMENT IMPOSE	FRICTION FACTOR IMPOSED
FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1
FICHIER DE DONNEES BINAIRE 2	BINARY DATA FILE 2
FICHIER DE DONNEES FORMATE 1	FORMATTED DATA FILE 1
FICHIER DE DONNEES FORMATE 2	FORMATTED DATA FILE 2
FICHIER DE DONNEES TOMAWAC 1	TOMAWAC DATA FILE 1
FICHIER DE GEOMETRIE	GEOMETRY FILE
FICHIER DE REFERENCE	REFERENCE FILE
FICHIER DES CONDITIONS AUX LIMITES	BOUNDARY CONDITIONS FILE
FICHIER DES FONDS	BOTTOM TOPOGRAPHY FILE
FICHIER DES PARAMETRES	STEERING FILE
FICHIER DES RESULTATS	RESULTS FILE
FICHIER DES RESULTATS BINAIRE	BINARY RESULTS FILE
FICHIER DES RESULTATS FORMATE	FORMATTED RESULTS FILE
FICHIER FORTRAN	FORTRAN FILE
FORMAT DU FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1 FORMAT
FORMAT DU FICHIER DE DONNEES BINAIRE 2	BINARY DATA FILE 2 FORMAT
FORMAT DU FICHIER DE DONNEES TOMAWAC 1	TOMAWAC DATA FILE 1 FORMAT
FORMAT DU FICHIER DE GEOMETRIE	GEOMETRY FILE FORMAT
FORMAT DU FICHIER DE REFERENCE	REFERENCE FILE FORMAT

FORMAT DU FICHIER DE RESULTATS	RESULTS FILE FORMAT
FORMULATION DU DEFERLEMENT	BREAKING LAW
FORMULATION DU FROTTEMENT DE FOND	BOTTOM FRICTION LAW
FROTTEMENT	FRICTION
GAMMA	GAMMA
GAMMAS	GAMMAS
GDALLY	GDALLY
HAUTEUR INITIALE	INITIAL DEPTH
HEURE DE L'ORIGINE DES TEMPS	ORIGINAL HOUR OF TIME
HOULE ALEATOIRE MONODIRECTIONNELLE	MONODIRECTIONAL RANDOM WAVE
HOULE ALEATOIRE MULTIDIRECTIONNELLE	MULTIDIRECTIONAL RANDOM WAVE
INFORMATIONS SUR LE SOLVEUR	INFORMATIONS ABOUT SOLVER
INSTANT DE LECTURE DU SPECTRE TOMAWAC	INSTANT FOR READING TOMAWAC SPECTRUM
KDALLY	KDALLY
LISSAGE DES HAUTEURS DE HOULE	WAVE HEIGHTS SMOOTHING
LISSAGES DU FOND	BOTTOM TOPOGRAPHY SMOOTHING
LISTE DES FICHIERS	LIST OF FILES
LOI DE FROTTEMENT SUR LE FOND	LAW OF BOTTOM FRICTION
LONGUEUR DU VECTEUR	VECTOR LENGTH
MASSE VOLUMIQUE DU FLUIDE	FLUID SPECIFIC MASS
MASSE VOLUMIQUE DU SEDIMENT	SEDIMENT SPECIFIC WEIGHT
MAXIMUM D'ITERATIONS POUR LE SOLVEUR	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER
MAXIMUM DE SOUS-ITERATIONS	MAXIMUM OF SUB-ITERATIONS
MAXIMUM DE SOUS-ITERATIONS POUR TETAP	MAXIMUM OF SUB-ITERATIONS FOR TETAP
MOT DE PASSE CRAY	PASSWORD
NOMBRE DE DIRECTION DANS LE SPECTRE TOMAWAC	NUMBER OF DIRECTIONS IN TOMAWAC SPECTRUM
NOMBRE DE DIRECTIONS DE DISCRETISATION	NUMBER OF DIRECTIONS
NOMBRE DE FREQUENCES DANS LE SPECTRE TOMAWAC	NUMBER OF FREQUENCIES IN TOMAWAC SPECTRUM
NOMBRE DE PERIODES DE DISCRETISATION	NUMBER OF PERIODS
NOMBRE DE VARIABLES PRIVEES	NUMBER OF PRIVATE VARIABLES
NUMERO DE COMPTE	ACCOUNT NUMBER
NUMERO DE VERSION	RELEASE
OPTION DU SOLVEUR	SOLVER OPTION
PARTITIONNEUR	PARTITIONING TOOL
PAS POUR LE BALAYAGE EN PERIODE	STEP FOR PERIOD SCANNING
PERIODE DE DEBUT POUR LE BALAYAGE EN PERIODE	BEGINNING PERIOD FOR PERIOD SCANNING

PERIODE DE FIN POUR LE BALAYAGE EN PERIODE	ENDING PERIOD FOR PERIOD SCANNING
PERIODE DE LA HOULE	WAVE PERIOD
PERIODE DE PIC	PEAK PERIOD
PERIODE DE SORTIE GRAPHIQUE	GRAPHIC PRINTOUT PERIOD
PERIODE DE SORTIE LISTING	LISTING PRINTOUT PERIOD
PERIODE MAXIMUM DU SPECTRE	MAXIMUM SPECTRAL PERIOD
PERIODE MINIMUM DU SPECTRE	MINIMUM SPECTRAL PERIOD
PLACE MEMOIRE CRAY	MEMORY SPACE
PRECISION DU SOLVEUR	SOLVER ACCURACY
PRECISION SUR LES SOUS-ITERATIONS POUR COURANT	SUB-ITERATIONS ACCURACY FOR CURRENT
PRECISION SUR LES SOUS-ITERATIONS POUR LA DISSIPATION	SUB-ITERATIONS ACCURACY FOR DISSIPATION
PRECISION SUR LES SOUS-ITERATIONS POUR TETAP	SUB-ITERATIONS ACCURACY FOR TETAP
PRECONDITIONNEMENT	PRECONDITIONING
PRIORITE	PRIORITY
PROCESSEURS PARALLELES	PARALLEL PROCESSORS
PRODUIT MATRICE-VECTEUR	MATRIX-VECTOR PRODUCT
PROFONDEUR DE REFERENCE POUR LA PHASE AUTOMATIQUE	REFERENCE WATER DEPTH FOR AUTOMATIC PHASE
REGIME HYDRAULIQUE IMPOSE	HYDRAULIC REGIME IMPOSED
RELAXATION SUR LA DISSIPATION	DISSIPATION RELAXATION
RELAXATION SUR TETAP	RELAXATION ON TETAP
RUGOSITE DE PEAU SEULE	SKIN ROUGHNESS ONLY
SOLVEUR	SOLVER
SORTIE LISTING	LISTING PRINTOUT
STANDARD DU FICHIER DE GEOMETRIE	GEOMETRY FILE STANDARD
STANDARD DU FICHIER DES RESULTATS	RESULTS FILE STANDARD
STOCKAGE DES MATRICES	MATRIX STORAGE
TEMPS MACHINE CRAY	CPU TIME
TITRE	TITLE
TYPE DU REGIME HYDRAULIQUE	HYDRAULIC REGIME TYPE
USER CRAY	USER CRAY
VALEUR MINIMUM DE H	MINIMUM VALUE FOR H
VALIDATION	VALIDATION
VARIABLES A IMPRIMER	VARIABLES TO BE PRINTED
VARIABLES POUR LES SORTIES GRAPHIQUES	VARIABLES FOR GRAPHIC PRINTOUTS
VARIATION RAPIDE DE LA BATHYMETRIE	RAPIDLY VARYING TOPOGRAPHY
VERIFICATION DU MAILLAGE	CHECKING THE MESH
VISCOSITE CINEMATIQUE DU FLUIDE	FLUID KINEMATIC VISCOSITY

ZERO	ZERO

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