TELEMAC-3D

Reference Manual

Version v8p5
December 1, 2023

Contents

1. Detail list of keywords

1.1 2D CONTINUATION

Type :	Logical
Dimension :	1
Mnemo	SUIT2
DEFAULT VALUE :	NO
French keyword :	`SUITE 2D`

Enables to use a `2D RESULT FILE` in `FILE FOR 2D CONTINUATION` as initial conditions file.

1.2 2D RESULT FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHYD)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES RESULTATS 2D`

Name of the file into which the 2D results of the computation are written with a periodicity given by the keyword `GRAPHIC PRINTOUT PERIOD`.

1.3 2D RESULT FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHYD)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DES RESULTATS 2D`

Format of the `2D RESULT FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.4 2D TIME SERIES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHI2)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES SERIES TEMPORELLES 2D`

Name of the file into which 2D time series are written at the points defined in the `TIME SERIES COORDINATES FILE`.

1.5 2D TIME SERIES FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHI2)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DES SERIES TEMPORELLES 2D`

Format of the `2D TIME SERIES FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.6 3D RESULT FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DRES)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES RESULTATS 3D`

Name of the file into which the 3D results of the computation are written with a periodicity given by the keyword `GRAPHIC PRINTOUT PERIOD`.

1.7 3D RESULT FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DRES)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DES RESULTATS 3D`

Format of the `3D RESULT FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.8 3D TIME SERIES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHI3)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES SERIES TEMPORELLES 3D`

Name of the file into which 3D time series are written at the points defined in the `TIME SERIES COORDINATES FILE`.

1.9 3D TIME SERIES FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHI3)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DES SERIES TEMPORELLES 3D`

Format of the `3D TIME SERIES FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.10 ABSCISSAE OF SOURCES

Type :	Real
Dimension :	2
Mnemo	XSCE
DEFAULT VALUE :	MANDATORY
French keyword :	`ABSCISSES DES SOURCES`

Floats giving the abscissae of potential sources of flow rates (in meters). The source will be located at the nearest node in the mesh.

1.11 ACCURACY FOR DIFFUSION OF K-EPSILON

Type :	Real
Dimension :	1
Mnemo	SLVDKE%EPS
DEFAULT VALUE :	1.E-8
French keyword :	`PRECISION POUR LA DIFFUSION DU K-EPSILON`

Sets the accuracy needed for the computation of the diffusion of the k-ε or Spalart-Allmaras models. Old default value = 1.E-6 until version V8P0.

1.12 ACCURACY FOR DIFFUSION OF SEDIMENT

Type :	Real
Dimension :	1
Mnemo	S3D_SLVDSE%EPS
DEFAULT VALUE :	1.E-8
French keyword :	`PRECISION POUR LA DIFFUSION DU SEDIMENT`

Sets the accuracy needed for the computation of the diffusion of sediments. Old default value = 1.E-6 until version V8P0.

1.13 ACCURACY FOR DIFFUSION OF TRACERS

Type : Real
Dimension : 2
Mnemo SLVDTA(ITRAC)%EPS
DEFAULT VALUE : MANDATORY
French keyword : `PRECISION POUR LA DIFFUSION DES TRACEURS`
Sets the accuracy needed for the computation of the diffusion of the tracers. One single value for every tracer. Default value = 1.E-8. Old default value = 1.E-6 until version V7P3.

1.14 ACCURACY FOR DIFFUSION OF VELOCITIES

Type : Real
Dimension : 1
Mnemo SLVDVI%EPS
DEFAULT VALUE : 1.E-8
French keyword : `PRECISION POUR LA DIFFUSION DES VITESSES`
Sets the accuracy needed for the computation of the diffusion of the velocities. Old default value = 1.E-5 until version V8P0.

1.15 ACCURACY FOR PPE

Type : Real
Dimension : 1
Mnemo SLVPOI%EPS
DEFAULT VALUE : 1.E-8
French keyword : `PRECISION POUR PPE`
Sets the precision needed for the computation of the Poisson Pressure Equation. Old default value = 1.E-4 until version V8P0.

1.16 ACCURACY FOR PROPAGATION

Type : Real
Dimension : 1
Mnemo SLVPRO%EPS
DEFAULT VALUE : 1.E-8
French keyword : `PRECISION POUR LA PROPAGATION`
Sets the accuracy needed for the computation of the propagation step. Old default value = 1.E-6 until version V8P0.

1.17 AD LINEAR SOLVER DERIVATIVE CONVERGENCE

Type : Logical
Dimension : 1
Mnemo AD_LINSOLV_DERIVATIVE_CONVERGENCE
DEFAULT VALUE : YES
French keyword : `AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE`
Iterative linear solvers: derivative convergence test for AD.

1.18 AD LINEAR SOLVER RESET DERIVATIVES

Type : Logical
Dimension : 1
Mnemo AD_LINSOLV_RESETDERIV
DEFAULT VALUE : YES
French keyword : `AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE`
Resets the derivatives for AD.

1.19 AD NAMES OF DERIVATIVES

Type : String
Dimension : 2
Mnemo NAME_ADVAR
DEFAULT VALUE : 'MANDATORY'
French keyword : `AD NOMS DES DERIVEES`
Name of user derivatives in 32 characters, 16 for the name, 16 for the unit.

1.20 AD NUMBER OF DERIVATIVES

Type : Integer
Dimension : 1
Mnemo NADVAR
DEFAULT VALUE : 0
French keyword : `AD NOMBRE DES DERIVEES`
Defines the number of user derivatives, within the framework of the algorithmic differentiation.

1.21 AD NUMBER OF DIRECTIONS

Type : Integer
Dimension : 1
Mnemo AD_NUMOFDIR
DEFAULT VALUE : 1
French keyword : `AD NOMBRE DE DIRECTIONS`
Defines the number of directions for the differentiators.

1.22 AD SYMBOLIC LINEAR SOLVER

Type : Logical
Dimension : 1
Mnemo AD_SYMBLINSOLV
DEFAULT VALUE : NO
French keyword : `AD SOLVEUR LINEAIRE SYMBOLIQUE`
Enables the symbolic linear solver for AD.

1.23 ADVECTION STEP

Type : Logical
Dimension : 1
Mnemo CONVEC
DEFAULT VALUE : YES
French keyword : `ETAPE DE CONVECTION`
Takes into account the advection terms or not. If YES, some advection terms can still be ignored

with the keywords SCHEME FOR ADVECTION OF...

1.24 ADVECTION-DIFFUSION SCHEME WITH SETTLING VELOCITY

Type :	Integer
Dimension :	1
Mnemo	S3D_SETDEP
DEFAULT VALUE :	0
French keyword :	SCHEMA DE CONVECTION DIFFUSION AVEC VITESSE DE CHUTE

Choice of the vertical scheme for diffusion and settling of sediment:

- 0: Implicit-diffusion scheme,
- 1: Implicit-convection scheme (Tridiagonal matrix solver),
- 2: **set_fall.f**

1.25 AIR PRESSURE

Type :	Logical
Dimension :	1
Mnemo	ATMOS
DEFAULT VALUE :	NO
French keyword :	PRESSION ATMOSPHERIQUE

Sets whether the influence of an atmosphere pressure field is taken into account or not.

1.26 AIR TEMPERATURE

Type :	Real
Dimension :	1
Mnemo	CST_TAIR
DEFAULT VALUE :	20.
French keyword :	TEMPERATURE DE L'AIR

Gives the value of air temperature when it is constant in time and space. In °C.

1.27 ASCII ATMOSPHERIC DATA FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3ATMA)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER ASCII DE DONNEES ATMOSPHERIQUES

ASCII data file containing the atmospheric data varying in time.

1.28 ASCII DATABASE FOR TIDE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DBDD)
DEFAULT VALUE :	”
French keyword :	BASE ASCII DE DONNEES DE MAREE

File name for the tide data base of harmonic constituents extracted from the TIDAL MODEL FILE.

1.29 ASCII DROGUES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DFLO)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER ASCII DES FLOTTEURS`

ASCII results file with positions of drogues.

1.30 ATMOSPHERIC PRESSURE AT TIDAL BOUNDARIES

Type :	Logical
Dimension :	1
Mnemo	PRESSBC
DEFAULT VALUE :	NO
French keyword :	`PRESSION ATMOSPHERIQUE AUX FRONTIERES A MAREE`

Take in account atmospheric pressure at tidal boundary conditions. Inverted barometer method used to compute the shift.

1.31 AVERAGE WATER DENSITY

Type :	Real
Dimension :	1
Mnemo	RHO0
DEFAULT VALUE :	1025.
French keyword :	`MASSE VOLUMIQUE MOYENNE DE L'EAU`

Average water density in the domain, see subroutine **DRSURR**.

1.32 BED LAYERS THICKNESS

Type :	Real
Dimension :	1
Mnemo	S3D_EPAI0
DEFAULT VALUE :	5.E-3
French keyword :	`EPAISSEUR DES COUCHES DU FOND VASEUX`

Reference thickness considered for the creation of new bed layers. This parameter is used if `CONSOLIDATION MODEL` = 2 (Gibson model (Lenormant)). With this model, the sediment which settles on the bottom arrives at first in the fresh deposit layer. When the thickness of this layer is equal to the `BED LAYERS THICKNESS`, a new mud layer is added to the mud bed.

1.33 BETA EXPANSION COEFFICIENT FOR TRACERS

Type :	Real
Dimension :	2
Mnemo	BETAC
DEFAULT VALUE :	MANDATORY
French keyword :	`COEFFICIENT DE DILATATION BETA POUR LES TRACEURS`

Unit: K^{-1}. This coefficient is used to define the evolution of the water density with respect to the tracer concentration when using `DENSITY LAW` = 4 (one value per tracer).

1.34 BINARY ATMOSPHERIC DATA FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3ATMB)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES`
Binary-coded data file containing the atmospheric data varying in time and space on the mesh.

1.35 BINARY ATMOSPHERIC DATA FILE FORMAT

Type : String
Dimension : 1
Mnemo T3D_FILES(T3ATMB)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : `FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES`
Format of the `BINARY ATMOSPHERIC DATA FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.36 BINARY BOUNDARY DATA FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBND)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER BINAIRE DE DONNEES DE FRONTIERE`
Binary-coded data file containing the boundary conditions data varying in time and space.

1.37 BINARY BOUNDARY DATA FILE FORMAT

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBND)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : `FORMAT DU FICHIER BINAIRE DE DONNEES DE FRONTIERE`
Format of the `BINARY BOUNDARY DATA FILE`. Possible values are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED format based on HDF5.

1.38 BINARY DATA FILE 1

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBI1)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE DONNEES BINAIRE 1`
Data file in binary mode available to the user.

1.39 BINARY DATA FILE 1 FORMAT

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBI1)%FMT
DEFAULT VALUE : 'SERAFIN'
French keyword : `FORMAT DU FICHIER DE DONNEES BINAIRE 1`

Format of the `BINARY DATA FILE 1`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.40 BINARY DATA FILE 2

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBI2)%NAME
DEFAULT VALUE : ''
French keyword : `FICHIER DE DONNEES BINAIRE 2`

Data file in binary mode available to the user.

1.41 BINARY DATABASE 1 FOR TIDE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBB1)
DEFAULT VALUE : ''
French keyword : `BASE BINAIRE 1 DE DONNEES DE MAREE`

File name for the binary database 1 of tidal harmonic constants. In the case of the OSU satellite altimetry model (TPXO type), this file should be for free surface level, for instance h_tpxo7.2.

1.42 BINARY DATABASE 2 FOR TIDE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBB2)
DEFAULT VALUE : ''
French keyword : `BASE BINAIRE 2 DE DONNEES DE MAREE`

File name for the binary database 2 of tidal harmonic constants. In the case of the OSU satellite altimetry model (TPXO type), this file should be for tidal velocities, for instance u_tpxo7.2.

1.43 BINARY DROGUES FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DBLO)%NAME
DEFAULT VALUE : ''
French keyword : `FICHIER BINAIRE DES FLOTTEURS`

Binary results file with positions of drogues.

1.44 BINARY RESULTS FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRBI)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS BINAIRE`
Additional binary-coded result file available to the user.

1.45 BOTTOM FRICTION DUE TO WAVES

Type : Logical
Dimension : 1
Mnemo BOT_MOMENT
DEFAULT VALUE : NO
French keyword : `FROTTEMENT SUR LE FOND DU AUX VAGUES`
Allows to take into account the momentum lost by waves due to bottom friction. You need a fine mesh around the bottom to be precise.

1.46 BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS

Type : Logical
Dimension : 1
Mnemo LISFON_AFTER
DEFAULT VALUE : YES
French keyword : `LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR`
Indicates if the number of potential smoothings on bottom topography is done after (or before otherwise) the topography modifications implemented by the user.

1.47 BOTTOM SURFACES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DDL5)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DELWAQ DES SURFACES DU FOND`
Results file for chaining with DELWAQ.

1.48 BOTTOM TOPOGRAPHY FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DFON)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DES FONDS`
Name of the possible file containing the bathymetric data. Where this keyword is used, these bathymetric data shall be used in the computation.

1.49 BOUNDARY CONDITION ON THE BOTTOM

Type :	Integer
Dimension :	1
Mnemo	BC_BOTTOM
DEFAULT VALUE :	1
French keyword :	`CONDITION A LA LIMITE AU FOND`

Specifies the type of boundary conditions on the bottom layer. Possible choices are:

- 1: Neumann conditions on velocity on bottom,
- 2: velocities will be set to 0. Should be linked to a refined mesh near the bottom.

1.50 BOUNDARY CONDITIONS FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DCLI)%NAME
DEFAULT VALUE :	'MANDATORY'
French keyword :	`FICHIER DES CONDITIONS AUX LIMITES`

Name of the file containing the types of boundary conditions. This file is filled automatically by the mesh generator through colours that are assigned to the boundary nodes.

1.51 BYPASS VOID VOLUMES

Type :	Logical
Dimension :	1
Mnemo	BYPASS
DEFAULT VALUE :	NO
French keyword :	`CONTOURNEMENT DES VOLUMES NULS`

Will speed-up distributive and finite volumes advection schemes in case of tidal flats or generalised sigma transformation.

1.52 CHECKING THE MESH

Type :	Logical
Dimension :	1
Mnemo	CHECK_MESH
DEFAULT VALUE :	NO
French keyword :	`VERIFICATION DU MAILLAGE`

If this keyword is equal to YES, a call to subroutine **CHECKMESH** will look for errors in the mesh, superimposed points, etc.

1.53 CLOUD COVER

Type :	Real
Dimension :	1
Mnemo	CST_CLDC
DEFAULT VALUE :	5.
French keyword :	`NEBULOSITE`

Gives the value of cloud cover when it is constant in time and space. In octas for WAQTEL or tenths for KHIONE.

1.54 COEFFICIENT FOR HORIZONTAL DIFFUSION OF TRACERS

Type : Real
Dimension : 2
Mnemo DNUTAH
DEFAULT VALUE : MANDATORY
French keyword : `COEFFICIENT DE DIFFUSION HORIZONTAL DES TRACEURS`

Sets the values of the horizontal diffusion of tracers. These values may have a significant effect on the evolution of tracers in time. Since version 7.1, it has been an array, with one value per tracer, separated by semicolons.

1.55 COEFFICIENT FOR HORIZONTAL DIFFUSION OF VELOCITIES

Type : Real
Dimension : 1
Mnemo DNUVIH
DEFAULT VALUE : 1.E-6
French keyword : `COEFFICIENT DE DIFFUSION HORIZONTAL DES VITESSES`

Sets, in an even way for the whole domain, the value of the coefficient of global (dynamic+turbulent) viscosity for the horizontal direction. This value may have a significant effect both on the shapes and sizes of recirculation zones.

1.56 COEFFICIENT FOR SOFT BOUNDARIES

Type : Real
Dimension : 2
Mnemo COEF_SOFT
DEFAULT VALUE : MANDATORY
French keyword : `COEFFICIENT POUR LES FRONTIERES DOUCES`

Values of the coefficients for each soft boundary.

1.57 COEFFICIENT FOR VERTICAL DIFFUSION OF TRACERS

Type : Real
Dimension : 2
Mnemo DNUTAV
DEFAULT VALUE : MANDATORY
French keyword : `COEFFICIENT DE DIFFUSION VERTICAL DES TRACEURS`

Sets the values of the vertical diffusion of tracers. These values may have a significant effect on the evolution of tracers in time. Since version 7.1, it has been an array, with one value per tracer, separated by semicolons.

1.58 COEFFICIENT FOR VERTICAL DIFFUSION OF VELOCITIES

Type : Real
Dimension : 1
Mnemo DNUVIV
DEFAULT VALUE : 1.E-6
French keyword : `COEFFICIENT DE DIFFUSION VERTICAL DES VITESSES`

Sets, in an even way for the whole domain, the value of the coefficient of global (dynamic+turbulent) viscosity for the horizontal direction. This value may have a significant effect both on the shapes and sizes of recirculation zones.

1.59 COEFFICIENT OF WIND INFLUENCE

Type : Real
Dimension : 1
Mnemo FAIR
DEFAULT VALUE : 1.55E-6
French keyword : `COEFFICIENT D'INFLUENCE DU VENT`
Sets the value of the wind driving coefficient. See the User Manual for the value to give.

1.60 COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED

Type : Logical
Dimension : 1
Mnemo FAIRACCU
DEFAULT VALUE : YES
French keyword : `COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VENT`
If YES, the value of the wind driving coefficient is computed with respect to the wind velocity.
The value of `COEFFICIENT OF WIND INFLUENCE` is overwritten. Old default value = NO until V8P1.

1.61 COEFFICIENT RELATIVE TO FLOC DESTRUCTION

Type : Real
Dimension : 1
Mnemo S3D_TURBB
DEFAULT VALUE : 0.09
French keyword : `COEFFICIENT TRADUISANT LA DESTRUCTION DES FLOCS`
When the influence of turbulence on the settling velocity is modelled, this coefficient traduces the breaking of flocs by turbulence (coefficient *b* of Van Leussen formula). Value to be imposed if `INFLUENCE OF TURBULENCE ON SETTLING VELOCITY` = YES.

1.62 COEFFICIENT TO CALIBRATE SEA LEVEL

Type : Real
Dimension : 1
Mnemo MSL
DEFAULT VALUE : 0.
French keyword : `COEFFICIENT DE CALAGE DU NIVEAU DE MER`
Coefficient to calibrate the sea level. This coefficient usually corresponds to the mean sea level or a close value.

1.63 COEFFICIENT TO CALIBRATE TIDAL RANGE

Type : Real
Dimension : 1
Mnemo CTIDE
DEFAULT VALUE : 1.
French keyword : `COEFFICIENT DE CALAGE DU MARNAGE`
Coefficient to calibrate the tidal range of tidal wave at tidal open boundary conditions.

1.64 COEFFICIENT TO CALIBRATE TIDAL VELOCITIES

Type : Real
Dimension : 1
Mnemo CTIDEV
DEFAULT VALUE : 999999.
French keyword : `COEFFICIENT DE CALAGE DES VITESSES DE COURANT`

Coefficient to calibrate the tidal velocities of tidal wave at tidal open boundary conditions. Default value 999999. means that the square root of `COEFFICIENT TO CALIBRATE TIDAL RANGE` is taken.

1.65 COHESIVE SEDIMENT

Type : Logical
Dimension : 1
Mnemo S3D_SEDCO
DEFAULT VALUE : NO
French keyword : `SEDIMENT COHESIF`

Tells if the sediment is cohesive or not.

1.66 COMPATIBLE COMPUTATION OF FLUXES

Type : Logical
Dimension : 1
Mnemo COMFLU
DEFAULT VALUE : NO
French keyword : `CALCUL COMPATIBLE DES FLUX`

Flowrates through control sections, computation compatible with the weak formulation of no-flux boundary condition.

1.67 COMPUTATION CONTINUED

Type : Logical
Dimension : 1
Mnemo DEBU
DEFAULT VALUE : NO
French keyword : `SUITE DE CALCUL`

Determines whether the computation under way is independent or is following an earlier result.

- NO: It is the first run for this computation and a whole set of initial conditions should be defined,
- YES: It follows a former computation: the initial conditions consist in the last time step of the `PREVIOUS COMPUTATION FILE` defined in the steering file used for submitting the computation.

All the data from the steering file may be defined once again, which provides an opportunity to change, for example, the time step, the turbulence model, the friction, to add or remove a tracer...
It is also possible to define new boundary conditions (in the subroutine **BORD3D** or values defined in the steering file).
In order to get a perfect continued computation, the user has to activate the `RESTART MODE` in a previous computation to generate the file from which the following computation starts (`RESTART FILE`).

1.68 CONCATENATE PARTEL OUTPUT

Type : Logical
Dimension : 1
Mnemo CONCAT_PARTEL
DEFAULT VALUE : NO
French keyword : `CONCATENATION SORTIE PARTEL`

With this option partel no more generates a file (GEO/CLI/PAR) per process but a single concatenate file of them, associated to an index file. Then instead of having partel generating 3P files, it only generates 6 files.

1.69 CONSOLIDATION

Type : Logical
Dimension : 1
Mnemo S3D_TASSE
DEFAULT VALUE : NO
French keyword : `TASSEMENT DE LA VASE`

If this key word is equal to YES, consolidation is simulated thanks to a multi-layers model: the bed layers are characterized by their residence time which is the time after which the quantity of mud which remains in a layer goes into a more consolidated layer.

1.70 CONSOLIDATION MODEL

Type : Integer
Dimension : 1
Mnemo S3D_ITASS
DEFAULT VALUE : 1
French keyword : `OPTION DU MODELE DE TASSEMENT`

Choice of the consolidation model:

- 1: Empirical multilayer model,
- 2: Gibson model (Lenormant).

1.71 CONSTANT SEDIMENT SETTLING VELOCITY

Type : Real
Dimension : 1
Mnemo S3D_WCHU0
DEFAULT VALUE : 0.01
French keyword : `VITESSE DE CHUTE CONSTANTE`

Constant sediment settling velocity in m/s (>0 since v6.3). Prescribed value if `INFLUENCE OF TURBULENCE ON SETTLING VELOCITY` = NO.

1.72 CONTINUITY CORRECTION ON OPEN BOUNDARIES

Type : Logical
Dimension : 1
Mnemo CONCOR
DEFAULT VALUE : NO
French keyword : `CORRECTION DE CONTINUITE SUR FRONTIERES OUVERTES`

Changes the free velocities on open boundaries to get a better divergence-free field.

1.73 CORIOLIS

Type :	Logical
Dimension :	1
Mnemo	CORIOL
DEFAULT VALUE :	NO
French keyword :	CORIOLIS

The Coriolis force is taken into account or ignored.

1.74 CORIOLIS COEFFICIENT

Type :	Real
Dimension :	1
Mnemo	FCOR
DEFAULT VALUE :	0.
French keyword :	COEFFICIENT DE CORIOLIS

Sets the value of the Coriolis force coefficient, in cartesian coordinates. This coefficient, denoted **FCOR** in the code, should be equal to $2\omega\sin(l)$ where ω denotes the earth angular speed of rotation and l the latitude. ω = 7.29 10-5 rad/s.
The Coriolis force components are then:
$FU = FCOR \times V$,
$FV = -FCOR \times U$.
When using the spherical coordinates, the Coriolis coefficient is automatically computed.

1.75 COUPLING PERIOD FOR TOMAWAC

Type :	Integer
Dimension :	1
Mnemo	PERCOU_WAC
DEFAULT VALUE :	1
French keyword :	PERIODE DE COUPLAGE POUR TOMAWAC

Sets the coupling period with the TOMAWAC module, in number of time steps. By default, it is coupled at every time step.

1.76 COUPLING WITH

Type :	String
Dimension :	1
Mnemo	COUPLING, IN BIEF
DEFAULT VALUE :	”
French keyword :	COUPLAGE AVEC

List of codes to be coupled with TELEMAC-3D:

- TOMAWAC: internal coupling with TOMAWAC, forces are constant along the depth,
- TOMAWACT3D: internal coupling with TOMAWAC, forces are 3D,
- TOMAWAC2: internal coupling with TOMAWAC, forces are constant along the depth, meshes and domains can be different,
- TOMAWACT3D2: internal coupling with TOMAWAC, forces are 3D, meshes and domains can be different,
- WAQTEL: internal coupling with WAQTEL,

- DELWAQ: will yield results file for DELWAQ,
- GAIA: internal coupling with GAIA,
- KHIONE: internal coupling with KHIONE.

1.77 CRITICAL EROSION SHEAR STRESS OF THE MUD LAYERS

Type :	Real
Dimension :	2
Mnemo	S3D_TOCE_LAYER
DEFAULT VALUE :	MANDATORY
French keyword :	`CONTRAINTE CRITIQUE D'EROSION DES COUCHES DE VASE`

Critical erosion shear stress of the mud per layer (N/m^2). Needs to be defined for each layer (N/m^2), starting from the condolidated bottom layer upwards.

1.78 CRITICAL SHEAR STRESS FOR DEPOSITION

Type :	Real
Dimension :	1
Mnemo	S3D_TOCD
DEFAULT VALUE :	0.2
French keyword :	`CONTRAINTE CRITIQUE DE DEPOT`

Value of the critical bottom shear stress under which deposition of cohesive sediments occurs.

1.79 CULVERTS DATA FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DBUS)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DE DONNEES DES BUSES`

Description of culverts/bridges existing in the model.

1.80 DAMPING FUNCTION

Type :	Integer
Dimension :	1
Mnemo	DAMPING
DEFAULT VALUE :	0
French keyword :	`FONCTION D'AMORTISSEMENT`

Specifies the type of damping function used (when using mixing length turbulence model). The possible choices are:

- 0: nothing,
- 1: user programmed (in `USER_DRIUTI`),
- 2: Viollet,
- 3: Munk and Anderson.

1.81 DEBUGGER

Type :	Integer
Dimension :	1
Mnemo	DEBUG
DEFAULT VALUE :	0
French keyword :	DEBUGGER

If 1, additional writings will be printed in the listing, in particular the calls of subroutines.

1.82 DELWAQ PRINTOUT PERIOD

Type :	Integer
Dimension :	1
Mnemo	WAQPRD
DEFAULT VALUE :	1
French keyword :	PERIODE DE SORTIE POUR DELWAQ

Printout period for DELWAQ files.

1.83 DELWAQ STEERING FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DL11)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DE COMMANDE DELWAQ

Steering file for chaining with DELWAQ.

1.84 DENSITY LAW

Type :	Integer
Dimension :	1
Mnemo	DENLAW
DEFAULT VALUE :	0
French keyword :	LOI DE DENSITE

Gives the type of the law of density used in the case of active tracers. The sediment is considered active with its own law by default. The possible choices are:

- 0: nothing (and sediment if present),
- 1: function of the temperature (and sediment if present),
- 2: function of the salinity (and sediment if present),
- 3: function of the temperature and salinity (and sediment if present),
- 4: user-defined BETA coefficients (and effect of the sediment with its own behaviour if present),
- 5: the sediment and other tracers are forced to be passive,
- 6: Jackett et al. 2006.

1.85 DENSITY OF THE SEDIMENT

Type :	Real
Dimension :	1
Mnemo	S3D_RHOS
DEFAULT VALUE :	2650.
French keyword :	`MASSE VOLUMIQUE DU SEDIMENT`

Value of the sediment density (kg/m^3).

1.86 DICTIONARY

Type :	String
Dimension :	1
Mnemo	
DEFAULT VALUE :	'telemac3d.dico'
French keyword :	`DICTIONNAIRE`

Key word dictionary.

1.87 DIFFUSION FOR DELWAQ

Type :	Logical
Dimension :	1
Mnemo	DIFF_DEL
DEFAULT VALUE :	NO
French keyword :	`DIFFUSION POUR DELWAQ`

Triggers the output of diffusion for DELWAQ.

1.88 DIFFUSIVITY DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DL10)%NAME
DEFAULT VALUE :	''
French keyword :	`FICHIER DELWAQ DE LA DIFFUSION`

Results file for chaining with DELWAQ.

1.89 DROGUES FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DBLO)%FMT
DEFAULT VALUE :	'TECPLOT'
French keyword :	`FORMAT DU FICHIER DES FLOTTEURS`

Format of the `BINARY DROGUES FILE`. Possible choices are:

- BKBINPCL: binary PCL format native to Blue Kenue,
- TECPLOT: original TecPlot format (ASCII).

1.90 DURATION

Type : Real
Dimension : 1
Mnemo DUREE
DEFAULT VALUE : 0.
French keyword : `DUREE DU CALCUL`

Sets the duration of the simulation in seconds. May be used instead of the parameter `NUMBER OF TIME STEPS`. The nearest integer to (duration/time step) is taken. If `NUMBER OF TIME STEPS` is also given, the greater value is taken.

1.91 DYNAMIC BOUNDARY CONDITION

Type : Logical
Dimension : 1
Mnemo CLDYN
DEFAULT VALUE : NO
French keyword : `CONDITION LIMITE DYNAMIQUE`

If YES, it enables to prescribe a velocity at the free surface coherent with the dynamic boundary condition.

1.92 DYNAMIC PRESSURE IN WAVE EQUATION

Type : Logical
Dimension : 1
Mnemo DPWAVEQ
DEFAULT VALUE : NO
French keyword : `PRESSION DYNAMIQUE DANS L'EQUATION D'ONDE`

Defines if an estimated pressure gradient is taken into account in the wave equation.

1.93 ELEMENT

Type : String
Dimension : 1
Mnemo ELEMENT
DEFAULT VALUE : 'PRISM'
French keyword : `ELEMENT`

Specifies the type of elements used in the computation. The possible choices are:

- PRISM: superimposed meshes of triangles,
- TETRAHEDRON: the same but prisms are split into tetrahedrons.

1.94 ELEMENTS MASKED BY USER

Type : Logical
Dimension : 1
Mnemo MSKUSE
DEFAULT VALUE : NO
French keyword : `ELEMENTS MASQUES PAR L'UTILISATEUR`

If YES, fill in the subroutine **MASKOB**.

1.95 ELEVATIONS OF SOURCES

Type :	Real
Dimension :	2
Mnemo	ZSCE
DEFAULT VALUE :	MANDATORY
French keyword :	`COTES DES SOURCES`

Sets the height of the sources. The source will be located at the nearest plane in the mesh. The use of a fixed plane is then recommended to avoid the change of the nearest plane in case of variation of local water height.

1.96 EROSION COEFFICIENT

Type :	Real
Dimension :	1
Mnemo	S3D_MPART
DEFAULT VALUE :	2.E-3
French keyword :	`COEFFICIENT D'EROSION`

Value of the erosion coefficient used in Partheniades formula in kg/m^2/s.

1.97 EXCHANGE AREAS DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DDL2)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DELWAQ DES SURFACES DE FLUX`

Results file for chaining with DELWAQ.

1.98 EXCHANGES BETWEEN NODES DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DDL6)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS`

Results file for chaining with DELWAQ.

1.99 FICTITIOUS BED LEVEL

Type :	Real
Dimension :	1
Mnemo	FICT
DEFAULT VALUE :	2.0
French keyword :	`HAUTEUR DU LIT FICTIF`

Ratio between the fictitious bed and the grid size above the bed.

1.100 FILE FOR 2D CONTINUATION

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DS2D)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER POUR SUITE 2D`
File to be used in case of 2D continuation.

1.101 FILE FOR 2D CONTINUATION FORMAT

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DS2D)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : `FORMAT DU FICHIER POUR SUITE 2D`
Format of the `FILE FOR 2D CONTINUATION`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.102 FLOCCULATION

Type : Logical
Dimension : 1
Mnemo S3D_FLOC
DEFAULT VALUE : NO
French keyword : `FLOCULATION`
Decides if hindered formulation is to be used to compute settling velocity for mud.

1.103 FLOCCULATION COEFFICIENT

Type : Real
Dimension : 1
Mnemo S3D_TURBA
DEFAULT VALUE : 0.3
French keyword : `COEFFICIENT TRADUISANT LA FORMATION DES FLOCS`
When the influence of turbulence on the settling velocity is modelled, this coefficient traduces the formation of flocs by turbulence (coefficient a of Van Leussen formula). Value to be imposed if `INFLUENCE OF TURBULENCE ON SETTLING VELOCITY` = YES.

1.104 FLOCCULATION FORMULA

Type : Integer
Dimension : 1
Mnemo S3D_FLOC_TYPE
DEFAULT VALUE : 1
French keyword : `FORMULE POUR FLOCULATION`
Type of flocculation formula:

- 1: Van Leussen,

- 2: Soulsby et al. (2013).

1.105 FORMATTED DATA FILE 1

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DFO1)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE DONNEES FORMATE 1`
Formatted data file available to the user.

1.106 FORMATTED DATA FILE 2

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DFO2)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE DONNEES FORMATE 2`
Formatted data file available to the user.

1.107 FORMATTED RESULTS FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRFO)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE`
Formatted file of results available to the user.

1.108 FORMATTED RESULTS FILE 1

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF1)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 1`
Formatted file of results 1 available to the user.

1.109 FORMATTED RESULTS FILE 2

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF2)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 2`
Formatted file of results 2 available to the user.

1.110 FORMATTED RESULTS FILE 3

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF3)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 3`
Formatted file of results 3 available to the user.

1.111 FORMATTED RESULTS FILE 4

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF4)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 4`
Formatted file of results 4 available to the user.

1.112 FORMATTED RESULTS FILE 5

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF5)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 5`
Formatted file of results 5 available to the user.

1.113 FORMATTED RESULTS FILE 6

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DRF6)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE RESULTATS FORMATE 6`
Formatted file of results 6 available to the user.

1.114 FORTRAN FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DFORT)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER FORTRAN`
Name of the FORTRAN file or directory to be submitted, including specific subroutines of the model.

1.115 FREE FORMAT FOR ATMOSPHERIC DATA FILE

Type : Logical
Dimension : 1
Mnemo FREE_ATMO
DEFAULT VALUE : NO
French keyword : `FORMAT LIBRE POUR FICHIER DE DONNEES ATMOSPHERIQUES`

Indicates if the atmospheric data file (ASCII or binary) has to follow the format expected by the **METEO_TELEMAC** module or if it can be handled outside this module. If a special treatment has to be implemented for this file, e.g. with option `OPTION FOR WIND` = 3, set to YES.

1.116 FREE SURFACE GRADIENT COMPATIBILITY

Type :	Real
Dimension :	1
Mnemo	TETAZCOMP
DEFAULT VALUE :	1.
French keyword :	`COMPATIBILITE DU GRADIENT DE SURFACE LIBRE`

Values between 0 and 1 may suppress spurious oscillations.

1.117 FRICTION COEFFICIENT FOR LATERAL SOLID BOUNDARIES

Type :	Real
Dimension :	1
Mnemo	RUGOL0
DEFAULT VALUE :	0.01
French keyword :	`COEFFICIENT DE FROTTEMENT POUR LES PAROIS LATERALES`

Friction coefficient on the lateral boundaries, if constant. Old default value = 60. until version V8P0.

1.118 FRICTION COEFFICIENT FOR THE BOTTOM

Type :	Real
Dimension :	1
Mnemo	RUGOF0
DEFAULT VALUE :	0.01
French keyword :	`COEFFICIENT DE FROTTEMENT POUR LE FOND`

Friction coefficient on the bottom, if constant. Old default value = 60. until version V8P0.

1.119 GAIA STEERING FILE

Type :	String
Dimension :	1
Mnemo	PAS DE MNEMO
DEFAULT VALUE :	”
French keyword :	`FICHIER DES PARAMETRES DE GAIA`

GAIA parameter file in case of internal coupling.

1.120 GEOGRAPHIC SYSTEM

Type :	Integer
Dimension :	1
Mnemo	GEOSYST
DEFAULT VALUE :	-1
French keyword :	`SYSTEME GEOGRAPHIQUE`

Geographic coordinates system in which the numerical model is built. Indicate the corresponding zone with the keyword. The possible choices are:

- 0: defined by the user,

- 1: WGS84 longitude/latitude in real degrees,
- 2: WGS84 Northern UTM,
- 3: WGS84 Southern UTM,
- 4: Lambert,
- 5: Mercator projection.

1.121 GEOMETRY FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DGEO)%NAME
DEFAULT VALUE :	'MANDATORY'
French keyword :	`FICHIER DE GEOMETRIE`

Name of the file containing the mesh. This file may also contain the topography and the friction coefficients.

1.122 GEOMETRY FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DGEO)%FMT
DEFAULT VALUE :	'SERAFIN'
French keyword :	`FORMAT DU FICHIER DE GEOMETRIE`

Format of the `GEOMETRY FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.123 GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER

Type :	Integer
Dimension :	1
Mnemo	ICALHWG
DEFAULT VALUE :	0
French keyword :	`NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER`

Global number of the point (between 1 and the number of boundary nodes in the 2D mesh) with respect to which the tidal constituents have their phase shifted to start the calculation with a high water (for schematic tides only). This point has to be a maritime boundary node. Only harmonic constants databases like TPXO are concerned.

1.124 GLOBAL NUMBERS OF SOURCE NODES

Type :	Integer
Dimension :	2
Mnemo	ISCE
DEFAULT VALUE :	MANDATORY
French keyword :	`NUMEROS GLOBAUX DES NOEUDS DES SOURCES`

Global numbers of nodes in the 2D mesh that correspond to source point locations.

1.125 GOTM STEERING FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DGTM)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES PARAMETRES GOTM`

File containing parameters of GOTM. Use in combination with `VERTICAL TURBULENCE MODEL` = 6.

1.126 GRAPHIC PRINTOUT PERIOD

Type :	Integer
Dimension :	1
Mnemo	GRAPRD
DEFAULT VALUE :	1
French keyword :	`PERIODE POUR LES SORTIES GRAPHIQUES`

Determines, in number of time steps, the printout period for the `VARIABLES FOR 2D (or 3D) GRAPHIC PRINTOUTS` in the `2D or 3D RESULT FILE`.

1.127 GRAVITY ACCELERATION

Type :	Real
Dimension :	1
Mnemo	GRAV
DEFAULT VALUE :	9.81
French keyword :	`ACCELERATION DE LA PESANTEUR`

Sets the value of the acceleration due to gravity in m/s^2.

1.128 HARMONIC CONSTANTS FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DHAR)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES CONSTANTES HARMONIQUES`

Name of the file containing the harmonic constants extracted from the tidal model file (JMJ) or other atlases (FES, NEA, PREVIMER).

1.129 HINDERED SETTLING

Type :	Logical
Dimension :	1
Mnemo	S3D_HINDER
DEFAULT VALUE :	NO
French keyword :	`VITESSE DE CHUTE ENTRAVEE`

Decides if hindered formulation is to be used to compute settling velocity for mud.

1.130 HINDERED SETTLING FORMULA

Type :	Integer
Dimension :	1
Mnemo	S3D_HIND_TYPE
DEFAULT VALUE :	1
French keyword :	`FORMULE POUR VITESSE DE CHUTE ENTRAVEE`

Type of hindered settling:

- 1: Whitehouse et al. (2000) - working,
- 2: Winterwerp (1999) - not currently working.

1.131 HORIZONTAL TURBULENCE MODEL

Type :	Integer
Dimension :	1
Mnemo	ITURBH
DEFAULT VALUE :	1
French keyword :	`MODELE DE TURBULENCE HORIZONTAL`

Specifies the horizontal turbulence model. The available choices are:

- 1: constant viscosity,
- 3: k-ε model,
- 4: Smagorinski,
- 5: Spalart-Allmaras,
- 7: k-ω model,
- 9: DES model (Detached Eddy Simulation).

Caution: if option 1 is chosen, give the right `COEFFICIENT FOR... DIFFUSION OF VELOCITIES...`
If option 3 ou 7 is chosen, this parameter must get its real physical value of molecular diffusivity, generally about 10^{-6} because it is used as well in the turbulence model.

1.132 HYDROSTATIC INCONSISTENCY FILTER

Type :	Logical
Dimension :	1
Mnemo	INCHYD
DEFAULT VALUE :	NO
French keyword :	`FILTRE LES INCONSISTANCES HYDROSTATIQUES`

Allows to filter hydrostatic inconsistencies.

1.133 IMPLICITATION FOR DEPTH

Type :	Real
Dimension :	1
Mnemo	TETAH
DEFAULT VALUE :	0.55
French keyword :	`IMPLICITATION POUR LA HAUTEUR`

Sets the value of the implicitation coefficient for water depth in the propagation step (cf. Principe note). The values lower than 0.5 give an instable scheme.

1.134 IMPLICITATION FOR DIFFUSION

Type : Real
Dimension : 1
Mnemo TETADI
DEFAULT VALUE : 1.
French keyword : `IMPLICITATION POUR LA DIFFUSION`
Sets the value of the implicitation coefficient for the diffusion step.

1.135 IMPLICITATION FOR VELOCITIES

Type : Real
Dimension : 1
Mnemo TETAU
DEFAULT VALUE : 0.55
French keyword : `IMPLICITATION POUR LES VITESSES`
Sets the value of the implicitation coefficient for the velocity in the propagation step (cf. Principe note). The values lower than 0.5 give an instable scheme. Old default value = 1. until V8P0.

1.136 INFORMATION ABOUT MASS-BALANCE FOR EACH LISTING PRINTOUT

Type : Logical
Dimension : 1
Mnemo INFMAS
DEFAULT VALUE : YES
French keyword : `INFORMATION SUR LE BILAN DE MASSE A CHAQUE SORTIE LISTING`
Gives the information about mass-balance at every `LISTING PRINTOUT PERIOD`.

1.137 INITIAL CONDITIONS

Type : String
Dimension : 1
Mnemo CDTINI
DEFAULT VALUE : 'ZERO ELEVATION'
French keyword : `CONDITIONS INITIALES`
Makes it possible to define the initial conditions of the water depth. The possible values are as follows:

- ZERO ELEVATION: Initializes the free surface elevation to 0. The initial water depths are then found by computing the difference between the free surface and the bottom,
- CONSTANT ELEVATION: Initializes the water elevation to the value given by the keyword `INITIAL ELEVATION`. The initial water depths are computed as in the previous case,
- ZERO DEPTH: Initializes the water depths to 0.
- CONSTANT DEPTH: Initializes the water depths to the value given by the keyword `INITIAL DEPTH`,
- TPXO SATELITE ALTIMETRY: The initial conditions on the free surface and velocities are established from the satellite program data given by the harmonic constants database coming from OSU (e.g. TPXO) and stored in the `BINARY DATABASE 1/2 FOR TIDE`,

- SPECIAL or PARTICULAR: The initial conditions with the water depth should be stated in the **USER_CONDI3D_H** subroutine.

1.138 INITIAL DEPTH

Type :	Real
Dimension :	1
Mnemo	HAUTIN
DEFAULT VALUE :	0.
French keyword :	`HAUTEUR INITIALE`

Value to be used along with the option: `INITIAL CONDITIONS` : "CONSTANT DEPTH".

1.139 INITIAL ELEVATION

Type :	Real
Dimension :	1
Mnemo	COTINI
DEFAULT VALUE :	0.
French keyword :	`COTE INITIALE`

Value to be used with the option: `INITIAL CONDITIONS` : "CONSTANT ELEVATION".

1.140 INITIAL GUESS FOR DEPTH

Type :	Integer
Dimension :	1
Mnemo	IORDRH
DEFAULT VALUE :	1
French keyword :	`ORDRE DU TIR INITIAL POUR LA HAUTEUR`

Initial guess for the solver in the propagation step. Makes it possible to modify the initial value of δh, upon each iteration in the propagation step, by using the ultimate values this variable had in the earlier time steps. Thus, the convergence can be speeded up when the system is being solved. 3 options are available:

- 0: $\delta h = 0$,
- 1: $\delta h = \delta h_n$ (ultimate δh value in the next previous time step),
- 2: $\delta h = 2\ \delta h_n$ - δh_{n-1} (extrapolation).

If option 2 with the non-hydrostatic version, `INITIAL GUESS FOR DEPTH` is automatically set to 1.

1.141 INITIAL PERCENTAGE OF NON COHESIVE SEDIMENT

Type :	Real
Dimension :	1
Mnemo	S3D_PVSNCO0
DEFAULT VALUE :	0.
French keyword :	`POURCENTAGE INITIAL DE SEDIMENT NON COHESIF`

Initial percentage of non cohesive sediment (mixed sediments).

1.142 INITIAL THICKNESS OF SEDIMENT LAYERS

Type :	Real
Dimension :	2
Mnemo	S3D_ES_LAYER
DEFAULT VALUE :	MANDATORY
French keyword :	`EPAISSEURS INITIALES DES COUCHES`

Sediment layers thickness (m) for initialisation.

1.143 INITIAL TIME

Type :	Real
Dimension :	1
Mnemo	AT0
DEFAULT VALUE :	0.
French keyword :	`TEMPS INITIAL`

Initial time of the computation (in seconds).

1.144 INITIAL TIME SET TO ZERO

Type :	Logical
Dimension :	1
Mnemo	RAZTIM
DEFAULT VALUE :	NO
French keyword :	`REMISE A ZERO DU TEMPS`

Initial time set to zero in case of restart.

1.145 INITIAL VALUES OF TRACERS

Type :	Real
Dimension :	2
Mnemo	TRAC0
DEFAULT VALUE :	MANDATORY
French keyword :	`VALEURS INITIALES DES TRACEURS`

Sets the initial values of tracer(s). Required value(s) separated with a semicolumn ; if more than one. The number of supplied values must be equal to the number of declared tracers.

1.146 INITIAL VELOCITIES COMPUTED BY TPXO

Type :	Logical
Dimension :	1
Mnemo	VITINI_TPXO
DEFAULT VALUE :	YES
French keyword :	`VITESSES INITIALES CALCULEES PAR TPXO`

Initial velocity components computed from a tidal solution from OSU (e.g. TPXO) or HAMTIDE. NO to prevent from an initialisation with too big tidal velocities. For tidal solutions coming from OSU (e.g. TPXO) or HAMTIDE only.

1.147 KARMAN CONSTANT

Type : Real
Dimension : 1
Mnemo KARMAN
DEFAULT VALUE : 0.4
French keyword : `CONSTANTE DE KARMAN`
Value of Von Karman constant.

1.148 KHIONE STEERING FILE

Type : String
Dimension : 1
Mnemo PAS DE MNEMO
DEFAULT VALUE : ”
French keyword : `FICHIER DES PARAMETRES DE KHIONE`
KHIONE parameter file in case of internal coupling.

1.149 LAMBERT 93 CONVERSION FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DL93)
DEFAULT VALUE : ”
French keyword : `FICHIER DE CONVERSION LAMBERT 93`
Name of file gr3df97a.txt, conversion grid for Lambert 93.

1.150 LATITUDE OF ORIGIN POINT

Type : Real
Dimension : 1
Mnemo LATIT
DEFAULT VALUE : 0.
French keyword : `LATITUDE DU POINT ORIGINE`
Gives the value of the latitude of the origin point of the mesh (for the Mercator projection, see the keyword `GEOGRAPHIC SYSTEM`). Also used for heat exchange with atmosphere.

1.151 LAW OF BOTTOM FRICTION

Type : Integer
Dimension : 1
Mnemo KFROT
DEFAULT VALUE : 5
French keyword : `LOI DE FROTTEMENT SUR LE FOND`
Selects the type of formulation used for the bottom friction. The possible laws are as follows (refer to the Principle note):

- 0: no friction against bottom,
- 1: Haaland”s formula,
- 2: Chezy”s formula,
- 3: Strickler”s formula,

- 4: Manning"s formula,
- 5: Nikuradse"s formula.

Old default value = 2 (Chezy) until version V7P3 and 0 (no friction) in V8P0.

1.152 LAW OF FRICTION ON LATERAL BOUNDARIES

Type :	Integer
Dimension :	1
Mnemo	KFROTL
DEFAULT VALUE :	0
French keyword :	`LOI DE FROTTEMENT SUR LES PAROIS LATERALES`

Selects the type of formulation used for the friction on lateral boundaries. The possible laws are as follows (refer to the Principle note):

- 0: no friction, or **AUBOR** given by the `BOUNDARY CONDITION FILE`,
- 5: Nikuradse"s formula.

1.153 LINEARIZED PROPAGATION

Type :	Logical
Dimension :	1
Mnemo	PROLIN
DEFAULT VALUE :	NO
French keyword :	`PROPAGATION LINEARISEE`

Provided for linearizing the propagation step, e.g. when performing test-cases for which an analytical solution in the linearized case is available. Thus, the value of `MEAN DEPTH FOR LINEARIZATION` has to be given.

1.154 LIQUID BOUNDARIES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DIMP)%NAME
DEFAULT VALUE :	"
French keyword :	`FICHIER DES FRONTIERES LIQUIDES`

File containing the variations in time of boundary conditions.

1.155 LISTING PRINTOUT

Type :	Logical
Dimension :	1
Mnemo	LISTIN
DEFAULT VALUE :	YES
French keyword :	`SORTIE LISTING`

Result printout on hard copy. When NO is selected, the listing only includes the heading and the phrase "NORMAL END OF PROGRAM". In addition, the options `MASS-BALANCE` and `VALIDATION` are inhibited. Not recommended for use.

1.156 LISTING PRINTOUT PERIOD

Type :	Integer
Dimension :	1
Mnemo	LISPRD
DEFAULT VALUE :	1
French keyword :	`PERIODE POUR LES SORTIES LISTING`

Determines, in number of time steps, the printout period of the VARIABLES TO BE PRINTED. The results are systematically printed out on the listing file.

1.157 LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER

Type :	Integer
Dimension :	1
Mnemo	ICALHWB
DEFAULT VALUE :	0
French keyword :	`NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER`

Local number between 1 and the number of tidal boundary points (of the `HARMONIC CONSTANTS FILE`) where the tidal boundary conditions are computed with JMJ, NEA, FES, PREVIMER databases (except TPXO-type databases). The tidal constituents have their phase shifted with respect to this point to start the simulation with a high water (for schematic tides only).

1.158 LONGITUDE OF ORIGIN POINT

Type :	Real
Dimension :	1
Mnemo	LONGIT
DEFAULT VALUE :	0.
French keyword :	`LONGITUDE DU POINT ORIGINE`

Gives the value of the longitude of the origin point of the mesh (for the Mercator projection, see the keyword `GEOGRAPHIC SYSTEM`). Also used for tide generating force, heat exchange with atmosphere.

1.159 MASS-BALANCE

Type :	Logical
Dimension :	1
Mnemo	BILMAS
DEFAULT VALUE :	NO
French keyword :	`BILAN DE MASSE`

Determines whether a check of the mass-balance over the domain is done or not. This procedures computes the following at each time step:

- the domain inflows and outflows,
- the overall flow across all the boundaries,
- the relative error in the mass for that time step.

The relative error in the mass over the whole computation can be found at the end of the listing.

1.160 MASS-LUMPING FOR DEPTH

Type : Real
Dimension : 1
Mnemo AGGLOH
DEFAULT VALUE : 0.
French keyword : `MASS-LUMPING POUR LA HAUTEUR`

TELEMAC-3D offers the possibility to perform mass-lumping on H. This gathers all or part (given the value of the coefficient) of the **AM1(H)** matrices on their diagonal. This technique can speed-up the code a lot and also render it more stable. Yet, the solutions are smoothened. This parameter sets the mass-lumping amount done for H.

1.161 MASS-LUMPING FOR DIFFUSION

Type : Real
Dimension : 1
Mnemo AGGLOD
DEFAULT VALUE : 0.
French keyword : `MASS-LUMPING POUR LA DIFFUSION`

Mass-lumping of the mass-matrix in the diffusion step. If diffusion is explicit (`IMPLICITATION FOR DIFFUSION` < 0.001) or if the advection scheme is of type 3, 4, 5, 13 or 14, it is automatically set to 1. in **DIFF3D**.

1.162 MASS-LUMPING FOR VELOCITIES

Type : Real
Dimension : 1
Mnemo AGGLOU
DEFAULT VALUE : 0.
French keyword : `MASS-LUMPING POUR LES VITESSES`

Sets the amount of mass-lumping that is performed on the velocity. Read but not used.

1.163 MASS-LUMPING FOR WEAK CHARACTERISTICS

Type : Real
Dimension : 1
Mnemo AGGLOW
DEFAULT VALUE : 0.
French keyword : `MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES`

Sets the amount of mass-lumping that is applied to the mass matrix when using weak characteristics.

1.164 MATRIX STORAGE

Type : Integer
Dimension : 1
Mnemo OPTASS
DEFAULT VALUE : 3
French keyword : `STOCKAGE DES MATRICES`

Defines the method to store matrices. The possible choices are:

- 1: classical EBE,
- 3: edge-based storage.

1.165 MAXIMUM CONCENTRATION OF THE CONSOLIDATED MUD

Type : Real
Dimension : 1
Mnemo S3D_CFMAX
DEFAULT VALUE : 500.
French keyword : `CONCENTRATION MAXIMUM DE LA VASE TASSEE`

Maximum concentration which may be reached by a mud layer during consolidation. This value is used if `CONSOLIDATION MODEL` = 2 (Gibson model (Lenormant)).

1.166 MAXIMUM NUMBER OF BOUNDARIES

Type : Integer
Dimension : 1
Mnemo MAXFRO
DEFAULT VALUE : 30
French keyword : `NOMBRE MAXIMUM DE FRONTIERES`

Maximal number of boundaries in the mesh. Used for dimensioning arrays. Can be increased if needed.

1.167 MAXIMUM NUMBER OF BOUNDARIES ON THE BED

Type : Integer
Dimension : 1
Mnemo MAXBLB
DEFAULT VALUE : 30
French keyword : `NOMBRE MAXIMUM DE FRONTIERES SUR LE FOND`

Maximal number of liquid boundaries on the bed. Used for dimensioning arrays. Can be increased if needed.

1.168 MAXIMUM NUMBER OF DROGUES

Type : Integer
Dimension : 1
Mnemo NFLOT_MAX
DEFAULT VALUE : 0
French keyword : `NOMBRE MAXIMAL DE FLOTTEURS`

Maximum number of drogues in the computation. The user must then fill the subroutine **USER_FLOT3D** specifying the coordinates of the starting points, their departure and arrival times. The trajectory of drogues is recorded in the `ASCII DROGUES FILE` or the `BINARY DROGUES FILE` that must be given in the steering file.

1.169 MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES

Type : Integer
Dimension : 1
Mnemo MAXADV
DEFAULT VALUE : 50
French keyword : `MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION`

Limits the number of solver iterations for the advection schemes, only for schemes 13 and 14. Old default value = 10 until release 8.1.

1.170 MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo SLVDKE%NITMAX
DEFAULT VALUE : 200
French keyword : `MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU K-EPSILON`
Limits the number of solver iterations for the diffusion of k-ε or $\tilde{\nu}$.

1.171 MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF SEDIMENT

Type : Integer
Dimension : 1
Mnemo S3D_SLVDSE%NITMAX
DEFAULT VALUE : 60
French keyword : `MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU SEDIMENT`
Limits the number of solver iterations for the diffusion of sediment.

1.172 MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 2
Mnemo SLVDTA(ITRAC)%NITMAX
DEFAULT VALUE : MANDATORY
French keyword : `MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS`
Limits the number of solver iterations for the diffusion of tracer(s). Default value = 60.

1.173 MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo SLVDVI%NITMAX
DEFAULT VALUE : 60
French keyword : `MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES VITESSES`
Limits the number of solver iterations for the diffusion of velocities.

1.174 MAXIMUM NUMBER OF ITERATIONS FOR PPE

Type : Integer
Dimension : 1
Mnemo SLVPOI%NITMAX
DEFAULT VALUE : 100
French keyword : `MAXIMUM D'ITERATIONS POUR PPE`
Limits the number of solver iterations for the Poisson Pressure Equation.

1.175 MAXIMUM NUMBER OF ITERATIONS FOR PROPAGATION

Type : Integer
Dimension : 1
Mnemo SLVPRO%NITMAX
DEFAULT VALUE : 200
French keyword : `MAXIMUM D'ITERATIONS POUR LA PROPAGATION`
Since the algorithms used for solving the propagation step are iterative, the allowed number of

iterations should be limited. NOTE: a maximum number of 40 iterations per time step seems to be reasonable.

1.176 MAXIMUM NUMBER OF SOURCES

Type :	Integer
Dimension :	1
Mnemo	MAXSCE
DEFAULT VALUE :	20
French keyword :	`NOMBRE MAXIMUM DE SOURCES`

Maximal number of source points in the mesh, including punctual sources and twice the number of culverts. Used for dimensioning arrays. Can be increased if needed.

1.177 MAXIMUM NUMBER OF TRACERS

Type :	Integer
Dimension :	1
Mnemo	MAXTRA
DEFAULT VALUE :	20
French keyword :	`NOMBRE MAXIMUM DE TRACEURS`

Maximal number of tracers. Used for dimensioning arrays. Can be increased if needed.

1.178 MEAN DEPTH FOR LINEARIZATION

Type :	Real
Dimension :	1
Mnemo	HAULIN
DEFAULT VALUE :	0.
French keyword :	`PROFONDEUR MOYENNE POUR LA LINEARISATION`

Sets the water depth about which the linearization is done when the `LINEARIZED PROPAGATION` option is selected.

1.179 MEAN DIAMETER OF THE SEDIMENT

Type :	Real
Dimension :	1
Mnemo	S3D_D50
DEFAULT VALUE :	.01
French keyword :	`DIAMETRE MOYEN DES GRAINS`

Sets the value of the diameter D50 for non cohesive sediments.

1.180 MESH TRANSFORMATION

Type :	Integer
Dimension :	1
Mnemo	TRANSF
DEFAULT VALUE :	1
French keyword :	`TRANSFORMATION DU MAILLAGE`

Specifies the distribution of vertical planes of the mesh. Possible choices are:

- 0: user defined (then subroutine **CALCOT** to be implemented),
- 1: sigma,

- 2: zstar,
- 3: horizontal fixed planes,
- 5: adaptive mesh.

This keyword must comply with what is done in CONDIM subroutine.

1.181 MINIMAL VALUE FOR DEPTH

Type :	Real
Dimension :	1
Mnemo	HMIN
DEFAULT VALUE :	-1000.
French keyword :	VALEUR MINIMALE POUR LA HAUTEUR

Sets the minimum water depth value H. Only used with OPTION FOR THE TREATMENT OF TIDAL FLATS = 2 i.e. dry elements are frozen (tidal flats area are masked) or with ELEMENTS MASKED BY USER = YES.

1.182 MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS

Type :	Real
Dimension :	1
Mnemo	HMIN_VIT_BC
DEFAULT VALUE :	0.1
French keyword :	HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS

Minimum value of water depth used to compute tidal boundary conditions for velocities if the water depths are too small. For tidal solutions coming from OSU only (e.g. TPXO).

1.183 MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS

Type :	Real
Dimension :	1
Mnemo	HMIN_VIT_IC
DEFAULT VALUE :	0.1
French keyword :	HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS

Minimum value of water depth above which initial conditions for tidal velocities are computed. Otherwise, the velocity components are equal to 0. For tidal solutions coming from OSU only (e.g. TPXO).

1.184 MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE BOTTOM

Type :	Real
Dimension :	1
Mnemo	DISMIN_BOT
DEFAULT VALUE :	0.2
French keyword :	DISTANCE MINIMALE ENTRE PLANS PRES DU FOND

Minimum distance between planes close to the bottom. Only for planes of type **TRANSF_PLANE%I(...)** = 3.

1.185 MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE FREE SURFACE

Type : Real
Dimension : 1
Mnemo DISMIN_SUR
DEFAULT VALUE : 0.2
French keyword : `DISTANCE MINIMALE ENTRE PLANS PRES DE LA SURFACE LIBRE`
Minimum distance between planes close to the free surface. Only for planes of type **TRANSF_PLANE%I(...)** = 3.

1.186 MINIMUM VOLUME OF 3D ELEMENTS

Type : Real
Dimension : 1
Mnemo MINIMUM_VOLUME
DEFAULT VALUE : 1.E-6
French keyword : `VOLUME MINIMAL DES ELEMENTS 3D`
Minimum volume of 3D elements in m^3.

1.187 MINOR CONSTITUENTS INFERENCE

Type : Logical
Dimension : 1
Mnemo INTMICON
DEFAULT VALUE : NO
French keyword : `INTERPOLATION DE COMPOSANTES MINEURES`
For tidal solutions developed by OSU (e.g. TPXO) only. Inference of minor constituents from the ones read in input files linked to keywords `BINARY DATABASE 1 FOR TIDE` and `BINARY DATABASE 2 FOR TIDE`.

1.188 MIXED SEDIMENT

Type : Logical
Dimension : 1
Mnemo S3D_MIXTE
DEFAULT VALUE : NO
French keyword : `SEDIMENT MIXTE`
If YES, calculation of mixed sediment transport, there will be one cohesive sediment and one non cohesive sediment.

1.189 MIXING LENGTH MODEL

Type : Integer
Dimension : 1
Mnemo MIXING
DEFAULT VALUE : 1
French keyword : `MODELE DE LONGUEUR DE MELANGE`
Specifies the mixing length model used for vertical turbulence. Possible choices are:

- 1: Prandtl (suits such flows with a strong barotropic component as tidal flows),
- 3: Nezu and Nakagawa,

- 5: Quetin (better representation of wind drift),
- 6: Tsanis (better representation of wind drift).

4 (jet) has been suppressed.

1.190 MUD CONCENTRATIONS PER LAYER

Type :	Real
Dimension :	2
Mnemo	S3D_CONC_LAYER
DEFAULT VALUE :	MANDATORY
French keyword :	`CONCENTRATIONS DES COUCHES DE VASE`

Dry density of the mud-bed layers in g/L starting form the bottom upwards.

1.191 NAMES OF 2D PRIVATE VARIABLES

Type :	String
Dimension :	4
Mnemo	NAMES_PRIVE2D
DEFAULT VALUE :	'MANDATORY'
French keyword :	`NOMS DES VARIABLES PRIVEES 2D`

Name of variables in 2D private arrays in 32 characters, 16 for the name, 16 for the unit. If present, will be read in the `GEOMETRY FILE`. Maximum number of 4 names.

1.192 NAMES OF TRACERS

Type :	String
Dimension :	2
Mnemo	NAMETRAC
DEFAULT VALUE :	'MANDATORY'
French keyword :	`NOMS DES TRACEURS`

Name of tracers in 32 characters, 16 for the name, 16 for the unit.

1.193 NODES DISTANCES DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DDL7)%NAME
DEFAULT VALUE :	''
French keyword :	`FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS`

Results file for chaining with DELWAQ.

1.194 NON COHESIVE BED POROSITY

Type :	Real
Dimension :	1
Mnemo	S3D_XKV
DEFAULT VALUE :	0.4
French keyword :	`POROSITE DU LIT NON COHESIF`

The bed volume concentration **S3D_CFDEP** = (1-**S3D_XKV**) $\times$ **S3D_RHOS** is used to calculate the bed evolution of non-cohesive sand transport.

1.195 NON-HYDROSTATIC VERSION

Type :	Logical
Dimension :	1
Mnemo	NONHYD
DEFAULT VALUE :	YES
French keyword :	`VERSION NON-HYDROSTATIQUE`

Specifies the use of the non-hydrostatic code version or not.

1.196 NORTH

Type :	Real
Dimension :	1
Mnemo	NORD
DEFAULT VALUE :	0.
French keyword :	`NORD`

Angle of North, counted counter-clockwise, with Oy. Read but not used.

1.197 NUMBER OF 2D PRIVATE ARRAYS

Type :	Integer
Dimension :	1
Mnemo	NPRIV2D
DEFAULT VALUE :	0
French keyword :	`NOMBRE DE TABLEAUX PRIVES 2D`

Number of 2D arrays for own user programming in block **PRIVE2D**. It has to be lower or equal to 4.

1.198 NUMBER OF BOTTOM SMOOTHINGS

Type :	Integer
Dimension :	1
Mnemo	LISFON
DEFAULT VALUE :	0
French keyword :	`NOMBRE DE LISSAGES DU FOND`

Number of smoothings on bottom topography. Each smoothing is mass conservative. To be used when interpolation of bathymetry on the mesh gives very rough results.

1.199 NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES

Type :	Integer
Dimension :	1
Mnemo	NCO_DIST
DEFAULT VALUE :	1
French keyword :	`NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS`

For predictor-corrector options with advection scheme of type 3, 4, 5, LIPS or not). Number of iterations for every time step (or sub-time step) to converge to the solution. It is useful for unsteady cases. For quasi-steady flows, this keyword does not have a large impact on the solution, so it can be set to 0. On the other hand, for unsteady flows, it is suggested to set this keyword to 2 (at least), which is a good compromise between accuracy and computational time. Indeed, increasing the number of corrections the scheme is more accurate but the CPU time rapidly increases.

1.200 NUMBER OF CULVERTS

Type : Integer
Dimension : 1
Mnemo NBUSE
DEFAULT VALUE : 0
French keyword : NOMBRE DE BUSES

Number of culverts, tubes or bridges treated as source terms. They must be described as sources in the domain and their features are given in the CULVERTS DATA FILE (see written documentation).

1.201 NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS

Type : Integer
Dimension : 1
Mnemo GRADEB
DEFAULT VALUE : 0
French keyword : NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES

Determines the number of time steps after which the results are first written into the 2D or 3D RESULT FILE.

1.202 NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS

Type : Integer
Dimension : 1
Mnemo LISDEB
DEFAULT VALUE : 0
French keyword : NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING

Determines the number of time steps after which the results are first written into the listing.

1.203 NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS

Type : Integer
Dimension : 1
Mnemo NGAUSS
DEFAULT VALUE : 6
French keyword : NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES

See release notes v6.3. Number of Gauss points used to compute the weak characteristics. 6 (points) is the only choice for TELEMAC-3D.

1.204 NUMBER OF HORIZONTAL LEVELS

Type : Integer
Dimension : 1
Mnemo NPLAN
DEFAULT VALUE : 2
French keyword : NOMBRE DE PLANS HORIZONTAUX

Gives the number of planes from bottom to free surface. Must be at least 2.

1.205 NUMBER OF PRIVATE ARRAYS

Type : Integer
Dimension : 1
Mnemo NPRIV
DEFAULT VALUE : 0
French keyword : `NOMBRE DE TABLEAUX PRIVES`
Number of arrays for own user programming.

1.206 NUMBER OF SEDIMENT BED LAYERS

Type : Integer
Dimension : 1
Mnemo S3D_NCOUCH
DEFAULT VALUE : 1
French keyword : `NOMBRE DE COUCHES DU LIT COHESIF`
Number of cohesive sediment bed layers, should be less than 20.

1.207 NUMBER OF SUB ITERATIONS FOR NON LINEARITIES

Type : Integer
Dimension : 1
Mnemo NSOUSI
DEFAULT VALUE : 1
French keyword : `NOMBRE DE SOUS ITERATIONS POUR LES NON LINEARITES`
Used for updating, within one time step, the advection and propagation fields. Upon the first sub-iteration, these fields are given by C and the velocity field in the previous time step. At subsequent iterations, the results of the previous sub-iteration is used to update the advection and propagation field. The non-linearities can be taken into account through this technique.

1.208 NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES

Type : Integer
Dimension : 1
Mnemo NSP_DIST
DEFAULT VALUE : 1
French keyword : `NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS`
Only for implicit scheme with predictor-corrector (4 or 5). This keyword allows to subdivide the time step given by the user in the `STEERING FILE`, into several sub-steps. Again, it produces an effect on the precision of the scheme and it is convenient to set this keyword in order to have Courant numbers not too large (around 1).

1.209 NUMBER OF TIME STEPS

Type : Integer
Dimension : 1
Mnemo NIT
DEFAULT VALUE : 1
French keyword : `NOMBRE DE PAS DE TEMPS`
Specifies the number of time steps performed when running the code.

1.210 NUMBER OF TRACER FOR AMR

Type : Integer
Dimension : 1
Mnemo ITRAC_AMR
DEFAULT VALUE : 1
French keyword : `NUMERO DE TRACEUR POUR AMR`
Specifies the number of tracer used by the adaptive mesh algorithm (`MESH TRANSFORMATION` = 5).

1.211 NUMBER OF TRACERS

Type : Integer
Dimension : 1
Mnemo NTRAC
DEFAULT VALUE : 0
French keyword : `NOMBRE DE TRACEURS`
Defines the number of tracers.

1.212 OIL SPILL MODEL

Type : Logical
Dimension : 1
Mnemo SPILL_MODEL
DEFAULT VALUE : NO
French keyword : `MODELE DE NAPPES D'HYDROCARBURES`
Will trigger the oil spill model, in this case the `OIL SPILL STEERING FILE` is needed.

1.213 OIL SPILL STEERING FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DMIG)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DE COMMANDES HYDROCARBURES`
Contains data for the oil spill model.

1.214 OPEN BOUNDARY CONDITIONS ON THE BED

Type : Logical
Dimension : 1
Mnemo BEDBOU
DEFAULT VALUE : NO
French keyword : `CONDITIONS OUVERTES SUR LE FOND`
Defines if there are open boundary conditions on the bed.

1.215 OPTION FOR CHARACTERISTICS

Type : Integer
Dimension : 1
Mnemo OPTCHA
DEFAULT VALUE : 1
French keyword : `OPTION POUR LES CARACTERISTIQUES`

Possible choices are:

- 1: strong form,
- 2: weak form.

If SCHEME FOR ADVECTION OF... = 1 and also the corresponding keyword SCHEME OPTION FOR ADVECTION OF... = 2, OPTION FOR CHARACTERISTICS is automatically set to 2.

1.216 OPTION FOR CULVERTS

Type :	Integer
Dimension :	1
Mnemo	OPTBUSE
DEFAULT VALUE :	1
French keyword :	OPTION POUR LES BUSES

Option for the treatment of culverts. There are two options in TELEMAC-3D based on Bodhaine (1968) and Carlier (1976) formulae. Read the TELEMAC-3D theory guide for more informations.

1.217 OPTION FOR LIQUID BOUNDARIES

Type :	Integer
Dimension :	2
Mnemo	FRTYPE
DEFAULT VALUE :	MANDATORY
French keyword :	OPTION POUR LES FRONTIERES LIQUIDES

One integer per liquid boundary is given. Possible choices are:

- 1: classical boundary conditions,
- 2: Thompson method based on characteristics.

1.218 OPTION FOR SOFT BOUNDARIES

Type :	Integer
Dimension :	2
Mnemo	OPT_SOFT
DEFAULT VALUE :	MANDATORY
French keyword :	OPTION POUR LES FRONTIERES DOUCES

One integer per liquid boundary is given. Possible choices are:

- 0: Not a soft boundary ,
- 1: Method 1. Proportional to the speed,
- 2: Method 2. Proportional to the square of speed.

1.219 OPTION FOR THE BOUNDARY CONDITIONS OF K-EPSILON

Type :	Integer
Dimension :	1
Mnemo	OPTBCKE
DEFAULT VALUE :	1
French keyword :	OPTION POUR LES CONDITIONS AUX LIMITES DU K-EPSILON

Computation of the lateral boundary conditions of k and ε. Possible choices are:

- 1: no turbulence = the minimum values **KMIN** and **EMIN** defined in **CSTKEP**,
- 2: Hans Burchard formula.

1.220 OPTION FOR THE TREATMENT OF TIDAL FLATS

Type : Integer
Dimension : 1
Mnemo OPTBAN
DEFAULT VALUE : 1
French keyword : `OPTION DE TRAITEMENT DES BANCS DECOUVRANTS`

Used if `TIDAL FLATS` is YES. Possible choices are:

- 1: equations solved everywhere with correction on tidal flats (corrected free surface gradient),
- 2: dry elements are frozen (tidal flats area are masked). Warning: mass-conservation may be altered. Only works in serial computation.

1.221 OPTION FOR TIDAL BOUNDARY CONDITIONS

Type : Integer
Dimension : 2
Mnemo BND_TIDE
DEFAULT VALUE : MANDATORY
French keyword : `OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE`

Option for tidal boundary conditions. For real tides, option 1 is recommended. This keyword has been an array with a value given per liquid boundary, separated by semicolons, since version 7.1. This enables to have tidal conditions (or not) computed on liquid boundaries with prescribed velocities or depths, avoiding a clash when using weirs in the domain. 0 codes for conditions other than tidal. BEWARE since version 7.1! Old models must be changed if their tidal boundary is not number 1. In that case this keyword must be changed and more values given. Possible calibration with the keywords `COEFFICIENT TO CALIBRATE TIDAL RANGE`, `COEFFICIENT TO CALIBRATE TIDAL VELOCITIES`, and `COEFFICIENT TO CALIBRATE SEA LEVEL`. Possible choices are:

- 0: No tide,
- 1: Real tide (recommended methodology),
- 2: Astronomical tide,
- 3: Mean spring tide,
- 4: Mean tide,
- 5: Mean neap tide,
- 6: Astronomical neap tide,
- 7: Real tide (methodology before 2010).

1.222 OPTION FOR WIND

Type : Integer
Dimension : 1
Mnemo OPTWIND
DEFAULT VALUE : 1
French keyword : `OPTION DU VENT`
Gives the option for managing the wind:

- 1: constant in time and space, given by the keywords `WIND VELOCITY ALONG X` and `WIND VELOCITY ALONG Y`,
- 2: variable in time and constant in space, given by formatted file,
- 3: variable in time and space, given by formatted file or by a binary file.

1.223 OPTION OF SOLVER FOR DIFFUSION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo SLVDKE%KRYLOV
DEFAULT VALUE : 5
French keyword : `OPTION DU SOLVEUR POUR LA DIFFUSION DU K-EPSILON`
Dimension of Krylov space for the GMRES method (7). Old default value = 3 until version V8P0.

1.224 OPTION OF SOLVER FOR DIFFUSION OF THE SEDIMENT

Type : Integer
Dimension : 1
Mnemo S3D_SLVDSE%KRYLOV
DEFAULT VALUE : 5
French keyword : `OPTION DU SOLVEUR POUR LA DIFFUSION DU SEDIMENT`
Dimension of Krylov space for the GMRES method (7). Old default value = 3 until version V8P0.

1.225 OPTION OF SOLVER FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 2
Mnemo SLVDTA(ITRAC)%KRYLOV
DEFAULT VALUE : MANDATORY
French keyword : `OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS`
Dimension of Krylov space for the GMRES method (7). Default value = 5. Old default value = 3 until version V8P0.

1.226 OPTION OF SOLVER FOR DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo SLVDVI%KRYLOV
DEFAULT VALUE : 5
French keyword : `OPTION DU SOLVEUR POUR LA DIFFUSION DES VITESSES`

Dimension of Krylov space for the GMRES method (7). Old default value = 3 until version V8P0.

1.227 OPTION OF SOLVER FOR PPE

Type : Integer
Dimension : 1
Mnemo SLVPOI%KRYLOV
DEFAULT VALUE : 5
French keyword : `OPTION DU SOLVEUR POUR PPE`

Dimension of Krylov space for the GMRES method (7). Old default value = 3 until version V8P0.

1.228 OPTION OF SOLVER FOR PROPAGATION

Type : Integer
Dimension : 1
Mnemo SLVPRO%KRYLOV
DEFAULT VALUE : 5
French keyword : `OPTION DU SOLVEUR POUR LA PROPAGATION`

Dimension of Krylov space for the GMRES method (7). Old default value = 3 until version V8P0.

1.229 ORDINATES OF SOURCES

Type : Real
Dimension : 2
Mnemo YSCE
DEFAULT VALUE : MANDATORY
French keyword : `ORDONNEES DES SOURCES`

Floats giving the ordinates of potential sources of flow rates (in meters). The source will be located at the nearest node in the mesh.

1.230 ORIGINAL DATE OF TIME

Type : Integer
Dimension : 3
Mnemo MARDAT
DEFAULT VALUE : 1900;1;1
French keyword : `DATE DE L'ORIGINE DES TEMPS`

Enables to set the date of the time origin of the model when taking into account of the tide (tide generator force and/or the tidal boundary conditions). Also used with drogues, heat exchange with atmosphere, chaining with DELWAQ.

1.231 ORIGINAL HOUR OF TIME

Type : Integer
Dimension : 3
Mnemo MARTIM
DEFAULT VALUE : 0;0;0
French keyword : `HEURE DE L'ORIGINE DES TEMPS`

Enables to set the time of the time origin of the model when taking into account of the tide (tide

generator force and/or the tidal boundary conditions). Also used with drogues, heat exchange with atmosphere, chaining with DELWAQ.

1.232 PARALLEL PROCESSORS

Type :	Integer
Dimension :	1
Mnemo	NCSIZE
DEFAULT VALUE :	0
French keyword :	`PROCESSEURS PARALLELES`

Number of processors for domain partition. Value 0 corresponds to a scalar computation.

1.233 PARTITIONING TOOL

Type :	String
Dimension :	1
Mnemo	
DEFAULT VALUE :	'METIS'
French keyword :	`PARTITIONNEUR`

Partitioning tool selection:

- 1: METIS,
- 2: SCOTCH,
- 3: PARMETIS,
- 4: PTSCOTCH.

1.234 PRANDTL NUMBER

Type :	Real
Dimension :	1
Mnemo	PRANDTL
DEFAULT VALUE :	1.0
French keyword :	`NOMBRE DE PRANDTL`

Ratio between eddy viscosity and eddy diffusivity.

1.235 PRECONDITIONING FOR DIFFUSION OF K-EPSILON

Type :	Integer
Dimension :	1
Mnemo	SLVDKE%PRECON
DEFAULT VALUE :	2
French keyword :	`PRECONDITIONNEMENT POUR LA DIFFUSION DU K-EPSILON`

Choice of preconditioning for the diffusion of the k-ε model or Spalart-Allmaras model. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,

- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,
- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

1.236 PRECONDITIONING FOR DIFFUSION OF THE SEDIMENT

Type :	Integer
Dimension :	1
Mnemo	S3D_SLVDSE%PRECON
DEFAULT VALUE :	2
French keyword :	`PRECONDITIONNEMENT POUR LA DIFFUSION DU SEDIMENT`

Choice of the preconditioning in the sediment diffusion system that the convergence is speeded up when it is being solved. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,
- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,
- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

Some operations (either 2 or 3 diagonal preconditioning) can be performed concurrently with the others. Only prime numbers are therefore kept to denote the preconditioning operations. When several of them are to be performed concurrently, the product of relevant options shall be done.

1.237 PRECONDITIONING FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 2
Mnemo SLVDTA(ITRAC)%PRECON
DEFAULT VALUE : MANDATORY
French keyword : `PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS`

Choice of preconditioning for the diffusion of tracers. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,
- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,
- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

1.238 PRECONDITIONING FOR DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo SLVDVI%PRECON
DEFAULT VALUE : 2
French keyword : `PRECONDITIONNEMENT POUR LA DIFFUSION DES VITESSES`

Choice of preconditioning for the diffusion of velocities. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,
- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,
- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

1.239 PRECONDITIONING FOR PPE

Type : Integer
Dimension : 1
Mnemo SLVPOI%PRECON
DEFAULT VALUE : 2
French keyword : `PRECONDITIONNEMENT POUR PPE`
Preconditioning for the Poisson Pressure Equation. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,
- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,
- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

1.240 PRECONDITIONING FOR PROPAGATION

Type : Integer
Dimension : 1
Mnemo SLVPRO%PRECON
DEFAULT VALUE : 2
French keyword : `PRECONDITIONNEMENT POUR LA PROPAGATION`
Choice of the preconditioning in the propagation step linear system that the convergence is speeded up when it is being solved. Possible choices are:

- 0: no preconditioning,
- 2: diagonal,
- 3: diagonal with the condensed matrix,
- 5: diagonal with absolute values,
- 7: Crout,
- 11: Gauss-Seidel EBE,
- 13: matrix defined by the user,
- 14: diagonal and Crout,
- 17: direct solver on the vertical,

- 21: diagonal condensed and Crout,
- 34: diagonal and direct solver on the vertical.

Some operations (either 2 or 3 diagonal preconditioning) can be performed concurrently with the others. Only prime numbers are therefore kept to denote the preconditioning operations. When several of them are to be performed concurrently, the product of relevant options shall be done.

1.241 PRESCRIBED ELEVATIONS

Type :	Real
Dimension :	10
Mnemo	COTIMP
DEFAULT VALUE :	MANDATORY
French keyword :	`COTES IMPOSEES`

Values of the elevations prescribed at open boundaries.

1.242 PRESCRIBED FLOWRATES

Type :	Real
Dimension :	10
Mnemo	DEBIMP
DEFAULT VALUE :	MANDATORY
French keyword :	`DEBITS IMPOSES`

Values of the flowrates prescribed at open boundaries.

1.243 PRESCRIBED FLOWRATES ON THE BED

Type :	Real
Dimension :	10
Mnemo	BEDFLO
DEFAULT VALUE :	0.;0.;0.;0.;0.;0.;0.;0.;0.;0.
French keyword :	`DEBITS IMPOSES SUR LE FOND`

Sets the value for flow rate on flow rate-imposed bed boundaries.

1.244 PRESCRIBED TRACERS VALUES

Type :	Real
Dimension :	2
Mnemo	TRACER
DEFAULT VALUE :	MANDATORY
French keyword :	`VALEURS IMPOSEES DES TRACEURS`

Determines the imposed value of tracers at the first boundary, then at the second, and so on, with the same logic as `VALUE OF THE TRACERS AT THE SOURCES`.

1.245 PRESCRIBED VELOCITIES

Type :	Real
Dimension :	10
Mnemo	VITIMP
DEFAULT VALUE :	MANDATORY
French keyword :	`VITESSES IMPOSEES`

Values of the magnitudes of velocity prescribed at open boundaries.

1.246 PREVIOUS COMPUTATION FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DPRE)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DU CALCUL PRECEDENT`

Name of a file containing the results of an earlier computation which was made on the same mesh. The last recorded time step will provide the initial conditions for the new computation. In case of a perfect continued computation, the `PREVIOUS COMPUTATION FILE` has to be the `RESTART FILE` of the last computation. This last file is then an output file of the last computation. The `PREVIOUS COMPUTATION FILE FORMAT` and the `RESTART FILE FORMAT` have to be set with ”SERAFIND” or ”MED”.

1.247 PREVIOUS COMPUTATION FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DPRE)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DU CALCUL PRECEDENT`

Format of the `PREVIOUS COMPUTATION FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.248 PREVIOUS COMPUTATION SEDIMENTOLOGICAL FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DSUS)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER SEDIMENTOLOGIQUE DU CALCUL PRECEDENT`

Name of a file containing the sedimentological parameters (thickness and concentration of the bed. . .), results of an earlier computation which was made on the same mesh. The last recorded time step will provide the initial conditions for the new computation.

1.249 PRINTING CUMULATED FLOWRATES

Type :	Logical
Dimension :	1
Mnemo	CUMFLO
DEFAULT VALUE :	NO
French keyword :	`IMPRESSION DU CUMUL DES FLUX`

Printing the cumulated flowrates through control sections.

1.250 PRINTOUT PERIOD FOR DROGUES

Type :	Integer
Dimension :	1
Mnemo	FLOPRD
DEFAULT VALUE :	1
French keyword :	PERIODE POUR LES SORTIES DE FLOTTEURS

Number of time steps between 2 outputs of drogues positions in the binary file. It does not disturb the quality of the computation of the trajectory.

1.251 RAIN OR EVAPORATION

Type :	Logical
Dimension :	1
Mnemo	RAIN
DEFAULT VALUE :	NO
French keyword :	PLUIE OU EVAPORATION

Enables to add or remove water at the free surface. See the keyword RAIN OR EVAPORATION IN MM PER DAY.

1.252 RAIN OR EVAPORATION IN MM PER DAY

Type :	Real
Dimension :	1
Mnemo	CST_RAIN
DEFAULT VALUE :	0.
French keyword :	PLUIE OU EVAPORATION EN MM PAR JOUR

Specifies the amount of water to add or remove at the free surface.

1.253 RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER

Type :	Real
Dimension :	1
Mnemo	S3D_KSPRATIO
DEFAULT VALUE :	3.0
French keyword :	RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN

Ratio for the computation of skin friction. skin roughness = ratio $\times$ mean diameter.

1.254 READ CRITICAL BED SHEAR STRESS PER LAYER

Type :	Logical
Dimension :	1
Mnemo	S3D_READ_TOCE
DEFAULT VALUE :	NO
French keyword :	LECTURE CONTRAINTE CRITIQUE POUR CHAQUE COUCHE

Decides if erosion shear stress at each layer is read from GEOMETRY FILE.

1.255 RECORD NUMBER FOR RESTART

Type : Integer
Dimension : 1
Mnemo START_RECORD
DEFAULT VALUE : -1
French keyword : ENREGISTREMENT POUR SUITE DE CALCUL

In case of COMPUTATION CONTINUED = YES, record number to start from in the PREVIOUS COMPUTATION FILE. -1 means that the last record is taken.

1.256 RECORD NUMBER IN RESTART FILE

Type : Integer
Dimension : 1
Mnemo RESTART_RECORD
DEFAULT VALUE : -1
French keyword : NUMERO DE L'ENREGISTREMENT DANS LE FICHIER POUR SUITE

Determines the number of time step when printing the variables to be saved for a perfect restart in the RESTART FILE. Default = -1 means the RESTART FILE is only written at the last time step and/or periodically at the period RESTART FILE PRINTOUT PERIOD.

1.257 RECORD NUMBER IN WAVE FILE

Type : Integer
Dimension : 1
Mnemo NPTH
DEFAULT VALUE : 1
French keyword : NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE

Record number to be read by TELEMAC-3D in the wave driven currents file.

1.258 REFERENCE CONCENTRATION FORMULA

Type : Integer
Dimension : 1
Mnemo S3D_ICQ
DEFAULT VALUE : 1
French keyword : FORMULE POUR LA CONCENTRATION DE REFERENCE

- 1: Zyserman and Fredsoe, equilibrium formula,
- 3: Van Rijn formula (1987).

1.259 REFERENCE FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DREF)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE REFERENCE

Binary-coded result file for validation.

1.260 REFERENCE FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DREF)%FMT
DEFAULT VALUE :	'SERAFIN'
French keyword :	`FORMAT DU FICHIER DE REFERENCE`

Format of the `REFERENCE FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.261 RELATIVE HUMIDITY

Type :	Real
Dimension :	1
Mnemo	CST_HREL
DEFAULT VALUE :	50.
French keyword :	`HUMIDITE RELATIVE`

Gives the value of relative humidity when it is constant in time and space. In %.

1.262 RESIDENCE TIME FOR MUD

Type :	Real
Dimension :	30
Mnemo	S3D_TREST(S3D_NCOUCH)
DEFAULT VALUE :	MANDATORY
French keyword :	`TEMPS DE SEJOUR DE LA VASE`

Array which contains the residence times of the mud bed layers (the first value is related to the bottom layer and the last one to the top layer). These values are needed when `CONSOLIDATION MODEL` = 1 (Empirical multilayer model).

1.263 RESTART FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DRST)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER POUR SUITE`

Name of the file into which the last computation results shall be written in order to get a perfect continued computation. It is then an output file for the current computation, which will be used as an input file when a continued computation is expected to be perfect (the keyword `PREVIOUS COMPUTATION FILE` is then used). The `RESTART FILE FORMAT` and the `PREVIOUS COMPUTATION FILE FORMAT` have to be set with ”SERAFIND” or ”MED”.

1.264 RESTART FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DRST)%FMT
DEFAULT VALUE :	'SERAFIND'
French keyword :	`FORMAT DU FICHIER POUR SUITE`

Format of the `RESTART FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

Only double precision formats ensure a perfect restart.

1.265 RESTART FILE PRINTOUT PERIOD

Type :	Integer
Dimension :	1
Mnemo	RSTPRD
DEFAULT VALUE :	0
French keyword :	`PERIODE POUR LES SORTIES DU FICHIER POUR SUITE`

Determines, in number of time steps, the printout period for the variables to be saved for a perfect restart in the `RESTART FILE`. Default = 0 means the `RESTART FILE` is only written at the last time step or at the `RECORD NUMBER IN RESTART FILE`.

1.266 RESTART MODE

Type :	Logical
Dimension :	1
Mnemo	RESTART_MODE
DEFAULT VALUE :	NO
French keyword :	`MODE SUITE`

Triggers the filling of the `RESTART FILE`, which ensures a perfect restart of a computation, unlike using the `3D RESULT FILE`.

1.267 RESULT FILE IN LONGITUDE-LATITUDE

Type :	Logical
Dimension :	1
Mnemo	KEEP_LONLAT
DEFAULT VALUE :	YES
French keyword :	`FICHIER RESULTAT EN LONGITUDE-LATITUDE`

Gives the coordinates of the result file in longitude-latitude if the geometry file is also given in longitude-latitude.

1.268 SALINITY DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DDL4)%NAME
DEFAULT VALUE :	''
French keyword :	`FICHIER DELWAQ DE LA SALINITE`

Results file for chaining with DELWAQ.

1.269 SALINITY FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo SALI_DEL
DEFAULT VALUE : NO
French keyword : `SALINITE POUR DELWAQ`
Triggers the output of salinity for DELWAQ.

1.270 SCHEME FOR ADVECTION OF DEPTH

Type : Integer
Dimension : 1
Mnemo SCHCH
DEFAULT VALUE : 5
French keyword : `SCHEMA POUR LA CONVECTION DE LA HAUTEUR`
The conservative scheme (5) is now mandatory.

1.271 SCHEME FOR ADVECTION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo SCHCKE
DEFAULT VALUE : 5
French keyword : `SCHEMA POUR LA CONVECTION DU K-EPSILON`
Sets the advection scheme for the k-ε model or Spalart-Allmaras model. Possible choices are:

- 0: no convection,
- 1: characteristics,
- 2: SUPG,
- 3: Leo Postma scheme,
- 4: MURD scheme N,
  - SCHEME OPTION FOR ADVECTION OF VELOCITIES/TRACERS/K-EPSILON):
    - 1: classical explicit scheme;
    - 2: 1st order predictor-corrector;
    - 3: 2nd order predictor-corrector;
    - 4: implicit scheme compatible with tidal flats;
  - `NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES`: sets the number of sub-iterations for the 1st and 2nd order predictor-corrector schemes (a value around 4 is recommended).
- 5: MURD scheme PSI,
  - SCHEME OPTION FOR ADVECTION OF VELOCITIES/TRACERS/K-EPSILON):
    - 1: classical explicit scheme;

        * 2: 1st order predictor-corrector;
        * 3: 2nd order predictor-corrector;
        * 4: implicit scheme compatible with tidal flats;
      - NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES: sets the number of sub-iterations for the 1st and 2nd order predictor-corrector schemes (a value around 4 is recommended).
  - 13: Leo Postma for tidal flats,
  - 14: explicit N-scheme for tidal flats.

Default values for SCHEME FOR ADVECTION OF K-EPSILON = 5 + SCHEME OPTION FOR ADVECTION OF K-EPSILON = 4 give LIPS scheme. Old default value = 1 (characteristics) until version V8P0.

1.272 SCHEME FOR ADVECTION OF TRACERS

Type :	Integer
Dimension :	2
Mnemo	SCHCTA
DEFAULT VALUE :	MANDATORY
French keyword :	SCHEMA POUR LA CONVECTION DES TRACEURS

Sets the advection scheme for the tracers (one integer per tracer). Possible choices are:

- 0: no convection,
- 1: characteristics,
- 2: explicit + SUPG,
- 3: explicit Leo Postma,
- 4: explicit + MURD scheme N,
- 5: explicit + MURD scheme PSI,
- 13: Leo Postma for tidal flats,
- 14: N-scheme for tidal flats.

Default values for SCHEME FOR ADVECTION OF TRACERS = 5 + SCHEME OPTION FOR ADVECTION OF TRACERS = 4 give LIPS scheme.

1.273 SCHEME FOR ADVECTION OF VELOCITIES

Type :	Integer
Dimension :	1
Mnemo	SCHCVI
DEFAULT VALUE :	5
French keyword :	SCHEMA POUR LA CONVECTION DES VITESSES

Sets the advection scheme for the velocities. Possible choices are:

- 0: no convection,
- 1: characteristics,

- 2: explicit + SUPG,
- 3: explicit Leo Postma,
- 4: explicit + MURD scheme N,
- 5: explicit + MURD scheme PSI,
- 13: Leo Postma for tidal flats,
- 14: N-scheme for tidal flats.

Default values for `SCHEME FOR ADVECTION OF VELOCITIES` = 5 + `SCHEME OPTION FOR ADVECTION OF VELOCITIES` = 4 give LIPS scheme. Old default value = 1 (characteristics) until version V8P0.

1.274 SCHEME FOR DIFFUSION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo SCHDKE
DEFAULT VALUE : 1
French keyword : `SCHEMA POUR LA DIFFUSION DU K-EPSILON`

Monitors the choice of the diffusion scheme for k and ε. Possible choices are:

- 0: no diffusion,
- 1: implicit.

1.275 SCHEME FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 1
Mnemo SCHDTA
DEFAULT VALUE : 1
French keyword : `SCHEMA POUR LA DIFFUSION DES TRACEURS`

Monitors the choice of the diffusion scheme for tracers. Possible choices are:

- 0: no diffusion,
- 1: implicit.

1.276 SCHEME FOR DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo SCHDVI
DEFAULT VALUE : 1
French keyword : `SCHEMA POUR LA DIFFUSION DES VITESSES`

Monitors the choice of the diffusion scheme for velocities. Possible choices are:

- 0: no diffusion,
- 1: implicit.

1.277 SCHEME OPTION FOR ADVECTION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo OPTADV_KE
DEFAULT VALUE : 4
French keyword : `OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON`
If present replaces and has priority over: `OPTION FOR CHARACTERISTICS` and `SUPG OPTION`.
If N or PSI scheme:

- 1: explicit,
- 2: predictor-corrector,
- 3: predictor-corrector second-order in time,
- 4: implicit (compatible with tidal flats).

If no tidal flats, option 2 is faster. Old default value = 1 (explicit) until version V8P0.

1.278 SCHEME OPTION FOR ADVECTION OF TRACERS

Type : Integer
Dimension : 2
Mnemo OPTADV_TR
DEFAULT VALUE : MANDATORY
French keyword : `OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS`
If present replaces and has priority over: `OPTION FOR CHARACTERISTICS` and `SUPG OPTION`.
If N or PSI scheme:

- 1: explicit,
- 2: predictor-corrector,
- 3: predictor-corrector second-order in time,
- 4: implicit (compatible with tidal flats).

Default value = 4. If no tidal flats, option 2 is faster. Old default value = 1 (explicit) until version V8P0.

1.279 SCHEME OPTION FOR ADVECTION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo OPTADV_VI
DEFAULT VALUE : 4
French keyword : `OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES`
If present replaces and has priority over: `OPTION FOR CHARACTERISTICS` and `SUPG OPTION`.
If N or PSI scheme:

- 1: explicit,
- 2: predictor-corrector,
- 3: predictor-corrector second-order in time,
- 4: implicit (compatible with tidal flats).

If no tidal flats, option 2 is faster. Old default value = 1 (explicit) until version V8P0.

1.280 SECTIONS INPUT FILE

Type : String
Dimension : 1
Mnemo T3D_FILES%ADR(T3DSEC)
DEFAULT VALUE : ”
French keyword : `FICHIER DES SECTIONS DE CONTROLE`
Sections input file, partitioned.

1.281 SECTIONS OUTPUT FILE

Type : String
Dimension : 1
Mnemo T3D_FILES%ADR(T3DSEO)
DEFAULT VALUE : ”
French keyword : `FICHIER DE SORTIE DES SECTIONS DE CONTROLE`
Sections output file, written by the master.

1.282 SEDIMENT

Type : Logical
Dimension : 1
Mnemo S3D_SEDI
DEFAULT VALUE : NO
French keyword : `SEDIMENT`
If YES, sediment transport is modelled.

1.283 SEDIMENTOLOGICAL RESULT FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(S3D_T3DSED)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DES RESULTATS SEDIMENTOLOGIQUES`
Name of the file into which the sedimentological computation results (thickness and concentration of the mud bed...) shall be written, the periodicity being given by the keyword `GRAPHIC PRINTOUT PERIOD`.

1.284 SEDIMENTOLOGICAL RESULT FILE BINARY

Type : String
Dimension : 1
Mnemo S3D_BIRSED
DEFAULT VALUE : ’STD’
French keyword : `BINAIRE DU FICHIER DES RESULTATS SEDIMENTOLOGIQUES`
Binary file type used for writing the results file. This type depends on the machine on which the file was generated. The possible values are as follows:

- IBM, for a file on an IBM (from a CRAY),
- I3E, for a file on an HP (from a CRAY),
- STD, binary type of the machine on which the user is working.

In that case, normal READ and WRITE commands are used.

1.285 SETTLING VELOCITY OF SANDS

Type : Real
Dimension : 1
Mnemo S3D_WCS0
DEFAULT VALUE : 0.
French keyword : `VITESSE DE CHUTE DES SABLES`
Non cohesive sediment settling velocity.

1.286 SHIELDS PARAMETER

Type : Real
Dimension : 1
Mnemo S3D_AC
DEFAULT VALUE : 0.047
French keyword : `PARAMETRE DE SHIELDS`
Used to determine the critical bed shear stress value.

1.287 SKIN FRICTION CORRECTION

Type : Integer
Dimension : 1
Mnemo S3D_ICR
DEFAULT VALUE : 0
French keyword : `CORRECTION FROTTEMENT DE PEAU`
Formula to predict the skin bed roughness:

- 0: No correction (TAUP = TOB) see also `RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN` **S3D_KSPRATIO**,
- 1: Flat bed (KSP = **S3D_KSPRATIO** $\times$ **S3D_D50**),
- 2: Ripple correction factor (not yet implemented).

1.288 SOLAR RADIATION

Type : Real
Dimension : 1
Mnemo CST_RAY3
DEFAULT VALUE : 160.
French keyword : `RAYONNEMENT SOLAIRE`
Gives the value of solar radiation when it is constant in time and space. In W/m^2.

1.289 SOLVER FOR DIFFUSION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo SLVDKE%SLV
DEFAULT VALUE : 1
French keyword : `SOLVEUR POUR LA DIFFUSION DU K-EPSILON`
Choice of the solver for the diffusion of k and ε. but also $\tilde{\nu}$. Possible choices are:

- 1: conjugate gradient,

- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,
- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

1.290 SOLVER FOR DIFFUSION OF THE SEDIMENT

Type : Integer
Dimension : 1
Mnemo S3D_SLVDSE%SLV
DEFAULT VALUE : 3
French keyword : `SOLVEUR POUR LA DIFFUSION DU SEDIMENT`
Choice of the solver for the sediment equation. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,
- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

1.291 SOLVER FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 2
Mnemo SLVDTA(ITRAC)%SLV
DEFAULT VALUE : MANDATORY
French keyword : `SOLVEUR POUR LA DIFFUSION DES TRACEURS`
Choice of the solver for the diffusion of tracers (one integer per tracer). Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,

- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

1.292 SOLVER FOR DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo SLVDVI%SLV
DEFAULT VALUE : 1
French keyword : `SOLVEUR POUR LA DIFFUSION DES VITESSES`

Choice of the solver for the diffusion of velocities U and V. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,
- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

1.293 SOLVER FOR PPE

Type : Integer
Dimension : 1
Mnemo SLVPOI%SLV
DEFAULT VALUE : 7
French keyword : `SOLVEUR POUR PPE`

Choice of the solver for the Poisson Pressure Equation. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,
- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

Old default value = 1 (conjugate gradient) until version V8P0.

1.294 SOLVER FOR PROPAGATION

Type :	Integer
Dimension :	1
Mnemo	SLVPRO%SLV
DEFAULT VALUE :	7
French keyword :	`SOLVEUR POUR LA PROPAGATION`

Choice of the solver for the propagation equation. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient,
- 6: CGSTAB,
- 7: GMRES,
- 8: direct solver.

Old default value = 1 (conjugate gradient) until version V8P0.

1.295 SOURCES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DVEF)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES SOURCES`

Name of the file containing time-dependent information on sources.

1.296 SPATIAL PROJECTION TYPE

Type :	Integer
Dimension :	1
Mnemo	PROTYP
DEFAULT VALUE :	2
French keyword :	`TYPE DE PROJECTION SPATIALE`

Specifies the type of spatial projection used (for example when using spherical coordinates). Possible choices are:

- 1: Cartesian, not georeferenced,
- 2: Mercator,
- 3: latitude/longitude (in degrees).

Option 2 or 3 mandatory for spherical coordinates. Option 3: latitude and longitude in degrees! When using option 3, the coordinates are automatically treated by TELEMAC-3D using Mercator projection.

1.297 SPHERICAL COORDINATES

Type :	Logical
Dimension :	1
Mnemo	SPHERI
DEFAULT VALUE :	NO
French keyword :	`COORDONNEES SPHERIQUES`

Selection of spherical coordinates to perform the computation (for large computation domains). Warning: this option is closely related to the mesh that should have been entered onto a nautical chart drawn as per Mercator projection The `LATITUDE OF ORIGIN POINT`, which corresponds to ordinate $y = 0$ in the mesh, must moreover be given.

1.298 STAGE-DISCHARGE CURVES

Type :	Integer
Dimension :	10
Mnemo	STA_DIS_CURVES
DEFAULT VALUE :	MANDATORY
French keyword :	`COURBES DE TARAGE`

Specifies if a discharge-elevation curve must be used for a given boundary (one value per open boundary):

- 0: no,
- 1: Z(Q),
- 2: Q(Z). Not yet implemented.

1.299 STAGE-DISCHARGE CURVES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DPAR)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DES COURBES DE TARAGE`

Name of the file containing stage-discharge curves.

1.300 STAGE-DISCHARGE CURVES RELAXATION COEFFICIENT

Type :	Real
Dimension :	1
Mnemo	RELAX_STA_DIS
DEFAULT VALUE :	0.02
French keyword :	`COEFFICIENT DE RELAXATION DES COURBES DE TARAGE`

Relaxation coefficient used to interpolate free surface elevation with respect to flowrate from the stage-discharge curve (for `STAGE-DISCHARGE CURVES` = 1). If set to 1., the elevation is instantaneously prescribed corresponding to the stage-discharge curve, but this may lead to instabilities. Setting a value between 0. and 1., a delay is introduced to prescribe this stage-discharge curve, that is a compromise between the goal of the stage-discharge curve and possible instabilities. Read the TELEMAC-3D user manual for more details.

1.301 STANDARD VALUES FOR TRACERS

Type : Real
Dimension : 2
Mnemo T0AC
DEFAULT VALUE : MANDATORY
French keyword : `VALEURS DE REFERENCE DES TRACEURS`

Reference value of tracers corresponding to the given density when using `DENSITY LAW` = 4 (one value per tracer).

1.302 STEERING FILE

Type : String
Dimension : 1
Mnemo
DEFAULT VALUE : ”
French keyword : `FICHIER DES PARAMETRES`

Name of the file containing the parameters of the computation. Written by the user.

1.303 STOCHASTIC DIFFUSION MODEL

Type : Integer
Dimension : 1
Mnemo STOCHA
DEFAULT VALUE : 0
French keyword : `MODELE DE DIFFUSION STOCHASTIQUE`

For particles: drogues, oil spills. If no turbulence is activated, this stochastic diffusion is not considered during the particle transport.

1.304 SUPG OPTION

Type : Integer
Dimension : 4
Mnemo OPTSUP
DEFAULT VALUE : 1;0;1;1
French keyword : `OPTION DE SUPG`

Specifies the type of upwinding used. Possible choices are:

- 0: no upwinding,
- 1: classical SUPG,
- 2: modified SUPG.

Only the 1st coefficient is used (and applied to U, V and W). It is also this coefficient which is applied to tracer(s), k and ε if needed.

1.305 TEMPERATURE DELWAQ FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DDL8)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DELWAQ DE LA TEMPERATURE`

Results file for chaining with DELWAQ.

1.306 TEMPERATURE FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo TEMP_DEL
DEFAULT VALUE : NO
French keyword : TEMPERATURE POUR DELWAQ
Triggers the output of temperature for DELWAQ.

1.307 THRESHOLD CONCENTRATION FOR HINDERED SETTLING

Type : Real
Dimension : 1
Mnemo S3D_CINI
DEFAULT VALUE : 0.0
French keyword : CONCENTRATION LIMITE POUR VITESSE DE CHUTE ENTRAVEE
The sediment concentration at which hindered settling is initiated. These values are needed when HINDERED SETTLING = YES.

1.308 THRESHOLD DEPTH FOR WIND

Type : Real
Dimension : 1
Mnemo HWIND
DEFAULT VALUE : 1.
French keyword : PROFONDEUR LIMITE POUR LE VENT
Wind is not taken into account for depths smaller than this value.

1.309 THRESHOLD FOR SEDIMENT FLUX CORRECTION ON TIDAL FLATS

Type : Real
Dimension : 1
Mnemo S3D_HSED
DEFAULT VALUE : 0.2
French keyword : SEUIL LIMITE POUR EROSION SUR BANCS DECOUVRANTS
Below this limiting depth, all sediment erosion rates are set to zero. See subroutine **FLUSED**.

1.310 THRESHOLD FOR VISCOSITY CORRECTION ON TIDAL FLATS

Type : Real
Dimension : 1
Mnemo HLIM
DEFAULT VALUE : 0.2
French keyword : SEUIL POUR CORRECTION DE VISCOSITE SUR BANCS DECOUVRANTS
Below the threshold, viscosity will be progressively cancelled. See **CLIP** subroutine.

1.311 THRESHOLD HEIGHT BEFORE CRUSHED ELEMENTS

Type : Real
Dimension : 1
Mnemo MIN_DZ
DEFAULT VALUE : 0.
French keyword : HAUTEUR SEUIL AVANT ELEMENTS ECRASES

Minimum height below which 3D elements are treated as crushed. This is not done for the free surface plane.

1.312 TIDAL DATA BASE

Type :	Integer
Dimension :	1
Mnemo	TIDALDB
DEFAULT VALUE :	-1
French keyword :	`BASE DE DONNEES DE MAREE`

Gives the name of the data base used to automatically generate the boundary conditions. Possible choices are:

- 1: JMJ,
- 2: TPXO,
- 3: MISCELLANEOUS (LEGOS-NEA, FES20XX, PREVIMER...).

For JMJ, indicate the location of the files bdd_jmj and geofin with keywords `ASCII DATABASE FOR TIDE` and `TIDAL MODEL FILE`. For TPXO, LEGOS-NEA, FES20XX and PREVIMER, the user has to download files of harmonic constituents on the internet.

1.313 TIDAL FLATS

Type :	Logical
Dimension :	1
Mnemo	BANDEC
DEFAULT VALUE :	YES
French keyword :	`BANCS DECOUVRANTS`

When NO, the specific treatments for tidal flats are by-passed. This spares time, but of course you must be sure that you have no tidal flats.

1.314 TIDAL MODEL FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DTID)
DEFAULT VALUE :	”
French keyword :	`FICHIER DU MODELE DE MAREE`

Geometry file of the model from which harmonic constituents are extracted (JMJ only).

1.315 TIDAL MODEL FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DTID)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	`FORMAT DU FICHIER DU MODELE DE MAREE`

Format of the `TIDAL MODEL FILE`. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.316 TIDE GENERATING FORCE

Type :	Logical
Dimension :	1
Mnemo	MAREE
DEFAULT VALUE :	NO
French keyword :	`FORCE GENERATRICE DE LA MAREE`

The tide generating force is taken into account.

1.317 TIME SERIES COORDINATES FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DCOO)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DE COORDONNEES DES SERIES TEMPORELLES`

Name of the file containing points coordinates and periods of time where time series are extracted in the `TIME SERIES FILE` (2D or 3D).

1.318 TIME STEP

Type :	Real
Dimension :	1
Mnemo	DT
DEFAULT VALUE :	1.
French keyword :	`PAS DE TEMPS`

Specifies the time step in seconds.

1.319 TIME STEP FOR CONSOLIDATION

Type :	Real
Dimension :	1
Mnemo	S3D_DTC
DEFAULT VALUE :	1200.
French keyword :	`PAS DE TEMPS DE LA CONSOLIDATION`

Time step for the modelling consolidation, which can be greater than the hydrodynamic time step. This parameter is used if `CONSOLIDATION MODEL` = 1 (Empirical multilayer model) or 2 (Gibson model (Lenormant)).

1.320 TITLE

Type :	String
Dimension :	1
Mnemo	TITCAS
DEFAULT VALUE :	”
French keyword :	`TITRE`

Title of the case being considered.

1.321 TOMAWAC STEERING FILE

Type :	String
Dimension :	1
Mnemo	PAS DE MNEMO
DEFAULT VALUE :	”
French keyword :	`FICHIER DES PARAMETRES DE TOMAWAC`

TOMAWAC parameter file in case of internal coupling.

1.322 TRACERS VERTICAL PROFILES

Type :	Integer
Dimension :	2
Mnemo	VERPROTRA
DEFAULT VALUE :	MANDATORY
French keyword :	`PROFILS DES TRACEURS SUR LA VERTICALE`

Specifies the type of profiles of tracer concentration on the vertical. There are as many values to be given as the product of the number of tracers and the number of open boundaries. Possible choices are:

- 0: user defined,
- 1: constant,
- 2: Rouse equilibrium, constant (diluted tracer) or Rouse (sediment),
- 3: Rouse (normalized) and imposed concentration.
- 4: Rouse modified with molecular viscosity.

1.323 TREATMENT OF FLUXES AT THE BOUNDARIES

Type :	Integer
Dimension :	2
Mnemo	DIRFLU
DEFAULT VALUE :	MANDATORY
French keyword :	`TRAITEMENT DES FLUX AUX FRONTIERES`

Used so far only with the SUPG, PSI and N schemes (one integer per open boundary). Possible choices are:

- 1: priority to prescribed values,
- 2: priority to fluxes.

With option 2, Dirichlet prescribed values are not obeyed, but the fluxes are correct.

1.324 TREATMENT OF NEGATIVE DEPTHS

Type :	Integer
Dimension :	1
Mnemo	OPT_HNEG
DEFAULT VALUE :	1
French keyword :	`TRAITEMENT DES HAUTEURS NEGATIVES`

Only with `OPTION FOR THE TREATMENT OF TIDAL FLATS` = 1. Possible choices are:

- 0: no treatment,
- 1: smoothing,
- 2: flux control.

If using option 2 with tidal flats, it is mandatory to set MASS-LUMPING FOR DEPTH = 1.

1.325 TREATMENT ON TIDAL FLATS FOR K-EPSILON

Type : Integer
Dimension : 1
Mnemo TRBAKE
DEFAULT VALUE : 0
French keyword : TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LE K-EPSILON
Treatment of tidal flats at the diffusion step for k and ε.

- 0: forced to zero,
- 1: value before masked.

1.326 TREATMENT ON TIDAL FLATS FOR TRACERS

Type : Integer
Dimension : 1
Mnemo TRBATA
DEFAULT VALUE : 0
French keyword : TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES TRACEURS
Treatment of tidal flats at the diffusion step for tracers.

- 0: forced to zero,
- 1: value before masked.

Use choice 1 to ensure conservation of tracer(s).

1.327 TREATMENT ON TIDAL FLATS FOR VELOCITIES

Type : Integer
Dimension : 1
Mnemo TRBAVI
DEFAULT VALUE : 0
French keyword : TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES VITESSES
Treatment of tidal flats at the diffusion step for velocities.

- 0: forced to zero,
- 1: value before masked.

1.328 TURBULENCE REGIME FOR LATERAL SOLID BOUNDARIES

Type :	Integer
Dimension :	1
Mnemo	LISRUL
DEFAULT VALUE :	2
French keyword :	`REGIME DE TURBULENCE POUR LES PAROIS LATERALES`

Defines the turbulence regime for the lateral boundaries:

- 1: smooth,
- 2: rough.

1.329 TURBULENCE REGIME FOR THE BOTTOM

Type :	Integer
Dimension :	1
Mnemo	LISRUF
DEFAULT VALUE :	2
French keyword :	`REGIME DE TURBULENCE POUR LE FOND`

Defines the turbulence regime for the bottom in the case of a k-ε or mixing-length model:

- 1: smooth,
- 2: rough,
- 3: rough also (for compatibility with old versions).

1.330 TYPE OF SOURCES

Type :	Integer
Dimension :	1
Mnemo	OPTSOU
DEFAULT VALUE :	1
French keyword :	`TYPE DES SOURCES`

Defines how the sources are computed:

- 1: Source term multiplied by a finite element basis,
- 2: Source term multiplied by a Dirac function (recommended with high numbers of sources).

1.331 VALIDATION

Type :	Logical
Dimension :	1
Mnemo	VALID
DEFAULT VALUE :	NO
French keyword :	`VALIDATION`

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

1.332 VALUE OF ATMOSPHERIC PRESSURE

Type : Real
Dimension : 1
Mnemo CST_PATMOS
DEFAULT VALUE : 100000.
French keyword : `VALEUR DE LA PRESSION ATMOSPHERIQUE`
Gives the value of atmospheric pressure when it is constant in time and space. In Pa.

1.333 VALUE OF THE TRACERS AT THE SOURCES

Type : Real
Dimension : 2
Mnemo TASCE
DEFAULT VALUE : MANDATORY
French keyword : `VALEURS DES TRACEURS DES SOURCES`
Sets the value of the tracers at the sources. All tracers for the first source, then all tracers for the second source, etc. (see user manual). For example, if there are 3 tracers (T1, T2 and T3) and 2 sources (S1 and S2), the following syntax is used:
S1_T1;S1_T2;S1_T3;S2_T1;S2_T2;S2_T3
10.0; 10.0; 0.0; 0.0; 10.0; 10.0

1.334 VALUES OF TRACERS IN THE RAIN

Type : Real
Dimension : 2
Mnemo TRAIN
DEFAULT VALUE : MANDATORY
French keyword : `VALEURS DES TRACEURS DANS LA PLUIE`
Sets the value of the tracers in the rain.

1.335 VARIABLES FOR 2D GRAPHIC PRINTOUTS

Type : String
Dimension : 1
Mnemo SORT2D
DEFAULT VALUE : 'U,V,H,B'
French keyword : `VARIABLES POUR LES SORTIES GRAPHIQUES 2D`
Names of variables that may be written in the `2D RESULT FILE`. Every variable is represented by a group of letters with any separator between them , ; or blank possibilities are the following:

- U: depth averaged velocity along x axis (m/s),
- V: depth averaged velocity along y axis (m/s),
- C: celerity (m/s),
- H: water depth (m),
- S: free surface elevation (m),
- B: bottom elevation (m),
- TAi: TAi concentrations for tracers, i is the tracer number,

- TA*: TA concentrations for tracers from 1 to 9,
- TA**: TA concentrations for tracers from 10 to 99,
- F: Froude number,
- Q: scalar discharge (m^2/s),
- I: discharge along x (m^2/s),
- J: discharge along y (m^2/s),
- M: norm of velocity (m/s),
- X: wind along x axis (m/s),
- Y: wind along y axis (m/s),
- P: atmospheric pressure (Pa),
- W: friction coefficient,
- RB: non erodible bottom elevation (m),
- HD: thickness of the fresh deposits (m),
- EF: erosion rate ($kg/m^2/s$),
- DF: probability of deposition ($kg/m^2/s$),
- DZF : bed evolution,
- PRIVE1: work array PRIVE 1,
- PRIVE2: work array PRIVE 2,
- PRIVE3: work array PRIVE 3,
- PRIVE4: work array PRIVE 4,
- QS: solid discharge (m^2/s),
- QSX: solid discharge along x (m^2/s),
- QSY: solid discharge along y (m^2/s),
- US: friction velocity (m/s),
- MAXZ: maximum value of the free surface elevation during the computation (m),
- TMXZ: time corresponding to this maximum elevation (s),
- TAIR: air temperature (°C),
- USURF: velocity along x axis at the surface (m/s),
- VSURF: velocity along y axis at the surface (m/s),
- WSURF: velocity along z axis at the surface (m/s),

- MSURF: magnitude of velocity at the surface (m/s),
- TASURFi: TAi conc for tracers at the surface, i is the tracer number,
- TASURF*: TA conc for tracers at the surface from 1 to 9,
- TASURF**: TA conc for tracers at the surface from 10 to 99,
- CSO2: depth averaged oxygen saturation concentration (mgO2/l),
- O2SAT: depth averaged percentage of oxygen saturation (%).

1.336 VARIABLES FOR 3D GRAPHIC PRINTOUTS

Type :	String
Dimension :	1
Mnemo	SORT3D
DEFAULT VALUE :	'Z,U,V,W'
French keyword :	`VARIABLES POUR LES SORTIES GRAPHIQUES 3D`

Names of variables to be written in the `3D RESULT FILE`. Free choice of separator. You can ask for:

- U : velocity along x (m/s),
- V : velocity along y (m/s),
- W : velocity along z (m/s),
- Z : elevation z (m),
- TAx: concentration of tracers,
- NUX: viscosity for U and V along x (m^2/s),
- NUY: viscosity for U and V along y (m^2/s),
- NUZ: viscosity for U and V along z (m^2/s),
- NAX: viscosity for tracers along x (m^2/s),
- NAY: viscosity for tracers along y (m^2/s),
- NAZ: viscosity for tracers along z (m^2/s),
- RI : Richardson number for mixing length model,
- K : turbulent kinetic energy for k-ε model (J/kg),
- EPS: dissipation of turbulent kinetic energy (W/kg),
- DP : dynamic pressure (multiplied by DT/RHO),
- PH : hydrostatic pressure (Pa),
- RHO: relative density,
- P1 : private variable 1,
- P2 : private variable 2,

- P3 : private variable 3,
- P4 : private variable 4,
- US : Stokes velocity along x axis (m/s),
- VS : Stokes velocity along y axis (m/s),
- WS : Stokes velocity along z axis (m/s),
- CSO2: oxygen saturation concentration (mgO2/l),
- O2SAT: percentage of oxygen saturation (%).

1.337 VECTOR LENGTH

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

Vector length on vector machines.

1.338 VELOCITIES IN BINARY DATABASE 2 FOR TIDE

Type :	Logical
Dimension :	1
Mnemo	VIT_IN_T3DBB2
DEFAULT VALUE :	NO
French keyword :	`VITESSES DANS BASE BINAIRE 2 DE DONNEES DE MAREE`

Indicates if `BINARY DATABASE 2 FOR TIDE` contains velocities or circulations (h times velocities). For OSU solutions, let default value NO (circulation). For HAMTIDE, choose YES.

1.339 VELOCITIES OF THE SOURCES ALONG X

Type :	Real
Dimension :	2
Mnemo	USCE
DEFAULT VALUE :	MANDATORY
French keyword :	`VITESSES DES SOURCES SELON X`

Specifies the compoment along x of the velocities of the sources. If nothing is specified, the sources diffuse without any velocity in every direction (cf. validation case source).

1.340 VELOCITIES OF THE SOURCES ALONG Y

Type :	Real
Dimension :	2
Mnemo	VSCE
DEFAULT VALUE :	MANDATORY
French keyword :	`VITESSES DES SOURCES SELON Y`

Specifies the compoment along y of the velocities of the sources. If nothing is specified, the sources diffuse without any velocity in every direction (cf. validation case source).

1.341 VELOCITIES OF THE SOURCES ALONG Z

Type : Real
Dimension : 2
Mnemo WSCE
DEFAULT VALUE : MANDATORY
French keyword : `VITESSES DES SOURCES SELON Z`

Specifies the compoment along z of the velocities of the sources. If nothing is specified, the sources diffuse without any velocity in every direction (cf. validation case source).

1.342 VELOCITY DELWAQ FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DDL9)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DELWAQ DE LA VITESSE`

Results file for chaining with DELWAQ.

1.343 VELOCITY FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo VELO_DEL
DEFAULT VALUE : NO
French keyword : `VITESSE POUR DELWAQ`

Triggers the output of velocity for DELWAQ.

1.344 VELOCITY PROFILES

Type : Integer
Dimension : 2
Mnemo PROFVEL
DEFAULT VALUE : MANDATORY
French keyword : `PROFILS DE VITESSE`

Specifies the type of horizontal profile of velocities (one integer per open boundary). Possible choices are:

- 1: constant normal profile,
- 2: u and v given in the `BOUNDARY CONDITION FILE`,
- 3: normal velocity given in **UBOR** in the `BOUNDARY CONDITION FILE`,
- 4: normal velocity in $\sqrt{h}$,
- 5: like 4 but virtual depth based on the lowest elevation of the boundary.

1.345 VELOCITY PROJECTED ON BOTTOM

Type : Logical
Dimension : 1
Mnemo VELPROBOT
DEFAULT VALUE : YES
French keyword : `VITESSE PROJETEE SUR LE FOND`

Will ensure $\boldsymbol{U}.\boldsymbol{n} = 0$ on bottom by a projection at the end of time loop.

1.346 VELOCITY PROJECTED ON SOLID LATERAL BOUNDARIES

Type : Logical
Dimension : 1
Mnemo VELPROLAT
DEFAULT VALUE : YES
French keyword : `VITESSE PROJETEE SUR LES PAROIS LATERALES SOLIDES`
Will ensure $\boldsymbol{U}.\boldsymbol{n} = 0$ on solid lateral boundaries by a projection at the end of time loop.

1.347 VELOCITY VERTICAL PROFILES

Type : Integer
Dimension : 2
Mnemo VERPROVEL
DEFAULT VALUE : MANDATORY
French keyword : `PROFILS DE VITESSE SUR LA VERTICALE`
Specifies the type of vertical profile of velocity (one integer per open boundary). Possible choices are:

- 0: defined by user,
- 1: constant,
- 2: logarithmic.

1.348 VERTICAL FLUXES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T3D_FILES(T3DDL3)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DELWAQ DES FLUX VERTICAUX`
Results file for chaining with DELWAQ.

1.349 VERTICAL TURBULENCE MODEL

Type : Integer
Dimension : 1
Mnemo ITURBV
DEFAULT VALUE : 1
French keyword : `MODELE DE TURBULENCE VERTICAL`
Specifies the vertical turbulence model. The available choices are:

- 1: constant viscosity,
- 2: mixing length,
- 3: k-ε model,
- 4: Smagorinski,
- 5: Spalart-Allmaras,

- 6: GOTM,
- 7: k-ω model,
- 9: DES model (Detached Eddy Simulation).

Caution: if option 1 is chosen, give the right COEFFICIENT FOR... DIFFUSION OF VELOCITIES... If option 3 ou 7 is chosen, this parameter must get its real physical value of molecular diffusivity, generally about 10^{-6} because it is used as well in the turbulence model.

1.350 VERTICAL VELOCITY DERIVATIVES

Type :	Integer
Dimension :	1
Mnemo	LINLOG
DEFAULT VALUE :	1
French keyword :	DERIVEES VERTICALES DES VITESSES

Way of computing the velocity derivatives along z only for a mixing length model over the vertical:

- 1: linear derivative (classic),
- 2: logarithmic derivative (better for logarithmic profiles) between the bottom and 0.2 times the water depth.

Option 2 allows getting better results when modelling the velocity profile near the bottom.

1.351 VOLUMES DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T3D_FILES(T3DDL1)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DELWAQ DES VOLUMES

Results file for chaining with DELWAQ.

1.352 WAQTEL STEERING FILE

Type :	String
Dimension :	1
Mnemo	
DEFAULT VALUE :	”
French keyword :	FICHIER DES PARAMETRES DE WAQTEL

File for physical parameters of water quality processes (local ones of TELEMAC-3D-WAQTEL not those of DELWAQ).

1.353 WATER DISCHARGE OF SOURCES

Type :	Real
Dimension :	2
Mnemo	QSCE
DEFAULT VALUE :	MANDATORY
French keyword :	DEBITS DES SOURCES

Specifies the discharge for every source. A positive discharge means that fluid is added.

1.354 WATER QUALITY PROCESS

Type :	Integer
Dimension :	1
Mnemo	WAQPROCESS
DEFAULT VALUE :	1
French keyword :	`PROCESSUS DE QUALITE D'EAU`

Gives the water quality process number, defined as a multiplicative combination of prime numbers (2, 3, 5, 7, 11, 13, 17 and 19) with 0 and 1 having a special role:

- 0: all,
- 1: none,
- 2: O2,
- 3: BIOMASS,
- 5: EUTRO,
- 7: MICROPOL,
- 11: THERMIC,
- 13: AED2,
- 17: Degradation law,
- 19: Ghost process for ice modelling.

Example: 110 = 2x5x11 activates O2, EUTRO and THERMIC together. It is noted that AED2 should be used on its own, for the time being, without possible combination with other processes.

1.355 WAVE DRIVEN CURRENTS

Type :	Logical
Dimension :	1
Mnemo	COUROU
DEFAULT VALUE :	NO
French keyword :	`COURANTS DE HOULE`

Wave driven currents are taken into account, see subroutine **TRISOU**.

1.356 WEAK SOIL CONCENTRATION FOR MUD

Type :	Real
Dimension :	1
Mnemo	S3D_CGEL
DEFAULT VALUE :	0.0
French keyword :	`CONCENTRATION LIMITE FLUIDE-SOLIDE`

The sediment concentration at which sediment forms a weak soil in kg/m^3. These values are needed when `HINDERED SETTLING` = YES.

1.357 WIND

Type : Logical
Dimension : 1
Mnemo VENT
DEFAULT VALUE : NO
French keyword : `VENT`
Determines whether the wind effects are to be taken into account or not.

1.358 WIND VELOCITY ALONG X

Type : Real
Dimension : 1
Mnemo CST_WINDX
DEFAULT VALUE : 0.
French keyword : `VITESSE DU VENT SUIVANT X`
Wind velocity, component along x axis (m/s), if constant.

1.359 WIND VELOCITY ALONG Y

Type : Real
Dimension : 1
Mnemo CST_WINDY
DEFAULT VALUE : 0.
French keyword : `VITESSE DU VENT SUIVANT Y`
Wind velocity, component along y axis (m/s), if constant.

1.360 ZERO

Type : Real
Dimension : 1
Mnemo
DEFAULT VALUE : 1.E-10
French keyword : `ZERO`
Not used so far.

1.361 ZONE NUMBER IN GEOGRAPHIC SYSTEM

Type : Integer
Dimension : 1
Mnemo NUMZONE
DEFAULT VALUE : -1
French keyword : `NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE`
Number of zone when using a plane projection. Indicate the geographic system in which the numerical model is built with the keyword `GEOGRAPHIC SYSTEM`. Possible choices are:

- 1: Lambert 1 north,
- 2: Lambert 2 center,
- 3: Lambert 3 south,
- 4: Lambert 4 Corsica,

- 22: Lambert 22 extended,
- 93: Lambert 93,
- X: UTM zone with WGS84 (X is the number of the zone).

2. List of keywords classified according to type

2.1 AUTOMATIC DIFFERENTIATION

AD LINEAR SOLVER DERIVATIVE CONVERGENCE
AD LINEAR SOLVER RESET DERIVATIVES
AD NAMES OF DERIVATIVES
AD NUMBER OF DERIVATIVES
AD NUMBER OF DIRECTIONS
AD SYMBOLIC LINEAR SOLVER

2.2 COMPUTATION ENVIRONMENT

2.2.1 GLOBAL

CHECKING THE MESH
MAXIMUM NUMBER OF BOUNDARIES
MAXIMUM NUMBER OF BOUNDARIES ON THE BED
MAXIMUM NUMBER OF SOURCES
MAXIMUM NUMBER OF TRACERS
PARALLEL PROCESSORS
TITLE
VECTOR LENGTH

2.2.2 INPUT

DATA

BINARY BOUNDARY DATA FILE
BINARY BOUNDARY DATA FILE FORMAT
BINARY DATA FILE 1
BINARY DATA FILE 1 FORMAT
BINARY DATA FILE 2
BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS
BOTTOM TOPOGRAPHY FILE
BOUNDARY CONDITIONS FILE
FORMATTED DATA FILE 1

FORMATTED DATA FILE 2
FORTRAN FILE
GEOMETRY FILE
GEOMETRY FILE FORMAT
NUMBER OF BOTTOM SMOOTHINGS
REFERENCE FILE
REFERENCE FILE FORMAT
TIME SERIES COORDINATES FILE
VALIDATION

2.2.3 OUTPUT

CONTROL SECTION

COMPATIBLE COMPUTATION OF FLUXES
PRINTING CUMULATED FLOWRATES
SECTIONS INPUT FILE
SECTIONS OUTPUT FILE

LISTING

INFORMATION ABOUT MASS-BALANCE FOR EACH LISTING PRINTOUT
LISTING PRINTOUT
LISTING PRINTOUT PERIOD
MASS-BALANCE
NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS

RESULTS

2D RESULT FILE
2D RESULT FILE FORMAT
2D TIME SERIES FILE
2D TIME SERIES FILE FORMAT
3D RESULT FILE
3D RESULT FILE FORMAT
3D TIME SERIES FILE
3D TIME SERIES FILE FORMAT
BINARY RESULTS FILE
FORMATTED RESULTS FILE
FORMATTED RESULTS FILE 1
FORMATTED RESULTS FILE 2
FORMATTED RESULTS FILE 3
FORMATTED RESULTS FILE 4
FORMATTED RESULTS FILE 5
FORMATTED RESULTS FILE 6
GRAPHIC PRINTOUT PERIOD
NAMES OF 2D PRIVATE VARIABLES
NUMBER OF 2D PRIVATE ARRAYS
NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS
NUMBER OF PRIVATE ARRAYS
RESULT FILE IN LONGITUDE-LATITUDE

VARIABLES FOR 2D GRAPHIC PRINTOUTS
VARIABLES FOR 3D GRAPHIC PRINTOUTS

2.2.4 RESTART

2D CONTINUATION
COMPUTATION CONTINUED
FILE FOR 2D CONTINUATION
FILE FOR 2D CONTINUATION FORMAT
INITIAL TIME SET TO ZERO
PREVIOUS COMPUTATION FILE
PREVIOUS COMPUTATION FILE FORMAT
RECORD NUMBER FOR RESTART
RECORD NUMBER IN RESTART FILE
RESTART FILE
RESTART FILE FORMAT
RESTART FILE PRINTOUT PERIOD
RESTART MODE

2.3 COUPLING

COUPLING WITH

2.3.1 DELWAQ

BOTTOM SURFACES DELWAQ FILE
DELWAQ PRINTOUT PERIOD
DELWAQ STEERING FILE
DIFFUSION FOR DELWAQ
DIFFUSIVITY DELWAQ FILE
EXCHANGE AREAS DELWAQ FILE
EXCHANGES BETWEEN NODES DELWAQ FILE
NODES DISTANCES DELWAQ FILE
SALINITY DELWAQ FILE
SALINITY FOR DELWAQ
TEMPERATURE DELWAQ FILE
TEMPERATURE FOR DELWAQ
VELOCITY DELWAQ FILE
VELOCITY FOR DELWAQ
VERTICAL FLUXES DELWAQ FILE
VOLUMES DELWAQ FILE

2.3.2 GAIA

GAIA STEERING FILE

2.3.3 KHIONE

KHIONE STEERING FILE

2.3.4 TOMAWAC

BOTTOM FRICTION DUE TO WAVES
COUPLING PERIOD FOR TOMAWAC
TOMAWAC STEERING FILE

2.3.5 WAQTEL

WAQTEL STEERING FILE
WATER QUALITY PROCESS

2.4 GENERAL PARAMETERS

DEBUGGER

2.4.1 LOCATION

LATITUDE OF ORIGIN POINT
LONGITUDE OF ORIGIN POINT
NORTH
SPATIAL PROJECTION TYPE
SPHERICAL COORDINATES

2.4.2 TIME

DURATION
INITIAL TIME
NUMBER OF TIME STEPS
ORIGINAL DATE OF TIME
ORIGINAL HOUR OF TIME
TIME STEP

2.5 HYDRODYNAMICS

ELEMENTS MASKED BY USER
NON-HYDROSTATIC VERSION

2.5.1 BOUNDARY CONDITIONS

BOUNDARY CONDITION ON THE BOTTOM
COEFFICIENT FOR SOFT BOUNDARIES
LIQUID BOUNDARIES FILE
OPEN BOUNDARY CONDITIONS ON THE BED

OPTION FOR LIQUID BOUNDARIES
OPTION FOR SOFT BOUNDARIES
PRESCRIBED ELEVATIONS
PRESCRIBED FLOWRATES
PRESCRIBED FLOWRATES ON THE BED
PRESCRIBED VELOCITIES
STAGE-DISCHARGE CURVES
STAGE-DISCHARGE CURVES FILE
STAGE-DISCHARGE CURVES RELAXATION COEFFICIENT
TURBULENCE REGIME FOR LATERAL SOLID BOUNDARIES
TURBULENCE REGIME FOR THE BOTTOM
VELOCITY PROFILES
VELOCITY PROJECTED ON BOTTOM
VELOCITY PROJECTED ON SOLID LATERAL BOUNDARIES
VELOCITY VERTICAL PROFILES

2.5.2 HYDRAULIC STRUCTURES

CULVERTS

CULVERTS DATA FILE
NUMBER OF CULVERTS
OPTION FOR CULVERTS

2.5.3 INITIALIZATION

INITIAL CONDITIONS
INITIAL DEPTH
INITIAL ELEVATION

2.5.4 NUMERICAL PARAMETERS

HYDROSTATIC INCONSISTENCY FILTER
MASS-LUMPING FOR DEPTH
MATRIX STORAGE

ADVECTION

BYPASS VOID VOLUMES
FREE SURFACE GRADIENT COMPATIBILITY
MASS-LUMPING FOR VELOCITIES
MASS-LUMPING FOR WEAK CHARACTERISTICS
NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS
OPTION FOR CHARACTERISTICS
SCHEME FOR ADVECTION OF DEPTH
SCHEME FOR ADVECTION OF VELOCITIES
SCHEME OPTION FOR ADVECTION OF VELOCITIES

DIFFUSION

ACCURACY FOR DIFFUSION OF VELOCITIES
IMPLICITATION FOR DIFFUSION
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF VELOCITIES
OPTION OF SOLVER FOR DIFFUSION OF VELOCITIES
PRECONDITIONING FOR DIFFUSION OF VELOCITIES
SCHEME FOR DIFFUSION OF VELOCITIES
SOLVER FOR DIFFUSION OF VELOCITIES

DISCRETISATION

ELEMENT

IMPLICITATION

IMPLICITATION FOR DEPTH
IMPLICITATION FOR VELOCITIES

NON HYDROSTATIC

ACCURACY FOR PPE
CONTINUITY CORRECTION ON OPEN BOUNDARIES
DYNAMIC BOUNDARY CONDITION
DYNAMIC PRESSURE IN WAVE EQUATION
MAXIMUM NUMBER OF ITERATIONS FOR PPE
OPTION OF SOLVER FOR PPE
PRECONDITIONING FOR PPE
SOLVER FOR PPE

PROPAGATION

ACCURACY FOR PROPAGATION
INITIAL GUESS FOR DEPTH
LINEARIZED PROPAGATION
MAXIMUM NUMBER OF ITERATIONS FOR PROPAGATION
MEAN DEPTH FOR LINEARIZATION
OPTION OF SOLVER FOR PROPAGATION
PRECONDITIONING FOR PROPAGATION
SOLVER FOR PROPAGATION

2.5.5 PARTICLES TRANSPORT

BROWNIAN MOTION

STOCHASTIC DIFFUSION MODEL

DROGUES

ASCII DROGUES FILE
BINARY DROGUES FILE
DROGUES FILE FORMAT
MAXIMUM NUMBER OF DROGUES

PRINTOUT PERIOD FOR DROGUES

OIL SPILL
OIL SPILL MODEL
OIL SPILL STEERING FILE

2.5.6 PHYSICAL PARAMETERS

AVERAGE WATER DENSITY
GRAVITY ACCELERATION

CORIOLIS EFFECT
CORIOLIS
CORIOLIS COEFFICIENT

FRICTION
FRICTION COEFFICIENT FOR LATERAL SOLID BOUNDARIES
FRICTION COEFFICIENT FOR THE BOTTOM
LAW OF BOTTOM FRICTION
LAW OF FRICTION ON LATERAL BOUNDARIES

METEOROLOGY
AIR PRESSURE
AIR TEMPERATURE
ASCII ATMOSPHERIC DATA FILE
BINARY ATMOSPHERIC DATA FILE
BINARY ATMOSPHERIC DATA FILE FORMAT
CLOUD COVER
COEFFICIENT OF WIND INFLUENCE
COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED
FREE FORMAT FOR ATMOSPHERIC DATA FILE
OPTION FOR WIND
RAIN OR EVAPORATION
RAIN OR EVAPORATION IN MM PER DAY
RELATIVE HUMIDITY
SOLAR RADIATION
THRESHOLD DEPTH FOR WIND
VALUE OF ATMOSPHERIC PRESSURE
WIND
WIND VELOCITY ALONG X
WIND VELOCITY ALONG Y

SOURCES
ABSCISSAE OF SOURCES
ELEVATIONS OF SOURCES
GLOBAL NUMBERS OF SOURCE NODES

ORDINATES OF SOURCES
SOURCES FILE
TYPE OF SOURCES
VELOCITIES OF THE SOURCES ALONG X
VELOCITIES OF THE SOURCES ALONG Y
VELOCITIES OF THE SOURCES ALONG Z
WATER DISCHARGE OF SOURCES

WAVE

RECORD NUMBER IN WAVE FILE
WAVE DRIVEN CURRENTS

2.5.7 TIDAL FLATS INFO

MINIMAL VALUE FOR DEPTH
OPTION FOR THE TREATMENT OF TIDAL FLATS
THRESHOLD FOR VISCOSITY CORRECTION ON TIDAL FLATS
TIDAL FLATS
TREATMENT OF NEGATIVE DEPTHS
TREATMENT ON TIDAL FLATS FOR VELOCITIES

2.5.8 TIDES

BINARY DATABASE 1 FOR TIDE
BINARY DATABASE 2 FOR TIDE
COEFFICIENT TO CALIBRATE SEA LEVEL
GEOGRAPHIC SYSTEM
GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
INITIAL VELOCITIES COMPUTED BY TPXO
LAMBERT 93 CONVERSION FILE
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS
MINOR CONSTITUENTS INFERENCE
ZONE NUMBER IN GEOGRAPHIC SYSTEM

BOUNDARY CONDITIONS

ASCII DATABASE FOR TIDE
COEFFICIENT TO CALIBRATE TIDAL RANGE
COEFFICIENT TO CALIBRATE TIDAL VELOCITIES
HARMONIC CONSTANTS FILE
LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS
OPTION FOR TIDAL BOUNDARY CONDITIONS
TIDAL DATA BASE
TIDAL MODEL FILE
TIDAL MODEL FILE FORMAT

PHYSICAL PARAMETERS

TIDE GENERATING FORCE

2.6 INTERNAL

CONCATENATE PARTEL OUTPUT
DICTIONARY
PARTITIONING TOOL
STEERING FILE

2.7 NUMERICAL PARAMETERS

NUMBER OF SUB ITERATIONS FOR NON LINEARITIES
ZERO

2.7.1 ADVECTION

ADVECTION STEP
MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES
NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES
SUPG OPTION
TREATMENT OF FLUXES AT THE BOUNDARIES

2.7.2 DIFFUSION

MASS-LUMPING FOR DIFFUSION

2.8 SEDIMENT INFO

COHESIVE SEDIMENT
DENSITY OF THE SEDIMENT
MIXED SEDIMENT
NUMBER OF SEDIMENT BED LAYERS
SEDIMENT
SHIELDS PARAMETER
TIME STEP FOR CONSOLIDATION

2.8.1 DEPOSITION

CRITICAL SHEAR STRESS FOR DEPOSITION
NON COHESIVE BED POROSITY

2.8.2 DEPRECATED

CLEANING TO BE DONE

BED LAYERS THICKNESS
MAXIMUM CONCENTRATION OF THE CONSOLIDATED MUD
RESIDENCE TIME FOR MUD

TO BE CHECKED

CONSOLIDATION
CONSOLIDATION MODEL

2.8.3 EROSION

EROSION COEFFICIENT

2.8.4 FLOCCULATION INFO

COEFFICIENT RELATIVE TO FLOC DESTRUCTION
FLOCCULATION
FLOCCULATION COEFFICIENT
FLOCCULATION FORMULA

2.8.5 INITIALIZATION

CRITICAL EROSION SHEAR STRESS OF THE MUD LAYERS
INITIAL PERCENTAGE OF NON COHESIVE SEDIMENT
INITIAL THICKNESS OF SEDIMENT LAYERS
MUD CONCENTRATIONS PER LAYER

2.8.6 INPUT

DATA

READ CRITICAL BED SHEAR STRESS PER LAYER

2.8.7 NUMERICAL PARAMETERS

DIFFUSION

ACCURACY FOR DIFFUSION OF SEDIMENT
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF SEDIMENT
OPTION OF SOLVER FOR DIFFUSION OF THE SEDIMENT
PRECONDITIONING FOR DIFFUSION OF THE SEDIMENT
SOLVER FOR DIFFUSION OF THE SEDIMENT

2.8.8 OUTPUT

RESULTS

SEDIMENTOLOGICAL RESULT FILE
SEDIMENTOLOGICAL RESULT FILE BINARY

2.8.9 PHYSICAL PARAMETERS

MEAN DIAMETER OF THE SEDIMENT

FRICTION

RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER
SKIN FRICTION CORRECTION

2.8.10 RESTART

PREVIOUS COMPUTATION SEDIMENTOLOGICAL FILE

2.8.11 SETTLING VELOCITY

ADVECTION-DIFFUSION SCHEME WITH SETTLING VELOCITY
CONSTANT SEDIMENT SETTLING VELOCITY
HINDERED SETTLING
HINDERED SETTLING FORMULA
SETTLING VELOCITY OF SANDS
THRESHOLD CONCENTRATION FOR HINDERED SETTLING
WEAK SOIL CONCENTRATION FOR MUD

2.8.12 SUSPENSION

REFERENCE CONCENTRATION FORMULA

2.8.13 TIDAL FLATS INFO

THRESHOLD FOR SEDIMENT FLUX CORRECTION ON TIDAL FLATS

2.9 TIDES

ATMOSPHERIC PRESSURE AT TIDAL BOUNDARIES
VELOCITIES IN BINARY DATABASE 2 FOR TIDE

2.10 TRACERS

NAMES OF TRACERS
NUMBER OF TRACERS

2.10.1 BOUNDARY CONDITIONS

PRESCRIBED TRACERS VALUES
TRACERS VERTICAL PROFILES

2.10.2 INITIALIZATION

INITIAL VALUES OF TRACERS

2.10.3 NUMERICAL PARAMETERS

ADVECTION

SCHEME FOR ADVECTION OF TRACERS
SCHEME OPTION FOR ADVECTION OF TRACERS

DIFFUSION

ACCURACY FOR DIFFUSION OF TRACERS
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS
OPTION OF SOLVER FOR DIFFUSION OF TRACERS
PRECONDITIONING FOR DIFFUSION OF TRACERS
SCHEME FOR DIFFUSION OF TRACERS
SOLVER FOR DIFFUSION OF TRACERS

2.10.4 PHYSICAL PARAMETERS

DENSITY

BETA EXPANSION COEFFICIENT FOR TRACERS
DENSITY LAW
STANDARD VALUES FOR TRACERS

METEOROLOGY

VALUES OF TRACERS IN THE RAIN

SOURCES

VALUE OF THE TRACERS AT THE SOURCES

2.10.5 TIDAL FLATS INFO

TREATMENT ON TIDAL FLATS FOR TRACERS

2.10.6 TURBULENCE

COEFFICIENT FOR HORIZONTAL DIFFUSION OF TRACERS
COEFFICIENT FOR VERTICAL DIFFUSION OF TRACERS

2.11 TURBULENCE

2.11.1 BOUNDARY CONDITIONS

FICTITIOUS BED LEVEL
OPTION FOR THE BOUNDARY CONDITIONS OF K-EPSILON

2.11.2 NUMERICAL PARAMETERS

VERTICAL VELOCITY DERIVATIVES

ADVECTION

SCHEME FOR ADVECTION OF K-EPSILON
SCHEME OPTION FOR ADVECTION OF K-EPSILON

DIFFUSION

ACCURACY FOR DIFFUSION OF K-EPSILON
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF K-EPSILON
OPTION OF SOLVER FOR DIFFUSION OF K-EPSILON
PRECONDITIONING FOR DIFFUSION OF K-EPSILON
SCHEME FOR DIFFUSION OF K-EPSILON
SOLVER FOR DIFFUSION OF K-EPSILON

2.11.3 PHYSICAL PARAMETERS

COEFFICIENT FOR HORIZONTAL DIFFUSION OF VELOCITIES
COEFFICIENT FOR VERTICAL DIFFUSION OF VELOCITIES
DAMPING FUNCTION
GOTM STEERING FILE
HORIZONTAL TURBULENCE MODEL
KARMAN CONSTANT
MIXING LENGTH MODEL
PRANDTL NUMBER
VERTICAL TURBULENCE MODEL

2.11.4 TIDAL FLATS INFO

TREATMENT ON TIDAL FLATS FOR K-EPSILON

2.12 VERTICAL

MESH TRANSFORMATION
MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE BOTTOM
MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE FREE SURFACE
MINIMUM VOLUME OF 3D ELEMENTS
NUMBER OF HORIZONTAL LEVELS
NUMBER OF TRACER FOR AMR
THRESHOLD HEIGHT BEFORE CRUSHED ELEMENTS

3. Glossary

3.1 English/French glossary

2D CONTINUATION	SUITE 2D
2D RESULT FILE	FICHIER DES RESULTATS 2D
2D RESULT FILE FORMAT	FORMAT DU FICHIER DES RESULTATS 2D
2D TIME SERIES FILE	FICHIER DES SERIES TEMPORELLES 2D
2D TIME SERIES FILE FORMAT	FORMAT DU FICHIER DES SERIES TEMPORELLES 2D
3D RESULT FILE	FICHIER DES RESULTATS 3D
3D RESULT FILE FORMAT	FORMAT DU FICHIER DES RESULTATS 3D
3D TIME SERIES FILE	FICHIER DES SERIES TEMPORELLES 3D
3D TIME SERIES FILE FORMAT	FORMAT DU FICHIER DES SERIES TEMPORELLES 3D
ABSCISSAE OF SOURCES	ABSCISSES DES SOURCES
ACCURACY FOR DIFFUSION OF K-EPSILON	PRECISION POUR LA DIFFUSION DU K-EPSILON
ACCURACY FOR DIFFUSION OF SEDIMENT	PRECISION POUR LA DIFFUSION DU SEDIMENT
ACCURACY FOR DIFFUSION OF TRACERS	PRECISION POUR LA DIFFUSION DES TRACEURS
ACCURACY FOR DIFFUSION OF VELOCITIES	PRECISION POUR LA DIFFUSION DES VITESSES
ACCURACY FOR PPE	PRECISION POUR PPE
ACCURACY FOR PROPAGATION	PRECISION POUR LA PROPAGATION
AD LINEAR SOLVER DERIVATIVE CONVERGENCE	AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE
AD LINEAR SOLVER RESET DERIVATIVES	AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE
AD NAMES OF DERIVATIVES	AD NOMS DES DERIVEES
AD NUMBER OF DERIVATIVES	AD NOMBRE DES DERIVEES
AD NUMBER OF DIRECTIONS	AD NOMBRE DE DIRECTIONS
AD SYMBOLIC LINEAR SOLVER	AD SOLVEUR LINEAIRE SYMBOLIQUE
ADVECTION STEP	ETAPE DE CONVECTION

ADVECTION-DIFFUSION SCHEME WITH SETTLING VELOCITY	SCHEMA DE CONVECTION DIFFUSION AVEC VITESSE DE CHUTE
AIR PRESSURE	PRESSION ATMOSPHERIQUE
AIR TEMPERATURE	TEMPERATURE DE L'AIR
ASCII ATMOSPHERIC DATA FILE	FICHIER ASCII DE DONNEES ATMOSPHERIQUES
ASCII DATABASE FOR TIDE	BASE ASCII DE DONNEES DE MAREE
ASCII DROGUES FILE	FICHIER ASCII DES FLOTTEURS
ATMOSPHERIC PRESSURE AT TIDAL BOUNDARIES	PRESSION ATMOSPHERIQUE AUX FRONTIERES A MAREE
AVERAGE WATER DENSITY	MASSE VOLUMIQUE MOYENNE DE L'EAU
BED LAYERS THICKNESS	EPAISSEUR DES COUCHES DU FOND VASEUX
BETA EXPANSION COEFFICIENT FOR TRACERS	COEFFICIENT DE DILATATION BETA POUR LES TRACEURS
BINARY ATMOSPHERIC DATA FILE	FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES
BINARY ATMOSPHERIC DATA FILE FORMAT	FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES
BINARY BOUNDARY DATA FILE	FICHIER BINAIRE DE DONNEES DE FRONTIERE
BINARY BOUNDARY DATA FILE FORMAT	FORMAT DU FICHIER BINAIRE DE DONNEES DE FRONTIERE
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 DATABASE 1 FOR TIDE	BASE BINAIRE 1 DE DONNEES DE MAREE
BINARY DATABASE 2 FOR TIDE	BASE BINAIRE 2 DE DONNEES DE MAREE
BINARY DROGUES FILE	FICHIER BINAIRE DES FLOTTEURS
BINARY RESULTS FILE	FICHIER DE RESULTATS BINAIRE
BOTTOM FRICTION DUE TO WAVES	FROTTEMENT SUR LE FOND DU AUX VAGUES
BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS	LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR
BOTTOM SURFACES DELWAQ FILE	FICHIER DELWAQ DES SURFACES DU FOND
BOTTOM TOPOGRAPHY FILE	FICHIER DES FONDS
BOUNDARY CONDITION ON THE BOTTOM	CONDITION A LA LIMITE AU FOND
BOUNDARY CONDITIONS FILE	FICHIER DES CONDITIONS AUX LIMITES
BYPASS VOID VOLUMES	CONTOURNEMENT DES VOLUMES NULS
CHECKING THE MESH	VERIFICATION DU MAILLAGE
CLOUD COVER	NEBULOSITE
COEFFICIENT FOR HORIZONTAL DIFFUSION OF TRACERS	COEFFICIENT DE DIFFUSION HORIZONTAL DES TRACEURS
COEFFICIENT FOR HORIZONTAL DIFFUSION OF VELOCITIES	COEFFICIENT DE DIFFUSION HORIZONTAL DES VITESSES
COEFFICIENT FOR SOFT BOUNDARIES	COEFFICIENT POUR LES FRONTIERES DOUCES

COEFFICIENT FOR VERTICAL DIFFUSION OF TRACERS	COEFFICIENT DE DIFFUSION VERTICAL DES TRACEURS
COEFFICIENT FOR VERTICAL DIFFUSION OF VELOCITIES	COEFFICIENT DE DIFFUSION VERTICAL DES VITESSES
COEFFICIENT OF WIND INFLUENCE	COEFFICIENT D'INFLUENCE DU VENT
COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED	COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VENT
COEFFICIENT RELATIVE TO FLOC DESTRUCTION	COEFFICIENT TRADUISANT LA DESTRUCTION DES FLOCS
COEFFICIENT TO CALIBRATE SEA LEVEL	COEFFICIENT DE CALAGE DU NIVEAU DE MER
COEFFICIENT TO CALIBRATE TIDAL RANGE	COEFFICIENT DE CALAGE DU MARNAGE
COEFFICIENT TO CALIBRATE TIDAL VELOCITIES	COEFFICIENT DE CALAGE DES VITESSES DE COURANT
COHESIVE SEDIMENT	SEDIMENT COHESIF
COMPATIBLE COMPUTATION OF FLUXES	CALCUL COMPATIBLE DES FLUX
COMPUTATION CONTINUED	SUITE DE CALCUL
CONCATENATE PARTEL OUTPUT	CONCATENATION SORTIE PARTEL
CONSOLIDATION	TASSEMENT DE LA VASE
CONSOLIDATION MODEL	OPTION DU MODELE DE TASSEMENT
CONSTANT SEDIMENT SETTLING VELOCITY	VITESSE DE CHUTE CONSTANTE
CONTINUITY CORRECTION ON OPEN BOUNDARIES	CORRECTION DE CONTINUITE SUR FRONTIERES OUVERTES
CORIOLIS	CORIOLIS
CORIOLIS COEFFICIENT	COEFFICIENT DE CORIOLIS
COUPLING PERIOD FOR TOMAWAC	PERIODE DE COUPLAGE POUR TOMAWAC
COUPLING WITH	COUPLAGE AVEC
CRITICAL EROSION SHEAR STRESS OF THE MUD LAYERS	CONTRAINTE CRITIQUE D'EROSION DES COUCHES DE VASE
CRITICAL SHEAR STRESS FOR DEPOSITION	CONTRAINTE CRITIQUE DE DEPOT
CULVERTS DATA FILE	FICHIER DE DONNEES DES BUSES
DAMPING FUNCTION	FONCTION D'AMORTISSEMENT
DEBUGGER	DEBUGGER
DELWAQ PRINTOUT PERIOD	PERIODE DE SORTIE POUR DELWAQ
DELWAQ STEERING FILE	FICHIER DE COMMANDE DELWAQ
DENSITY LAW	LOI DE DENSITE
DENSITY OF THE SEDIMENT	MASSE VOLUMIQUE DU SEDIMENT
DICTIONARY	DICTIONNAIRE
DIFFUSION FOR DELWAQ	DIFFUSION POUR DELWAQ
DIFFUSIVITY DELWAQ FILE	FICHIER DELWAQ DE LA DIFFUSION
DROGUES FILE FORMAT	FORMAT DU FICHIER DES FLOTTEURS
DURATION	DUREE DU CALCUL
DYNAMIC BOUNDARY CONDITION	CONDITION LIMITE DYNAMIQUE
DYNAMIC PRESSURE IN WAVE EQUATION	PRESSION DYNAMIQUE DANS L'EQUATION D'ONDE
ELEMENT	ELEMENT
ELEMENTS MASKED BY USER	ELEMENTS MASQUES PAR L'UTILISATEUR

ELEVATIONS OF SOURCES	COTES DES SOURCES
EROSION COEFFICIENT	COEFFICIENT D'EROSION
EXCHANGE AREAS DELWAQ FILE	FICHIER DELWAQ DES SURFACES DE FLUX
EXCHANGES BETWEEN NODES DELWAQ FILE	FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS
FICTITIOUS BED LEVEL	HAUTEUR DU LIT FICTIF
FILE FOR 2D CONTINUATION	FICHIER POUR SUITE 2D
FILE FOR 2D CONTINUATION FORMAT	FORMAT DU FICHIER POUR SUITE 2D
FLOCCULATION	FLOCULATION
FLOCCULATION COEFFICIENT	COEFFICIENT TRADUISANT LA FORMATION DES FLOCS
FLOCCULATION FORMULA	FORMULE POUR FLOCULATION
FORMATTED DATA FILE 1	FICHIER DE DONNEES FORMATE 1
FORMATTED DATA FILE 2	FICHIER DE DONNEES FORMATE 2
FORMATTED RESULTS FILE	FICHIER DE RESULTATS FORMATE
FORMATTED RESULTS FILE 1	FICHIER DE RESULTATS FORMATE 1
FORMATTED RESULTS FILE 2	FICHIER DE RESULTATS FORMATE 2
FORMATTED RESULTS FILE 3	FICHIER DE RESULTATS FORMATE 3
FORMATTED RESULTS FILE 4	FICHIER DE RESULTATS FORMATE 4
FORMATTED RESULTS FILE 5	FICHIER DE RESULTATS FORMATE 5
FORMATTED RESULTS FILE 6	FICHIER DE RESULTATS FORMATE 6
FORTRAN FILE	FICHIER FORTRAN
FREE FORMAT FOR ATMOSPHERIC DATA FILE	FORMAT LIBRE POUR FICHIER DE DONNEES ATMOSPHERIQUES
FREE SURFACE GRADIENT COMPATIBILITY	COMPATIBILITE DU GRADIENT DE SURFACE LIBRE
FRICTION COEFFICIENT FOR LATERAL SOLID BOUNDARIES	COEFFICIENT DE FROTTEMENT POUR LES PAROIS LATERALES
FRICTION COEFFICIENT FOR THE BOTTOM	COEFFICIENT DE FROTTEMENT POUR LE FOND
GAIA STEERING FILE	FICHIER DES PARAMETRES DE GAIA
GEOGRAPHIC SYSTEM	SYSTEME GEOGRAPHIQUE
GEOMETRY FILE	FICHIER DE GEOMETRIE
GEOMETRY FILE FORMAT	FORMAT DU FICHIER DE GEOMETRIE
GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER	NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER
GLOBAL NUMBERS OF SOURCE NODES	NUMEROS GLOBAUX DES NOEUDS DES SOURCES
GOTM STEERING FILE	FICHIER DES PARAMETRES GOTM
GRAPHIC PRINTOUT PERIOD	PERIODE POUR LES SORTIES GRAPHIQUES
GRAVITY ACCELERATION	ACCELERATION DE LA PESANTEUR
HARMONIC CONSTANTS FILE	FICHIER DES CONSTANTES HARMONIQUES
HINDERED SETTLING	VITESSE DE CHUTE ENTRAVEE
HINDERED SETTLING FORMULA	FORMULE POUR VITESSE DE CHUTE ENTRAVEE
HORIZONTAL TURBULENCE MODEL	MODELE DE TURBULENCE HORIZONTAL

HYDROSTATIC INCONSISTENCY FILTER	FILTRE LES INCONSISTANCES HYDROSTATIQUES
IMPLICITATION FOR DEPTH	IMPLICITATION POUR LA HAUTEUR
IMPLICITATION FOR DIFFUSION	IMPLICITATION POUR LA DIFFUSION
IMPLICITATION FOR VELOCITIES	IMPLICITATION POUR LES VITESSES
INFORMATION ABOUT MASS-BALANCE FOR EACH LISTING PRINTOUT	INFORMATION SUR LE BILAN DE MASSE A CHAQUE SORTIE LISTING
INITIAL CONDITIONS	CONDITIONS INITIALES
INITIAL DEPTH	HAUTEUR INITIALE
INITIAL ELEVATION	COTE INITIALE
INITIAL GUESS FOR DEPTH	ORDRE DU TIR INITIAL POUR LA HAUTEUR
INITIAL PERCENTAGE OF NON COHESIVE SEDIMENT	POURCENTAGE INITIAL DE SEDIMENT NON COHESIF
INITIAL THICKNESS OF SEDIMENT LAYERS	EPAISSEURS INITIALES DES COUCHES
INITIAL TIME	TEMPS INITIAL
INITIAL TIME SET TO ZERO	REMISE A ZERO DU TEMPS
INITIAL VALUES OF TRACERS	VALEURS INITIALES DES TRACEURS
INITIAL VELOCITIES COMPUTED BY TPXO	VITESSES INITIALES CALCULEES PAR TPXO
KARMAN CONSTANT	CONSTANTE DE KARMAN
KHIONE STEERING FILE	FICHIER DES PARAMETRES DE KHIONE
LAMBERT 93 CONVERSION FILE	FICHIER DE CONVERSION LAMBERT 93
LATITUDE OF ORIGIN POINT	LATITUDE DU POINT ORIGINE
LAW OF BOTTOM FRICTION	LOI DE FROTTEMENT SUR LE FOND
LAW OF FRICTION ON LATERAL BOUNDARIES	LOI DE FROTTEMENT SUR LES PAROIS LATERALES
LINEARIZED PROPAGATION	PROPAGATION LINEARISEE
LIQUID BOUNDARIES FILE	FICHIER DES FRONTIERES LIQUIDES
LISTING PRINTOUT	SORTIE LISTING
LISTING PRINTOUT PERIOD	PERIODE POUR LES SORTIES LISTING
LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER	NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER
LONGITUDE OF ORIGIN POINT	LONGITUDE DU POINT ORIGINE
MASS-BALANCE	BILAN DE MASSE
MASS-LUMPING FOR DEPTH	MASS-LUMPING POUR LA HAUTEUR
MASS-LUMPING FOR DIFFUSION	MASS-LUMPING POUR LA DIFFUSION
MASS-LUMPING FOR VELOCITIES	MASS-LUMPING POUR LES VITESSES
MASS-LUMPING FOR WEAK CHARACTERISTICS	MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES
MATRIX STORAGE	STOCKAGE DES MATRICES
MAXIMUM CONCENTRATION OF THE CONSOLIDATED MUD	CONCENTRATION MAXIMUM DE LA VASE TASSEE
MAXIMUM NUMBER OF BOUNDARIES	NOMBRE MAXIMUM DE FRONTIERES
MAXIMUM NUMBER OF BOUNDARIES ON THE BED	NOMBRE MAXIMUM DE FRONTIERES SUR LE FOND
MAXIMUM NUMBER OF DROGUES	NOMBRE MAXIMAL DE FLOTTEURS

MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES	MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF K-EPSILON	MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU K-EPSILON
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF SEDIMENT	MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU SEDIMENT
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS	MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF VELOCITIES	MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES VITESSES
MAXIMUM NUMBER OF ITERATIONS FOR PPE	MAXIMUM D'ITERATIONS POUR PPE
MAXIMUM NUMBER OF ITERATIONS FOR PROPAGATION	MAXIMUM D'ITERATIONS POUR LA PROPAGATION
MAXIMUM NUMBER OF SOURCES	NOMBRE MAXIMUM DE SOURCES
MAXIMUM NUMBER OF TRACERS	NOMBRE MAXIMUM DE TRACEURS
MEAN DEPTH FOR LINEARIZATION	PROFONDEUR MOYENNE POUR LA LINEARISATION
MEAN DIAMETER OF THE SEDIMENT	DIAMETRE MOYEN DES GRAINS
MESH TRANSFORMATION	TRANSFORMATION DU MAILLAGE
MINIMAL VALUE FOR DEPTH	VALEUR MINIMALE POUR LA HAUTEUR
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS	HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS	HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS
MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE BOTTOM	DISTANCE MINIMALE ENTRE PLANS PRES DU FOND
MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE FREE SURFACE	DISTANCE MINIMALE ENTRE PLANS PRES DE LA SURFACE LIBRE
MINIMUM VOLUME OF 3D ELEMENTS	VOLUME MINIMAL DES ELEMENTS 3D
MINOR CONSTITUENTS INFERENCE	INTERPOLATION DE COMPOSANTES MINEURES
MIXED SEDIMENT	SEDIMENT MIXTE
MIXING LENGTH MODEL	MODELE DE LONGUEUR DE MELANGE
MUD CONCENTRATIONS PER LAYER	CONCENTRATIONS DES COUCHES DE VASE
NAMES OF 2D PRIVATE VARIABLES	NOMS DES VARIABLES PRIVEES 2D
NAMES OF TRACERS	NOMS DES TRACEURS
NODES DISTANCES DELWAQ FILE	FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS
NON COHESIVE BED POROSITY	POROSITE DU LIT NON COHESIF
NON-HYDROSTATIC VERSION	VERSION NON-HYDROSTATIQUE
NORTH	NORD
NUMBER OF 2D PRIVATE ARRAYS	NOMBRE DE TABLEAUX PRIVES 2D
NUMBER OF BOTTOM SMOOTHINGS	NOMBRE DE LISSAGES DU FOND
NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES	NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS
NUMBER OF CULVERTS	NOMBRE DE BUSES

NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS	NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES
NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS	NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING
NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS	NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES
NUMBER OF HORIZONTAL LEVELS	NOMBRE DE PLANS HORIZONTAUX
NUMBER OF PRIVATE ARRAYS	NOMBRE DE TABLEAUX PRIVES
NUMBER OF SEDIMENT BED LAYERS	NOMBRE DE COUCHES DU LIT COHESIF
NUMBER OF SUB ITERATIONS FOR NON LINEARITIES	NOMBRE DE SOUS ITERATIONS POUR LES NON LINEARITES
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES	NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS
NUMBER OF TIME STEPS	NOMBRE DE PAS DE TEMPS
NUMBER OF TRACER FOR AMR	NUMERO DE TRACEUR POUR AMR
NUMBER OF TRACERS	NOMBRE DE TRACEURS
OIL SPILL MODEL	MODELE DE NAPPES D'HYDROCARBURES
OIL SPILL STEERING FILE	FICHIER DE COMMANDES HYDROCARBURES
OPEN BOUNDARY CONDITIONS ON THE BED	CONDITIONS OUVERTES SUR LE FOND
OPTION FOR CHARACTERISTICS	OPTION POUR LES CARACTERISTIQUES
OPTION FOR CULVERTS	OPTION POUR LES BUSES
OPTION FOR LIQUID BOUNDARIES	OPTION POUR LES FRONTIERES LIQUIDES
OPTION FOR SOFT BOUNDARIES	OPTION POUR LES FRONTIERES DOUCES
OPTION FOR THE BOUNDARY CONDITIONS OF K-EPSILON	OPTION POUR LES CONDITIONS AUX LIMITES DU K-EPSILON
OPTION FOR THE TREATMENT OF TIDAL FLATS	OPTION DE TRAITEMENT DES BANCS DECOUVRANTS
OPTION FOR TIDAL BOUNDARY CONDITIONS	OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE
OPTION FOR WIND	OPTION DU VENT
OPTION OF SOLVER FOR DIFFUSION OF K-EPSILON	OPTION DU SOLVEUR POUR LA DIFFUSION DU K-EPSILON
OPTION OF SOLVER FOR DIFFUSION OF THE SEDIMENT	OPTION DU SOLVEUR POUR LA DIFFUSION DU SEDIMENT
OPTION OF SOLVER FOR DIFFUSION OF TRACERS	OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS
OPTION OF SOLVER FOR DIFFUSION OF VELOCITIES	OPTION DU SOLVEUR POUR LA DIFFUSION DES VITESSES
OPTION OF SOLVER FOR PPE	OPTION DU SOLVEUR POUR PPE
OPTION OF SOLVER FOR PROPAGATION	OPTION DU SOLVEUR POUR LA PROPAGATION
ORDINATES OF SOURCES	ORDONNEES DES SOURCES
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
PRANDTL NUMBER	NOMBRE DE PRANDTL

PRECONDITIONING FOR DIFFUSION OF K-EPSILON	PRECONDITIONNEMENT POUR LA DIFFUSION DU K-EPSILON
PRECONDITIONING FOR DIFFUSION OF THE SEDIMENT	PRECONDITIONNEMENT POUR LA DIFFUSION DU SEDIMENT
PRECONDITIONING FOR DIFFUSION OF TRACERS	PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS
PRECONDITIONING FOR DIFFUSION OF VELOCITIES	PRECONDITIONNEMENT POUR LA DIFFUSION DES VITESSES
PRECONDITIONING FOR PPE	PRECONDITIONNEMENT POUR PPE
PRECONDITIONING FOR PROPAGATION	PRECONDITIONNEMENT POUR LA PROPAGATION
PRESCRIBED ELEVATIONS	COTES IMPOSEES
PRESCRIBED FLOWRATES	DEBITS IMPOSES
PRESCRIBED FLOWRATES ON THE BED	DEBITS IMPOSES SUR LE FOND
PRESCRIBED TRACERS VALUES	VALEURS IMPOSEES DES TRACEURS
PRESCRIBED VELOCITIES	VITESSES IMPOSEES
PREVIOUS COMPUTATION FILE	FICHIER DU CALCUL PRECEDENT
PREVIOUS COMPUTATION FILE FORMAT	FORMAT DU FICHIER DU CALCUL PRECEDENT
PREVIOUS COMPUTATION SEDIMENTOLOGICAL FILE	FICHIER SEDIMENTOLOGIQUE DU CALCUL PRECEDENT
PRINTING CUMULATED FLOWRATES	IMPRESSION DU CUMUL DES FLUX
PRINTOUT PERIOD FOR DROGUES	PERIODE POUR LES SORTIES DE FLOTTEURS
RAIN OR EVAPORATION	PLUIE OU EVAPORATION
RAIN OR EVAPORATION IN MM PER DAY	PLUIE OU EVAPORATION EN MM PAR JOUR
RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER	RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN
READ CRITICAL BED SHEAR STRESS PER LAYER	LECTURE CONTRAINTE CRITIQUE POUR CHAQUE COUCHE
RECORD NUMBER FOR RESTART	ENREGISTREMENT POUR SUITE DE CALCUL
RECORD NUMBER IN RESTART FILE	NUMERO DE L'ENREGISTREMENT DANS LE FICHIER POUR SUITE
RECORD NUMBER IN WAVE FILE	NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE
REFERENCE CONCENTRATION FORMULA	FORMULE POUR LA CONCENTRATION DE REFERENCE
REFERENCE FILE	FICHIER DE REFERENCE
REFERENCE FILE FORMAT	FORMAT DU FICHIER DE REFERENCE
RELATIVE HUMIDITY	HUMIDITE RELATIVE
RESIDENCE TIME FOR MUD	TEMPS DE SEJOUR DE LA VASE
RESTART FILE	FICHIER POUR SUITE
RESTART FILE FORMAT	FORMAT DU FICHIER POUR SUITE
RESTART FILE PRINTOUT PERIOD	PERIODE POUR LES SORTIES DU FICHIER POUR SUITE
RESTART MODE	MODE SUITE

RESULT FILE IN LONGITUDE-LATITUDE	FICHIER RESULTAT EN LONGITUDE-LATITUDE
SALINITY DELWAQ FILE	FICHIER DELWAQ DE LA SALINITE
SALINITY FOR DELWAQ	SALINITE POUR DELWAQ
SCHEME FOR ADVECTION OF DEPTH	SCHEMA POUR LA CONVECTION DE LA HAUTEUR
SCHEME FOR ADVECTION OF K-EPSILON	SCHEMA POUR LA CONVECTION DU K-EPSILON
SCHEME FOR ADVECTION OF TRACERS	SCHEMA POUR LA CONVECTION DES TRACEURS
SCHEME FOR ADVECTION OF VELOCITIES	SCHEMA POUR LA CONVECTION DES VITESSES
SCHEME FOR DIFFUSION OF K-EPSILON	SCHEMA POUR LA DIFFUSION DU K-EPSILON
SCHEME FOR DIFFUSION OF TRACERS	SCHEMA POUR LA DIFFUSION DES TRACEURS
SCHEME FOR DIFFUSION OF VELOCITIES	SCHEMA POUR LA DIFFUSION DES VITESSES
SCHEME OPTION FOR ADVECTION OF K-EPSILON	OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON
SCHEME OPTION FOR ADVECTION OF TRACERS	OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS
SCHEME OPTION FOR ADVECTION OF VELOCITIES	OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES
SECTIONS INPUT FILE	FICHIER DES SECTIONS DE CONTROLE
SECTIONS OUTPUT FILE	FICHIER DE SORTIE DES SECTIONS DE CONTROLE
SEDIMENT	SEDIMENT
SEDIMENTOLOGICAL RESULT FILE	FICHIER DES RESULTATS SEDIMENTOLOGIQUES
SEDIMENTOLOGICAL RESULT FILE BINARY	BINAIRE DU FICHIER DES RESULTATS SEDIMENTOLOGIQUES
SETTLING VELOCITY OF SANDS	VITESSE DE CHUTE DES SABLES
SHIELDS PARAMETER	PARAMETRE DE SHIELDS
SKIN FRICTION CORRECTION	CORRECTION FROTTEMENT DE PEAU
SOLAR RADIATION	RAYONNEMENT SOLAIRE
SOLVER FOR DIFFUSION OF K-EPSILON	SOLVEUR POUR LA DIFFUSION DU K-EPSILON
SOLVER FOR DIFFUSION OF THE SEDIMENT	SOLVEUR POUR LA DIFFUSION DU SEDIMENT
SOLVER FOR DIFFUSION OF TRACERS	SOLVEUR POUR LA DIFFUSION DES TRACEURS
SOLVER FOR DIFFUSION OF VELOCITIES	SOLVEUR POUR LA DIFFUSION DES VITESSES
SOLVER FOR PPE	SOLVEUR POUR PPE
SOLVER FOR PROPAGATION	SOLVEUR POUR LA PROPAGATION
SOURCES FILE	FICHIER DES SOURCES

SPATIAL PROJECTION TYPE	TYPE DE PROJECTION SPATIALE
SPHERICAL COORDINATES	COORDONNEES SPHERIQUES
STAGE-DISCHARGE CURVES	COURBES DE TARAGE
STAGE-DISCHARGE CURVES FILE	FICHIER DES COURBES DE TARAGE
STAGE-DISCHARGE CURVES RELAXATION COEFFICIENT	COEFFICIENT DE RELAXATION DES COURBES DE TARAGE
STANDARD VALUES FOR TRACERS	VALEURS DE REFERENCE DES TRACEURS
STEERING FILE	FICHIER DES PARAMETRES
STOCHASTIC DIFFUSION MODEL	MODELE DE DIFFUSION STOCHASTIQUE
SUPG OPTION	OPTION DE SUPG
TEMPERATURE DELWAQ FILE	FICHIER DELWAQ DE LA TEMPERATURE
TEMPERATURE FOR DELWAQ	TEMPERATURE POUR DELWAQ
THRESHOLD CONCENTRATION FOR HINDERED SETTLING	CONCENTRATION LIMITE POUR VITESSE DE CHUTE ENTRAVEE
THRESHOLD DEPTH FOR WIND	PROFONDEUR LIMITE POUR LE VENT
THRESHOLD FOR SEDIMENT FLUX CORRECTION ON TIDAL FLATS	SEUIL LIMITE POUR EROSION SUR BANCS DECOUVRANTS
THRESHOLD FOR VISCOSITY CORRECTION ON TIDAL FLATS	SEUIL POUR CORRECTION DE VISCOSITE SUR BANCS DECOUVRANTS
THRESHOLD HEIGHT BEFORE CRUSHED ELEMENTS	HAUTEUR SEUIL AVANT ELEMENTS ECRASES
TIDAL DATA BASE	BASE DE DONNEES DE MAREE
TIDAL FLATS	BANCS DECOUVRANTS
TIDAL MODEL FILE	FICHIER DU MODELE DE MAREE
TIDAL MODEL FILE FORMAT	FORMAT DU FICHIER DU MODELE DE MAREE
TIDE GENERATING FORCE	FORCE GENERATRICE DE LA MAREE
TIME SERIES COORDINATES FILE	FICHIER DE COORDONNEES DES SERIES TEMPORELLES
TIME STEP	PAS DE TEMPS
TIME STEP FOR CONSOLIDATION	PAS DE TEMPS DE LA CONSOLIDATION
TITLE	TITRE
TOMAWAC STEERING FILE	FICHIER DES PARAMETRES DE TOMAWAC
TRACERS VERTICAL PROFILES	PROFILS DES TRACEURS SUR LA VERTICALE
TREATMENT OF FLUXES AT THE BOUNDARIES	TRAITEMENT DES FLUX AUX FRONTIERES
TREATMENT OF NEGATIVE DEPTHS	TRAITEMENT DES HAUTEURS NEGATIVES
TREATMENT ON TIDAL FLATS FOR K-EPSILON	TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LE K-EPSILON
TREATMENT ON TIDAL FLATS FOR TRACERS	TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES TRACEURS
TREATMENT ON TIDAL FLATS FOR VELOCITIES	TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES VITESSES
TURBULENCE REGIME FOR LATERAL SOLID BOUNDARIES	REGIME DE TURBULENCE POUR LES PAROIS LATERALES
TURBULENCE REGIME FOR THE BOTTOM	REGIME DE TURBULENCE POUR LE FOND
TYPE OF SOURCES	TYPE DES SOURCES

VALIDATION	VALIDATION
VALUE OF ATMOSPHERIC PRESSURE	VALEUR DE LA PRESSION ATMOSPHERIQUE
VALUE OF THE TRACERS AT THE SOURCES	VALEURS DES TRACEURS DES SOURCES
VALUES OF TRACERS IN THE RAIN	VALEURS DES TRACEURS DANS LA PLUIE
VARIABLES FOR 2D GRAPHIC PRINTOUTS	VARIABLES POUR LES SORTIES GRAPHIQUES 2D
VARIABLES FOR 3D GRAPHIC PRINTOUTS	VARIABLES POUR LES SORTIES GRAPHIQUES 3D
VECTOR LENGTH	LONGUEUR DU VECTEUR
VELOCITIES IN BINARY DATABASE 2 FOR TIDE	VITESSES DANS BASE BINAIRE 2 DE DONNEES DE MAREE
VELOCITIES OF THE SOURCES ALONG X	VITESSES DES SOURCES SELON X
VELOCITIES OF THE SOURCES ALONG Y	VITESSES DES SOURCES SELON Y
VELOCITIES OF THE SOURCES ALONG Z	VITESSES DES SOURCES SELON Z
VELOCITY DELWAQ FILE	FICHIER DELWAQ DE LA VITESSE
VELOCITY FOR DELWAQ	VITESSE POUR DELWAQ
VELOCITY PROFILES	PROFILS DE VITESSE
VELOCITY PROJECTED ON BOTTOM	VITESSE PROJETEE SUR LE FOND
VELOCITY PROJECTED ON SOLID LATERAL BOUNDARIES	VITESSE PROJETEE SUR LES PAROIS LATERALES SOLIDES
VELOCITY VERTICAL PROFILES	PROFILS DE VITESSE SUR LA VERTICALE
VERTICAL FLUXES DELWAQ FILE	FICHIER DELWAQ DES FLUX VERTICAUX
VERTICAL TURBULENCE MODEL	MODELE DE TURBULENCE VERTICAL
VERTICAL VELOCITY DERIVATIVES	DERIVEES VERTICALES DES VITESSES
VOLUMES DELWAQ FILE	FICHIER DELWAQ DES VOLUMES
WAQTEL STEERING FILE	FICHIER DES PARAMETRES DE WAQTEL
WATER DISCHARGE OF SOURCES	DEBITS DES SOURCES
WATER QUALITY PROCESS	PROCESSUS DE QUALITE D'EAU
WAVE DRIVEN CURRENTS	COURANTS DE HOULE
WEAK SOIL CONCENTRATION FOR MUD	CONCENTRATION LIMITE FLUIDE-SOLIDE
WIND	VENT
WIND VELOCITY ALONG X	VITESSE DU VENT SUIVANT X
WIND VELOCITY ALONG Y	VITESSE DU VENT SUIVANT Y
ZERO	ZERO
ZONE NUMBER IN GEOGRAPHIC SYSTEM	NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE

3.2 French/English glossary

ABSCISSES DES SOURCES	ABSCISSAE OF SOURCES
ACCELERATION DE LA PESANTEUR	GRAVITY ACCELERATION
AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE	AD LINEAR SOLVER DERIVATIVE CONVERGENCE
AD NOMBRE DE DIRECTIONS	AD NUMBER OF DIRECTIONS
AD NOMBRE DES DERIVEES	AD NUMBER OF DERIVATIVES
AD NOMS DES DERIVEES	AD NAMES OF DERIVATIVES
AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE	AD LINEAR SOLVER RESET DERIVATIVES

AD SOLVEUR LINEAIRE SYMBOLIQUE	AD SYMBOLIC LINEAR SOLVER
BANCS DECOUVRANTS	TIDAL FLATS
BASE ASCII DE DONNEES DE MAREE	ASCII DATABASE FOR TIDE
BASE BINAIRE 1 DE DONNEES DE MAREE	BINARY DATABASE 1 FOR TIDE
BASE BINAIRE 2 DE DONNEES DE MAREE	BINARY DATABASE 2 FOR TIDE
BASE DE DONNEES DE MAREE	TIDAL DATA BASE
BILAN DE MASSE	MASS-BALANCE
BINAIRE DU FICHIER DES RESULTATS SEDIMENTOLOGIQUES	SEDIMENTOLOGICAL RESULT FILE BINARY
CALCUL COMPATIBLE DES FLUX	COMPATIBLE COMPUTATION OF FLUXES
COEFFICIENT D'EROSION	EROSION COEFFICIENT
COEFFICIENT D'INFLUENCE DU VENT	COEFFICIENT OF WIND INFLUENCE
COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VENT	COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED
COEFFICIENT DE CALAGE DES VITESSES DE COURANT	COEFFICIENT TO CALIBRATE TIDAL VELOCITIES
COEFFICIENT DE CALAGE DU MARNAGE	COEFFICIENT TO CALIBRATE TIDAL RANGE
COEFFICIENT DE CALAGE DU NIVEAU DE MER	COEFFICIENT TO CALIBRATE SEA LEVEL
COEFFICIENT DE CORIOLIS	CORIOLIS COEFFICIENT
COEFFICIENT DE DIFFUSION HORIZONTAL DES TRACEURS	COEFFICIENT FOR HORIZONTAL DIFFUSION OF TRACERS
COEFFICIENT DE DIFFUSION HORIZONTAL DES VITESSES	COEFFICIENT FOR HORIZONTAL DIFFUSION OF VELOCITIES
COEFFICIENT DE DIFFUSION VERTICAL DES TRACEURS	COEFFICIENT FOR VERTICAL DIFFUSION OF TRACERS
COEFFICIENT DE DIFFUSION VERTICAL DES VITESSES	COEFFICIENT FOR VERTICAL DIFFUSION OF VELOCITIES
COEFFICIENT DE DILATATION BETA POUR LES TRACEURS	BETA EXPANSION COEFFICIENT FOR TRACERS
COEFFICIENT DE FROTTEMENT POUR LE FOND	FRICTION COEFFICIENT FOR THE BOTTOM
COEFFICIENT DE FROTTEMENT POUR LES PAROIS LATERALES	FRICTION COEFFICIENT FOR LATERAL SOLID BOUNDARIES
COEFFICIENT DE RELAXATION DES COURBES DE TARAGE	STAGE-DISCHARGE CURVES RELAXATION COEFFICIENT
COEFFICIENT POUR LES FRONTIERES DOUCES	COEFFICIENT FOR SOFT BOUNDARIES
COEFFICIENT TRADUISANT LA DESTRUCTION DES FLOCS	COEFFICIENT RELATIVE TO FLOC DESTRUCTION
COEFFICIENT TRADUISANT LA FORMATION DES FLOCS	FLOCCULATION COEFFICIENT
COMPATIBILITE DU GRADIENT DE SURFACE LIBRE	FREE SURFACE GRADIENT COMPATIBILITY
CONCATENATION SORTIE PARTEL	CONCATENATE PARTEL OUTPUT
CONCENTRATION LIMITE FLUIDE-SOLIDE	WEAK SOIL CONCENTRATION FOR MUD

CONCENTRATION LIMITE POUR VITESSE DE CHUTE ENTRAVEE	THRESHOLD CONCENTRATION FOR HINDERED SETTLING
CONCENTRATION MAXIMUM DE LA VASE TASSEE	MAXIMUM CONCENTRATION OF THE CONSOLIDATED MUD
CONCENTRATIONS DES COUCHES DE VASE	MUD CONCENTRATIONS PER LAYER
CONDITION A LA LIMITE AU FOND	BOUNDARY CONDITION ON THE BOTTOM
CONDITION LIMITE DYNAMIQUE	DYNAMIC BOUNDARY CONDITION
CONDITIONS INITIALES	INITIAL CONDITIONS
CONDITIONS OUVERTES SUR LE FOND	OPEN BOUNDARY CONDITIONS ON THE BED
CONSTANTE DE KARMAN	KARMAN CONSTANT
CONTOURNEMENT DES VOLUMES NULS	BYPASS VOID VOLUMES
CONTRAINTE CRITIQUE D'EROSION DES COUCHES DE VASE	CRITICAL EROSION SHEAR STRESS OF THE MUD LAYERS
CONTRAINTE CRITIQUE DE DEPOT	CRITICAL SHEAR STRESS FOR DEPOSITION
COORDONNEES SPHERIQUES	SPHERICAL COORDINATES
CORIOLIS	CORIOLIS
CORRECTION DE CONTINUITE SUR FRONTIERES OUVERTES	CONTINUITY CORRECTION ON OPEN BOUNDARIES
CORRECTION FROTTEMENT DE PEAU	SKIN FRICTION CORRECTION
COTE INITIALE	INITIAL ELEVATION
COTES DES SOURCES	ELEVATIONS OF SOURCES
COTES IMPOSEES	PRESCRIBED ELEVATIONS
COUPLAGE AVEC	COUPLING WITH
COURANTS DE HOULE	WAVE DRIVEN CURRENTS
COURBES DE TARAGE	STAGE-DISCHARGE CURVES
DATE DE L'ORIGINE DES TEMPS	ORIGINAL DATE OF TIME
DEBITS DES SOURCES	WATER DISCHARGE OF SOURCES
DEBITS IMPOSES	PRESCRIBED FLOWRATES
DEBITS IMPOSES SUR LE FOND	PRESCRIBED FLOWRATES ON THE BED
DEBUGGER	DEBUGGER
DERIVEES VERTICALES DES VITESSES	VERTICAL VELOCITY DERIVATIVES
DIAMETRE MOYEN DES GRAINS	MEAN DIAMETER OF THE SEDIMENT
DICTIONNAIRE	DICTIONARY
DIFFUSION POUR DELWAQ	DIFFUSION FOR DELWAQ
DISTANCE MINIMALE ENTRE PLANS PRES DE LA SURFACE LIBRE	MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE FREE SURFACE
DISTANCE MINIMALE ENTRE PLANS PRES DU FOND	MINIMUM DISTANCE BETWEEN PLANES CLOSE TO THE BOTTOM
DUREE DU CALCUL	DURATION
ELEMENT	ELEMENT
ELEMENTS MASQUES PAR L'UTILISATEUR	ELEMENTS MASKED BY USER
ENREGISTREMENT POUR SUITE DE CALCUL	RECORD NUMBER FOR RESTART
EPAISSEUR DES COUCHES DU FOND VASEUX	BED LAYERS THICKNESS
EPAISSEURS INITIALES DES COUCHES	INITIAL THICKNESS OF SEDIMENT LAYERS
ETAPE DE CONVECTION	ADVECTION STEP
FICHIER ASCII DE DONNEES ATMOSPHERIQUES	ASCII ATMOSPHERIC DATA FILE

FICHIER ASCII DES FLOTTEURS	ASCII DROGUES FILE
FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES	BINARY ATMOSPHERIC DATA FILE
FICHIER BINAIRE DE DONNEES DE FRONTIERE	BINARY BOUNDARY DATA FILE
FICHIER BINAIRE DES FLOTTEURS	BINARY DROGUES FILE
FICHIER DE COMMANDE DELWAQ	DELWAQ STEERING FILE
FICHIER DE COMMANDES HYDROCARBURES	OIL SPILL STEERING FILE
FICHIER DE CONVERSION LAMBERT 93	LAMBERT 93 CONVERSION FILE
FICHIER DE COORDONNEES DES SERIES TEMPORELLES	TIME SERIES COORDINATES FILE
FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1
FICHIER DE DONNEES BINAIRE 2	BINARY DATA FILE 2
FICHIER DE DONNEES DES BUSES	CULVERTS DATA FILE
FICHIER DE DONNEES FORMATE 1	FORMATTED DATA FILE 1
FICHIER DE DONNEES FORMATE 2	FORMATTED DATA FILE 2
FICHIER DE GEOMETRIE	GEOMETRY FILE
FICHIER DE REFERENCE	REFERENCE FILE
FICHIER DE RESULTATS BINAIRE	BINARY RESULTS FILE
FICHIER DE RESULTATS FORMATE	FORMATTED RESULTS FILE
FICHIER DE RESULTATS FORMATE 1	FORMATTED RESULTS FILE 1
FICHIER DE RESULTATS FORMATE 2	FORMATTED RESULTS FILE 2
FICHIER DE RESULTATS FORMATE 3	FORMATTED RESULTS FILE 3
FICHIER DE RESULTATS FORMATE 4	FORMATTED RESULTS FILE 4
FICHIER DE RESULTATS FORMATE 5	FORMATTED RESULTS FILE 5
FICHIER DE RESULTATS FORMATE 6	FORMATTED RESULTS FILE 6
FICHIER DE SORTIE DES SECTIONS DE CONTROLE	SECTIONS OUTPUT FILE
FICHIER DELWAQ DE LA DIFFUSION	DIFFUSIVITY DELWAQ FILE
FICHIER DELWAQ DE LA SALINITE	SALINITY DELWAQ FILE
FICHIER DELWAQ DE LA TEMPERATURE	TEMPERATURE DELWAQ FILE
FICHIER DELWAQ DE LA VITESSE	VELOCITY DELWAQ FILE
FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS	NODES DISTANCES DELWAQ FILE
FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS	EXCHANGES BETWEEN NODES DELWAQ FILE
FICHIER DELWAQ DES FLUX VERTICAUX	VERTICAL FLUXES DELWAQ FILE
FICHIER DELWAQ DES SURFACES DE FLUX	EXCHANGE AREAS DELWAQ FILE
FICHIER DELWAQ DES SURFACES DU FOND	BOTTOM SURFACES DELWAQ FILE
FICHIER DELWAQ DES VOLUMES	VOLUMES DELWAQ FILE
FICHIER DES CONDITIONS AUX LIMITES	BOUNDARY CONDITIONS FILE
FICHIER DES CONSTANTES HARMONIQUES	HARMONIC CONSTANTS FILE
FICHIER DES COURBES DE TARAGE	STAGE-DISCHARGE CURVES FILE
FICHIER DES FONDS	BOTTOM TOPOGRAPHY FILE
FICHIER DES FRONTIERES LIQUIDES	LIQUID BOUNDARIES FILE
FICHIER DES PARAMETRES	STEERING FILE
FICHIER DES PARAMETRES DE GAIA	GAIA STEERING FILE

FICHIER DES PARAMETRES DE KHIONE	KHIONE STEERING FILE
FICHIER DES PARAMETRES DE TOMAWAC	TOMAWAC STEERING FILE
FICHIER DES PARAMETRES DE WAQTEL	WAQTEL STEERING FILE
FICHIER DES PARAMETRES GOTM	GOTM STEERING FILE
FICHIER DES RESULTATS 2D	2D RESULT FILE
FICHIER DES RESULTATS 3D	3D RESULT FILE
FICHIER DES RESULTATS SEDIMENTOLOGIQUES	SEDIMENTOLOGICAL RESULT FILE
FICHIER DES SECTIONS DE CONTROLE	SECTIONS INPUT FILE
FICHIER DES SERIES TEMPORELLES 2D	2D TIME SERIES FILE
FICHIER DES SERIES TEMPORELLES 3D	3D TIME SERIES FILE
FICHIER DES SOURCES	SOURCES FILE
FICHIER DU CALCUL PRECEDENT	PREVIOUS COMPUTATION FILE
FICHIER DU MODELE DE MAREE	TIDAL MODEL FILE
FICHIER FORTRAN	FORTRAN FILE
FICHIER POUR SUITE	RESTART FILE
FICHIER POUR SUITE 2D	FILE FOR 2D CONTINUATION
FICHIER RESULTAT EN LONGITUDE-LATITUDE	RESULT FILE IN LONGITUDE-LATITUDE
FICHIER SEDIMENTOLOGIQUE DU CALCUL PRECEDENT	PREVIOUS COMPUTATION SEDIMENTOLOGICAL FILE
FILTRE LES INCONSISTANCES HYDROSTATIQUES	HYDROSTATIC INCONSISTENCY FILTER
FLOCULATION	FLOCCULATION
FONCTION D'AMORTISSEMENT	DAMPING FUNCTION
FORCE GENERATRICE DE LA MAREE	TIDE GENERATING FORCE
FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES	BINARY ATMOSPHERIC DATA FILE FORMAT
FORMAT DU FICHIER BINAIRE DE DONNEES DE FRONTIERE	BINARY BOUNDARY DATA FILE FORMAT
FORMAT DU FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1 FORMAT
FORMAT DU FICHIER DE GEOMETRIE	GEOMETRY FILE FORMAT
FORMAT DU FICHIER DE REFERENCE	REFERENCE FILE FORMAT
FORMAT DU FICHIER DES FLOTTEURS	DROGUES FILE FORMAT
FORMAT DU FICHIER DES RESULTATS 2D	2D RESULT FILE FORMAT
FORMAT DU FICHIER DES RESULTATS 3D	3D RESULT FILE FORMAT
FORMAT DU FICHIER DES SERIES TEMPORELLES 2D	2D TIME SERIES FILE FORMAT
FORMAT DU FICHIER DES SERIES TEMPORELLES 3D	3D TIME SERIES FILE FORMAT
FORMAT DU FICHIER DU CALCUL PRECEDENT	PREVIOUS COMPUTATION FILE FORMAT
FORMAT DU FICHIER DU MODELE DE MAREE	TIDAL MODEL FILE FORMAT
FORMAT DU FICHIER POUR SUITE	RESTART FILE FORMAT
FORMAT DU FICHIER POUR SUITE 2D	FILE FOR 2D CONTINUATION FORMAT

FORMAT LIBRE POUR FICHIER DE DONNEES ATMOSPHERIQUES	FREE FORMAT FOR ATMOSPHERIC DATA FILE
FORMULE POUR FLOCULATION	FLOCCULATION FORMULA
FORMULE POUR LA CONCENTRATION DE REFERENCE	REFERENCE CONCENTRATION FORMULA
FORMULE POUR VITESSE DE CHUTE ENTRAVEE	HINDERED SETTLING FORMULA
FROTTEMENT SUR LE FOND DU AUX VAGUES	BOTTOM FRICTION DUE TO WAVES
HAUTEUR DU LIT FICTIF	FICTITIOUS BED LEVEL
HAUTEUR INITIALE	INITIAL DEPTH
HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS	MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS
HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS	MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS
HAUTEUR SEUIL AVANT ELEMENTS ECRASES	THRESHOLD HEIGHT BEFORE CRUSHED ELEMENTS
HEURE DE L'ORIGINE DES TEMPS	ORIGINAL HOUR OF TIME
HUMIDITE RELATIVE	RELATIVE HUMIDITY
IMPLICITATION POUR LA DIFFUSION	IMPLICITATION FOR DIFFUSION
IMPLICITATION POUR LA HAUTEUR	IMPLICITATION FOR DEPTH
IMPLICITATION POUR LES VITESSES	IMPLICITATION FOR VELOCITIES
IMPRESSION DU CUMUL DES FLUX	PRINTING CUMULATED FLOWRATES
INFORMATION SUR LE BILAN DE MASSE A CHAQUE SORTIE LISTING	INFORMATION ABOUT MASS-BALANCE FOR EACH LISTING PRINTOUT
INTERPOLATION DE COMPOSANTES MINEURES	MINOR CONSTITUENTS INFERENCE
LATITUDE DU POINT ORIGINE	LATITUDE OF ORIGIN POINT
LECTURE CONTRAINTE CRITIQUE POUR CHAQUE COUCHE	READ CRITICAL BED SHEAR STRESS PER LAYER
LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR	BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS
LOI DE DENSITE	DENSITY LAW
LOI DE FROTTEMENT SUR LE FOND	LAW OF BOTTOM FRICTION
LOI DE FROTTEMENT SUR LES PAROIS LATERALES	LAW OF FRICTION ON LATERAL BOUNDARIES
LONGITUDE DU POINT ORIGINE	LONGITUDE OF ORIGIN POINT
LONGUEUR DU VECTEUR	VECTOR LENGTH
MASS-LUMPING POUR LA DIFFUSION	MASS-LUMPING FOR DIFFUSION
MASS-LUMPING POUR LA HAUTEUR	MASS-LUMPING FOR DEPTH
MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES	MASS-LUMPING FOR WEAK CHARACTERISTICS
MASS-LUMPING POUR LES VITESSES	MASS-LUMPING FOR VELOCITIES
MASSE VOLUMIQUE DU SEDIMENT	DENSITY OF THE SEDIMENT
MASSE VOLUMIQUE MOYENNE DE L'EAU	AVERAGE WATER DENSITY
MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS	MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS

MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES VITESSES	MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF VELOCITIES
MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU K-EPSILON	MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF K-EPSILON
MAXIMUM D'ITERATIONS POUR LA DIFFUSION DU SEDIMENT	MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF SEDIMENT
MAXIMUM D'ITERATIONS POUR LA PROPAGATION	MAXIMUM NUMBER OF ITERATIONS FOR PROPAGATION
MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION	MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES
MAXIMUM D'ITERATIONS POUR PPE	MAXIMUM NUMBER OF ITERATIONS FOR PPE
MODE SUITE	RESTART MODE
MODELE DE DIFFUSION STOCHASTIQUE	STOCHASTIC DIFFUSION MODEL
MODELE DE LONGUEUR DE MELANGE	MIXING LENGTH MODEL
MODELE DE NAPPES D'HYDROCARBURES	OIL SPILL MODEL
MODELE DE TURBULENCE HORIZONTAL	HORIZONTAL TURBULENCE MODEL
MODELE DE TURBULENCE VERTICAL	VERTICAL TURBULENCE MODEL
NEBULOSITE	CLOUD COVER
NOMBRE DE BUSES	NUMBER OF CULVERTS
NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS	NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES
NOMBRE DE COUCHES DU LIT COHESIF	NUMBER OF SEDIMENT BED LAYERS
NOMBRE DE LISSAGES DU FOND	NUMBER OF BOTTOM SMOOTHINGS
NOMBRE DE PAS DE TEMPS	NUMBER OF TIME STEPS
NOMBRE DE PLANS HORIZONTAUX	NUMBER OF HORIZONTAL LEVELS
NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES	NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS
NOMBRE DE PRANDTL	PRANDTL NUMBER
NOMBRE DE SOUS ITERATIONS POUR LES NON LINEARITES	NUMBER OF SUB ITERATIONS FOR NON LINEARITIES
NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS	NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES
NOMBRE DE TABLEAUX PRIVES	NUMBER OF PRIVATE ARRAYS
NOMBRE DE TABLEAUX PRIVES 2D	NUMBER OF 2D PRIVATE ARRAYS
NOMBRE DE TRACEURS	NUMBER OF TRACERS
NOMBRE MAXIMAL DE FLOTTEURS	MAXIMUM NUMBER OF DROGUES
NOMBRE MAXIMUM DE FRONTIERES	MAXIMUM NUMBER OF BOUNDARIES
NOMBRE MAXIMUM DE FRONTIERES SUR LE FOND	MAXIMUM NUMBER OF BOUNDARIES ON THE BED
NOMBRE MAXIMUM DE SOURCES	MAXIMUM NUMBER OF SOURCES
NOMBRE MAXIMUM DE TRACEURS	MAXIMUM NUMBER OF TRACERS
NOMS DES TRACEURS	NAMES OF TRACERS
NOMS DES VARIABLES PRIVEES 2D	NAMES OF 2D PRIVATE VARIABLES
NORD	NORTH
NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE	ZONE NUMBER IN GEOGRAPHIC SYSTEM

NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE	RECORD NUMBER IN WAVE FILE
NUMERO DE L'ENREGISTREMENT DANS LE FICHIER POUR SUITE	RECORD NUMBER IN RESTART FILE
NUMERO DE TRACEUR POUR AMR	NUMBER OF TRACER FOR AMR
NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES	NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS
NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING	NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS
NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER	GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER	LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
NUMEROS GLOBAUX DES NOEUDS DES SOURCES	GLOBAL NUMBERS OF SOURCE NODES
OPTION DE SUPG	SUPG OPTION
OPTION DE TRAITEMENT DES BANCS DECOUVRANTS	OPTION FOR THE TREATMENT OF TIDAL FLATS
OPTION DU MODELE DE TASSEMENT	CONSOLIDATION MODEL
OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS	SCHEME OPTION FOR ADVECTION OF TRACERS
OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES	SCHEME OPTION FOR ADVECTION OF VELOCITIES
OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON	SCHEME OPTION FOR ADVECTION OF K-EPSILON
OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS	OPTION OF SOLVER FOR DIFFUSION OF TRACERS
OPTION DU SOLVEUR POUR LA DIFFUSION DES VITESSES	OPTION OF SOLVER FOR DIFFUSION OF VELOCITIES
OPTION DU SOLVEUR POUR LA DIFFUSION DU K-EPSILON	OPTION OF SOLVER FOR DIFFUSION OF K-EPSILON
OPTION DU SOLVEUR POUR LA DIFFUSION DU SEDIMENT	OPTION OF SOLVER FOR DIFFUSION OF THE SEDIMENT
OPTION DU SOLVEUR POUR LA PROPAGATION	OPTION OF SOLVER FOR PROPAGATION
OPTION DU SOLVEUR POUR PPE	OPTION OF SOLVER FOR PPE
OPTION DU VENT	OPTION FOR WIND
OPTION POUR LES BUSES	OPTION FOR CULVERTS
OPTION POUR LES CARACTERISTIQUES	OPTION FOR CHARACTERISTICS
OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE	OPTION FOR TIDAL BOUNDARY CONDITIONS
OPTION POUR LES CONDITIONS AUX LIMITES DU K-EPSILON	OPTION FOR THE BOUNDARY CONDITIONS OF K-EPSILON
OPTION POUR LES FRONTIERES DOUCES	OPTION FOR SOFT BOUNDARIES
OPTION POUR LES FRONTIERES LIQUIDES	OPTION FOR LIQUID BOUNDARIES
ORDONNEES DES SOURCES	ORDINATES OF SOURCES
ORDRE DU TIR INITIAL POUR LA HAUTEUR	INITIAL GUESS FOR DEPTH

PARAMETRE DE SHIELDS	SHIELDS PARAMETER
PARTITIONNEUR	PARTITIONING TOOL
PAS DE TEMPS	TIME STEP
PAS DE TEMPS DE LA CONSOLIDATION	TIME STEP FOR CONSOLIDATION
PERIODE DE COUPLAGE POUR TOMAWAC	COUPLING PERIOD FOR TOMAWAC
PERIODE DE SORTIE POUR DELWAQ	DELWAQ PRINTOUT PERIOD
PERIODE POUR LES SORTIES DE FLOTTEURS	PRINTOUT PERIOD FOR DROGUES
PERIODE POUR LES SORTIES DU FICHIER POUR SUITE	RESTART FILE PRINTOUT PERIOD
PERIODE POUR LES SORTIES GRAPHIQUES	GRAPHIC PRINTOUT PERIOD
PERIODE POUR LES SORTIES LISTING	LISTING PRINTOUT PERIOD
PLUIE OU EVAPORATION	RAIN OR EVAPORATION
PLUIE OU EVAPORATION EN MM PAR JOUR	RAIN OR EVAPORATION IN MM PER DAY
POROSITE DU LIT NON COHESIF	NON COHESIVE BED POROSITY
POURCENTAGE INITIAL DE SEDIMENT NON COHESIF	INITIAL PERCENTAGE OF NON COHESIVE SEDIMENT
PRECISION POUR LA DIFFUSION DES TRACEURS	ACCURACY FOR DIFFUSION OF TRACERS
PRECISION POUR LA DIFFUSION DES VITESSES	ACCURACY FOR DIFFUSION OF VELOCITIES
PRECISION POUR LA DIFFUSION DU K-EPSILON	ACCURACY FOR DIFFUSION OF K-EPSILON
PRECISION POUR LA DIFFUSION DU SEDIMENT	ACCURACY FOR DIFFUSION OF SEDIMENT
PRECISION POUR LA PROPAGATION	ACCURACY FOR PROPAGATION
PRECISION POUR PPE	ACCURACY FOR PPE
PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS	PRECONDITIONING FOR DIFFUSION OF TRACERS
PRECONDITIONNEMENT POUR LA DIFFUSION DES VITESSES	PRECONDITIONING FOR DIFFUSION OF VELOCITIES
PRECONDITIONNEMENT POUR LA DIFFUSION DU K-EPSILON	PRECONDITIONING FOR DIFFUSION OF K-EPSILON
PRECONDITIONNEMENT POUR LA DIFFUSION DU SEDIMENT	PRECONDITIONING FOR DIFFUSION OF THE SEDIMENT
PRECONDITIONNEMENT POUR LA PROPAGATION	PRECONDITIONING FOR PROPAGATION
PRECONDITIONNEMENT POUR PPE	PRECONDITIONING FOR PPE
PRESSION ATMOSPHERIQUE	AIR PRESSURE
PRESSION ATMOSPHERIQUE AUX FRONTIERES A MAREE	ATMOSPHERIC PRESSURE AT TIDAL BOUNDARIES
PRESSION DYNAMIQUE DANS L'EQUATION D'ONDE	DYNAMIC PRESSURE IN WAVE EQUATION
PROCESSEURS PARALLELES	PARALLEL PROCESSORS
PROCESSUS DE QUALITE D'EAU	WATER QUALITY PROCESS
PROFILS DE VITESSE	VELOCITY PROFILES
PROFILS DE VITESSE SUR LA VERTICALE	VELOCITY VERTICAL PROFILES

PROFILS DES TRACEURS SUR LA VERTICALE	TRACERS VERTICAL PROFILES
PROFONDEUR LIMITE POUR LE VENT	THRESHOLD DEPTH FOR WIND
PROFONDEUR MOYENNE POUR LA LINEARISATION	MEAN DEPTH FOR LINEARIZATION
PROPAGATION LINEARISEE	LINEARIZED PROPAGATION
RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN	RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER
RAYONNEMENT SOLAIRE	SOLAR RADIATION
REGIME DE TURBULENCE POUR LE FOND	TURBULENCE REGIME FOR THE BOTTOM
REGIME DE TURBULENCE POUR LES PAROIS LATERALES	TURBULENCE REGIME FOR LATERAL SOLID BOUNDARIES
REMISE A ZERO DU TEMPS	INITIAL TIME SET TO ZERO
SALINITE POUR DELWAQ	SALINITY FOR DELWAQ
SCHEMA DE CONVECTION DIFFUSION AVEC VITESSE DE CHUTE	ADVECTION-DIFFUSION SCHEME WITH SETTLING VELOCITY
SCHEMA POUR LA CONVECTION DE LA HAUTEUR	SCHEME FOR ADVECTION OF DEPTH
SCHEMA POUR LA CONVECTION DES TRACEURS	SCHEME FOR ADVECTION OF TRACERS
SCHEMA POUR LA CONVECTION DES VITESSES	SCHEME FOR ADVECTION OF VELOCITIES
SCHEMA POUR LA CONVECTION DU K-EPSILON	SCHEME FOR ADVECTION OF K-EPSILON
SCHEMA POUR LA DIFFUSION DES TRACEURS	SCHEME FOR DIFFUSION OF TRACERS
SCHEMA POUR LA DIFFUSION DES VITESSES	SCHEME FOR DIFFUSION OF VELOCITIES
SCHEMA POUR LA DIFFUSION DU K-EPSILON	SCHEME FOR DIFFUSION OF K-EPSILON
SEDIMENT	SEDIMENT
SEDIMENT COHESIF	COHESIVE SEDIMENT
SEDIMENT MIXTE	MIXED SEDIMENT
SEUIL LIMITE POUR EROSION SUR BANCS DECOUVRANTS	THRESHOLD FOR SEDIMENT FLUX CORRECTION ON TIDAL FLATS
SEUIL POUR CORRECTION DE VISCOSITE SUR BANCS DECOUVRANTS	THRESHOLD FOR VISCOSITY CORRECTION ON TIDAL FLATS
SOLVEUR POUR LA DIFFUSION DES TRACEURS	SOLVER FOR DIFFUSION OF TRACERS
SOLVEUR POUR LA DIFFUSION DES VITESSES	SOLVER FOR DIFFUSION OF VELOCITIES
SOLVEUR POUR LA DIFFUSION DU K-EPSILON	SOLVER FOR DIFFUSION OF K-EPSILON
SOLVEUR POUR LA DIFFUSION DU SEDIMENT	SOLVER FOR DIFFUSION OF THE SEDIMENT
SOLVEUR POUR LA PROPAGATION	SOLVER FOR PROPAGATION
SOLVEUR POUR PPE	SOLVER FOR PPE

SORTIE LISTING	LISTING PRINTOUT
STOCKAGE DES MATRICES	MATRIX STORAGE
SUITE 2D	2D CONTINUATION
SUITE DE CALCUL	COMPUTATION CONTINUED
SYSTEME GEOGRAPHIQUE	GEOGRAPHIC SYSTEM
TASSEMENT DE LA VASE	CONSOLIDATION
TEMPERATURE DE L'AIR	AIR TEMPERATURE
TEMPERATURE POUR DELWAQ	TEMPERATURE FOR DELWAQ
TEMPS DE SEJOUR DE LA VASE	RESIDENCE TIME FOR MUD
TEMPS INITIAL	INITIAL TIME
TITRE	TITLE
TRAITEMENT DES FLUX AUX FRONTIERES	TREATMENT OF FLUXES AT THE BOUNDARIES
TRAITEMENT DES HAUTEURS NEGATIVES	TREATMENT OF NEGATIVE DEPTHS
TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LE K-EPSILON	TREATMENT ON TIDAL FLATS FOR K-EPSILON
TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES TRACEURS	TREATMENT ON TIDAL FLATS FOR TRACERS
TRAITEMENT SUR LES BANCS DECOUVRANTS POUR LES VITESSES	TREATMENT ON TIDAL FLATS FOR VELOCITIES
TRANSFORMATION DU MAILLAGE	MESH TRANSFORMATION
TYPE DE PROJECTION SPATIALE	SPATIAL PROJECTION TYPE
TYPE DES SOURCES	TYPE OF SOURCES
VALEUR DE LA PRESSION ATMOSPHERIQUE	VALUE OF ATMOSPHERIC PRESSURE
VALEUR MINIMALE POUR LA HAUTEUR	MINIMAL VALUE FOR DEPTH
VALEURS DE REFERENCE DES TRACEURS	STANDARD VALUES FOR TRACERS
VALEURS DES TRACEURS DANS LA PLUIE	VALUES OF TRACERS IN THE RAIN
VALEURS DES TRACEURS DES SOURCES	VALUE OF THE TRACERS AT THE SOURCES
VALEURS IMPOSEES DES TRACEURS	PRESCRIBED TRACERS VALUES
VALEURS INITIALES DES TRACEURS	INITIAL VALUES OF TRACERS
VALIDATION	VALIDATION
VARIABLES POUR LES SORTIES GRAPHIQUES 2D	VARIABLES FOR 2D GRAPHIC PRINTOUTS
VARIABLES POUR LES SORTIES GRAPHIQUES 3D	VARIABLES FOR 3D GRAPHIC PRINTOUTS
VENT	WIND
VERIFICATION DU MAILLAGE	CHECKING THE MESH
VERSION NON-HYDROSTATIQUE	NON-HYDROSTATIC VERSION
VITESSE DE CHUTE CONSTANTE	CONSTANT SEDIMENT SETTLING VELOCITY
VITESSE DE CHUTE DES SABLES	SETTLING VELOCITY OF SANDS
VITESSE DE CHUTE ENTRAVEE	HINDERED SETTLING
VITESSE DU VENT SUIVANT X	WIND VELOCITY ALONG X
VITESSE DU VENT SUIVANT Y	WIND VELOCITY ALONG Y
VITESSE POUR DELWAQ	VELOCITY FOR DELWAQ
VITESSE PROJETEE SUR LE FOND	VELOCITY PROJECTED ON BOTTOM
VITESSE PROJETEE SUR LES PAROIS LATERALES SOLIDES	VELOCITY PROJECTED ON SOLID LATERAL BOUNDARIES

VITESSES DANS BASE BINAIRE 2 DE DONNEES DE MAREE	VELOCITIES IN BINARY DATABASE 2 FOR TIDE
VITESSES DES SOURCES SELON X	VELOCITIES OF THE SOURCES ALONG X
VITESSES DES SOURCES SELON Y	VELOCITIES OF THE SOURCES ALONG Y
VITESSES DES SOURCES SELON Z	VELOCITIES OF THE SOURCES ALONG Z
VITESSES IMPOSEES	PRESCRIBED VELOCITIES
VITESSES INITIALES CALCULEES PAR TPXO	INITIAL VELOCITIES COMPUTED BY TPXO
VOLUME MINIMAL DES ELEMENTS 3D	MINIMUM VOLUME OF 3D ELEMENTS
ZERO	ZERO

[1]

[1] J-M. HERVOUET. *Hydrodynamics of free surface flows. Modelling with the finite element method.* John Wiley & Sons, Ltd, Paris, 2007.