SWAN

SIMULATION OF WAVES IN NEAR SHORE AREAS VERSION NUMBER 41.20A

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PROJECT '2018FemaAppeal' '1'
  '100-year Wind and Wave conditions'
! -- SET commands ------
SET DEPMIN=0.01 MAXMES=999 MAXERR=3 PWTAIL=4
SET LEVEL 0
SET CARTESIAN
! -- MODE commands ------
MODE STATIONARY ONED
!-- COORDINATES commands-----
COORDINATES CART
!
! -- computational (CGRID) grid commands -----
                            xlenc=length of grid in meters
! mxc = number of mesh cells (one less than number of grid points)
!CGRID REGular [xpc] [ypc] [alpc] [xlenc] [ylenc] [mxc] [myc] &
     [ CIRcle | SECtor[dir1] [dir2] ] [mdc] [flow] [fhigh] [msc]
                 0 0 129
CGRID REGULAR
                                      0.
                                          129
                                   0.03
                               36
                                         0.8
Resolution in sigma-space: df/f = 0.1157
! -- READgrid ---- not used in 1-D mode -----
! -- INPgrid commands -------
!INPgrid BOTtom REGular [xpinp] [ypinp] [alpinp] [mxinp] [myinp] [dxinp] [dyinp]
                   0
                         0
                                 0
                                      129 0
INPGRID BOTTOM REGULAR
!READinp BOTtom [fac] 'fname1' [idla] [nhedf] [FREe|FORmat[form]|UNFormatted]
     BOTTOM -1. '../gridfiles/YK-14zmeters_xmeters.grd' 1
1-----
! -- WIND [vel] [dir]
WIND 25.1 0
! -- BOUnd SHAPespec
BOUND SHAPE JONSWAP 3.3 PEAK DSPR POWER
! -- BOUndspec
! BOU SIDE W CCW CON FILE 'swanspec.txt' 1
BOUN SIDE W CCW CONSTANT PAR 3.7979 14.0317 0 2
!-- BOUndnest1 - optional for boundary from parent run
!-- BOUndnest2
!-- BOUndnest3
!-- INITial -- usest to specify initial values
!----- P H Y S I C S -----
!-- GEN1 [cf10] [cf20] [cf30] [cf40] [edm1pm] [cdrag] [umin] [cfpm]
!-- GEN2 [cf10] [cf20] [cf30] [cf40] [cf50] [cf60] [edm1pm] [cdrag] [umin] [cfpm]
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GEN3 KOMEN
  whitecapping (on by default)
!-- WCAPping KOMen [cds2] [stpm] [powst] [delta] [powk]
   WCAP KOM
! quadruplet wave interactions
!-- QUADrupl [iquad] [lambda] [Cn14] [Csh1] [Csh2]
! -- BREaking CONstant [alpha] [gamma]
    BREAK
           CON
                     1.
                             0.73
!-- FRICtion JONswap CONstant [cfjon]
                           0.038
           JONSWAP CON
   FRIC
!-- TRIad [itriad] [trfac] [cutfr] [a] [b] [urcrit] [urslim]
                  0.65 2.5 0.95 -0.75 0.2
! TRIAD
 TRIAD
!-- VEGEtation [height] [diamtr] [nstems] [drag]
!-- MUD [layer] [rhom] [viscm]
!- LIMiter [ursell] [qb] deactivates quadruplets with Ursell number exceeds ursell
!-- OBSTacle -- not in 1-D
!-- SETUP [supcor]
  SETUP 0
! ----- N U M E R I C S -----
!-- PROP can use BBST or GSE instead of default
! -- NUMeric -- lots of options
    NUM ACCUR npnts=100. stat 30
    NUMeric STOPC
1
! -----O U T P U T ------
!OUTPut OPTIons "comment' (TABLE [field]) (BLOck [ndec] [len]) (SPEC [ndec])
OUTPUT OPTIONS '%' TABLE 16
$BLOCK 9 1000 SPEC 8
!CURve 'sname' [xp1] [yp1] <[int] [xp] [yp] >
CURVE 'curve' 0
                  0
                          129 129
!TABLe 'sname' < HEADer | NOHEADer | INDexed > 'fname' <output parameters> (output time)
Table 'curve'
DSPR DEPTH SETUP
               HEADER 'YK-14.dat' XP YP HSIGN TPS RTP TMM10 DIR &
!QUANTITY XP hexp=99999
|-----
COMPUTE STATIONARY
               COMPUTATIONAL PART OF SWAN
One-dimensional mode of SWAN is activated
Gridresolution
                   : MXC
                                    130 MYC
                                                        1
                    : MCGRD
                                    131
                    : MSC
                                     31 MDC
                   : MTC
                                     0 ITERMX
1 IREFR
                   : NSTATC
                   : ITFRE
: IBOT
: IWCAP
Propagation flags
                                     1 ISURF
1 IWIND
                                                        1
Source term flags
                                      1 IQUAD
                    : ITRIAD
                    : IVEG
                                      0 ITURBV
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: IMUD
Spatial step
                                     0.1000E+01 DY
                        : DX
                                                           0.1000E+01
                        : df/f
                                     0.1157E+00 DDIR
Spectral bin
                                                           0.1000E+02
                                     0.9810E+01 RHO
Physical constants
                       : GRAV
                                                            0.1025E+04
Wind input
                        : WSPEED
                                    0.2510E+02 DIR
                                                            0.0000E+00
                        : E(f) 0.4000E+01 E(k)
: A(f) 0.5000E+01 A(k)
Tail parameters
                                                            0.2500E+01
                                                           0.3000E+01
                                     0.1000E-01 NPNTS
Accuracy parameters : DREL
                                                            0.9950E+02
                                     0.0000E+00 CURVAT 0.5000E-02
                        : DHABS
                        : GRWMX
                                     0.1000E+00
Drying/flooding
                        : LEVEL
                                    0.0000E+00 DEPMIN 0.1000E-01
The Cartesian convention for wind and wave directions is used
Scheme for geographic propagation is SORDUP Scheme geogr. space : PROPSC 2 1
                                             2 ICMAX
Scheme spectral space: CSS
                                     0.5000E+00 CDD
                                                           0.5000E+00
Current is off
Quadruplets
                         : IQUAD
                        : LAMBDA 0.2500E+00 CNL4
: CSH1 0.5500E+01 CSH2
                                                           0.3000E+08
                         : CSH1
                                                           0.8330E+00
                                    -0.1250E+01
                         : CSH3
Maximum Ursell nr for Snl4 :
                                    0.1000E+02
                                                            0.8000E+00
                        : ITRIAD
                                                1 TRFAC
                         : CUTFR
                                     0.2500E+01 URCRI 0.2000E+00
Minimum Ursell nr for Snl3 :
                                     0.1000E-01
JONSWAP ('73)
                       : GAMMA
                                     0.3800E-01
Vegetation is off
Turbulence is off
Fluid mud is off
                      : EMPCOF (CDS2): 0.2360E-04
: APM (STPM) : 0.3020E-02
: POWST : 0.2000E+01
: DELTA : 0.1000E+01
: POWK : 0.1000F±01
W-cap Komen ('84)
W-cap Komen ('84)
W-cap Komen ('84)
W-cap Komen ('84)
Wind drag is fit
Snyder/Komen wind input
Battjes&Janssen ('78): ALPHA
                                     0.1000E+01 GAMMA 0.7300E+00
Set-up
                       : SUPCOR 0.0000E+00
Diffraction is off
Janssen ('89,'90)
Janssen ('89,'90)
                                     0.1000E-01 KAPPA 0.4100E+00
0.1280E+01 RHOW 0.1025E+04
                        : ALPHA
                        : RHOA
                                    0.1880E+03 CF20 0.5900E+00
0.1200E+00 CF40 0.2500E+03
1st and 2nd gen. wind: CF10
                         : CF30
                         : CF50
                                     0.2300E-02 CF60 -0.2230E+00
                                                          -0.5600E+00
                         : CF70
                                     0.0000E+00 CF80
                                    0.1249E-02 EDMLPM 0.3600E-02
0.1230E-02 UMIN 0.1000E+01
                         : RHOAW
                         : CDRAG
                         : LIM_PM 0.1300E+00
 First guess by 2nd generation model flags for first iteration:
 0.0000E+00
iteration 1; sweep 1
iteration 1; sweep 2
iteration 1; sweep 3
iteration 1; sweep 3
               1; sweep 4
iteration
not possible to compute, first iteration
 Options given by user are activated for proceeding calculation:
 ITER 2 GRWMX 0.1000E+00 ALFA 0.0000E+00
IWIND 3 IWCAP 1 IQUAD 2
ITRIAD 1 IBOT 1 ISURF 1
          1 IBO1
0 ITURBV
                           0 IMUD
                                            0
 IVEG
iteration 2; sweep 1
iteration 2; sweep 2
iteration 2; sweep 3
iteration 2; sweep 4
accuracy OK in 8.47 % of wet grid points (99.50 % required)
iteration
               3; sweep 1
iteration
               3; sweep 2
             3; sweep 2
3; sweep 3
iteration
iteration 3; sweep 4 accuracy OK in 0.77 % of wet grid points ( 99.50 % required)
iteration
               4; sweep 1
iteration
iteration
               4; sweep 2
iteration
              4; sweep 3
iteration 4; sweep 4 accuracy OK in 13.08 % of wet grid points ( 99.50 % required)
               5; sweep 1
iteration
iteration
               5; sweep 2
               5; sweep 3
iteration
iteration
               5; sweep 4
accuracy OK in 29.24 % of wet grid points (99.50 % required)
iteration
               6; sweep 1
               6; sweep 2
iteration
iteration
              6; sweep 3
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iteration 6: sweep 4 accuracy OK in 81.54 % of wet grid points ( 99.50 % required)
iteration
                  7; sweep 1
iteration
                  7; sweep 2
iteration 7; sweep 2
iteration 7; sweep 3
iteration 7; sweep 4
accuracy OK in 98.47 % of wet grid points (99.50 % required)
iteration
                  8; sweep 1
iteration
                  8; sweep 2
iteration
                 8; sweep 3
iteration 8; sweep 4 accuracy OK in 98.47 % of wet grid points (99.50 % required)
iteration
                  9; sweep 1
iteration
                  9; sweep 2
iteration 9; sweep 3
iteration 9; sweep 4
accuracy OK in 98.47 % of wet grid points (99.50 % required)
iteration
                 10; sweep 1
iteration
                10; sweep 2
iteration 10; sweep 3
iteration 10; sweep 4
accuracy OK in 99.24 % of wet grid points (99.50 % required)
                 11; sweep 1
iteration
iteration
                 11; sweep 2
iteration 11; sweep 2
iteration 11; sweep 3
iteration 11; sweep 4
accuracy OK in 100.00 % of wet grid points ( 99.50 % required)
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STOP