

Differences between tidal software

Double check:

M6
2MK3
MO3
KJ2
eta2
KQ1
ups1
M1
NO1
A54
MKS2
MP1
tau1
A19
BET1
A4
MSm
MSN6

OSU:

"m2 ", "s2 ", "n2 ", "k2 ", "k1 ", "o1 ", "p1 ", "q1 ", "mf ", "mm ", "m4 ", "ms4 ", "mn4 "

```
data constid
1 /'m2 ','s2 ','k1 ','o1 ',
2 'n2 ','p1 ','k2 ','q1 ',
3 '2n2 ','mu2 ','nu2 ','l2 ',
4 't2 ','j1 ','m1 ','oo1 ',
5 'rho1 ','mf ','mm ','ssa ',
6 'm4 ','ms4 ','mn4 ','m6 ',
7 'm8 ','mk3 ','s6 ','2sm2',
8 '2mk3/
```

c FOR EACH POSSIBLE CONSTITUENT, these parameters are given:

c alpha = correction factor for first order load tides

c amp = amplitude of equilibrium tide in m

c ph = Currently set to zero ... phases for

c each constituent are referred to the time

c when the phase of the forcing for that

c constituent is zero on the Greenwich meridian.)

c omega = angular frequency of constituent, in radians

real alpha_d(ncmx),ph_d(ncmx),amp_d(ncmx),omega_d(ncmx)

- ,phase_mkB(ncmx),beta_SE(ncmx)
integer ispec_d(ncmx)

c Tidal parameters taken from Rodney's constituent.h, 2/23/96:

c (except for ispec).

data ispec_d/

```
1 2,2,1,1,
2 2,1,2,1,
3 2,2,2,2,
4 2,1,1,1,
5 1,0,0,0,
6 0,0,0,0,
7 0,0,0,0,
8 0/
```

ccc note: for now I am just leaving ispec for M4 set to 0 (ispec

ccc is only used to define forcing in atgf, and this is always 0

ccc for M4)

data alpha_d/

```
1 0.693,0.693,0.736,0.695,
2 0.693,0.706,0.693,0.695,
3 0.693,0.693,0.693,0.693,
4 0.693,0.695,0.695,0.695,
5 0.695,0.693,0.693,0.693,
6 0.693,0.693,0.693,0.693,
7 0.693,0.693,0.693,0.693,
8 0.693/
```

```
data omega_d/
1 1.405189e-04,1.454441e-04,7.292117e-05,6.759774e-05,
2 1.378797e-04,7.252295e-05,1.458423e-04,6.495854e-05,
3 1.352405e-04,1.355937e-04,1.382329e-04,1.431581e-04,
4 1.452450e-04,7.556036e-05,7.028195e-05,7.824458e-05,
5 6.531174e-05,0.053234e-04,0.026392e-04,0.003982e-04,
6 2.810377e-04,2.859630e-04,2.783984e-04,4.215566e-04,
7 5.620755e-04,2.134402e-04,4.363323e-04,1.503693e-04,
8 2.081166e-04/
```

```
data ph_d/29*0.0/
```

```
data amp_d/
1 0.242334,0.112743,0.141565,0.100661,
2 0.046397,0.046848,0.030684,0.019273,
3 0.006141,0.007408,0.008811,0.006931,
4 0.006608,0.007915,0.007915,0.004338,
5 0.003661,0.042041,0.022191,0.019567,
ccc amplitude for M4 etc. is zero
6 0.,0.,0.,0.,
7 0.,0.,0.,0.,
8 0./
```

```
C Astronomical arguments, obtained with Richard Ray's
c "arguments" and "astrol", for Jan 1, 1992, 00:00 Greenwich time
c Corrected July 12, 2000
data phase_mkB/
1 1.731557546,0.000000000,0.173003674,1.558553872,
2 6.050721243,6.110181633,3.487600001,5.877717569,
3 4.086699633,3.463115091,5.427136701,0.553986502,
4 0.052841931,2.137025284,2.436575100,1.929046130,
5 5.254133027,1.756042456,1.964021610,3.487600001,
6 3.463115091,1.731557546,1.499093481,5.194672637,
7 6.926230184,1.904561220,0.000000000,4.551627762,
8 3.809122439/
c I am putting 0 for ms2,mn4 etc. for now: correct later
c Now this correction is done using the SAL file (h_TPX03_90-90.load)
c I replace beta_SE with units for now (on case we decide to switch back
c to old version) and comment the old numbers - this way I do NOT change
c anything in subroutines
c This was in weights.h before - placed here not to mix with w!
c to remove solid Earth tide multily by beta:
data beta_SE/
1 0.9540,0.9540,0.9400,0.9400,
2 0.9540,0.9400,0.9540,0.9400,
3 0.9540,0.9540,0.9540,0.9540,
4 0.9540,0.9400,0.9400,0.9400,
5 0.9400,0.9400,0.9400,0.9400,
cccc for M4 just using value for semi-diurnals (no good reason!)
7 0.9540,0.9540,0.9540,0.954,
6 0.9540,0.9540,0.9540,0.954,
8 0.9540/
c data beta_SE/29*1./
```