**Metadata to be provided with each set of model results uploaded to the Inundation Testbed – SURA Server**

V 3.0

1. **Date/Approx Time files uploaded to server –** Oct. 28, 2011 @ 11:00AM
2. **Brief description of model run including version # -** VIMS Hurricane Rita storm tide simulation, 3D version of SELFE, using wind stress provided by UND and including wave interaction.
3. **Model name and version #** - SELFE v3.1g and WWMII
4. **Model input file names** –
   1. Grid files, hgrid.gr3, hgrid.ll

1. The longitude and latitude for each node

2. The bathymetry for each node

3. The mesh and node information

4. The nodes for open boundary and land boundary

* 1. open boundary file, bctides.in, bctides.log

1. Total # of tidal constituents used in earth tidal potential and tidal boundary (include amplitude, frequency, nodal factor, earth equilibrium argument in degrees). Start from August 13 (including tidal spinup) through September 27, 2005.

2. Amplitude and phase for each node on the open boundary

* 1. bottom roughness height for each node, rough.gr3
  2. The wind stress was provided by UND.
  3. model setup files, param.in

1. **Model time parameters**

* Surge model time step (s) 60s
* Run start date & time (including tidal spinup) : 8/13/2005 00:00 UTC(GMT)
* Wind start date: 9/18/2005 00:00 UTC (GMT)
* Total run length: 48 days
* Output record start date: 9/18/2005 00:10 UTC (GMT)
* Output record end date: 9/27/2005 00:00 UTC (GMT)
* Output record time interval (s): 600s (**10 minutes**)

1. **Summary of key run parameters**

* 3D with 11 layers.
* bottom friction representation and parameters; spatially varying roughness height
* surface drag law and parameters (e.g., cap): using wind stress provided by UND
* Direction bins =36
* Frequency bins (range) =35 (0.035-0.9635)
* White capping – KOMEN  ([cds2]=2.36E-5 [stpm]=3.02E-3)
* Depth induced wave breaking (parameters)-ON ([alpha=1.0;[gama]=0.73)
* Refraction –off
* Bottom Friction (parameter)-JONSWAP ([cfjon]=0.019)

1. **Model results file names** – (time series water level, IMEDS ascii)

elev\_rita\_3d\_storm\_tide\_wave.IMEDS

Dp\_rita\_3d\_storm\_tide\_wave.IMEDS

Hs\_rita\_3d\_storm\_tide\_wave.IMEDS

Tm02\_rita\_3d\_storm\_tide\_wave.IMEDS

Tp\_rita\_3d\_storm\_tide\_wave.IMEDS

**Note**: This is the results for the inclusive of wave interaction. The flag of sea level for the dry point or is

-999.0.

Elevations at all nodes in entire domain are:

1\_WaterLevel.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_WaterLevel.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_WaterLevel.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_WaterLevel.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_WaterLevel.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_WaterLevel.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_WaterLevel.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_WaterLevel.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_WaterLevel.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

Vertical varying horizontal velocity at all nodes in entire domain are:

1\_hvel.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_hvel.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_hvel.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_hvel.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_hvel.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_hvel.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_hvel.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_hvel.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_hvel.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

Significant wave heights at all nodes in entire domain are:

1\_ SigWaveHeight.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_ SigWaveHeight.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_ SigWaveHeight.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_ SigWaveHeight.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_ SigWaveHeight.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_ SigWaveHeight.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_ SigWaveHeight.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_ SigWaveHeight.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_ SigWaveHeight.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

Peak periods at all nodes in entire domain are:

1\_ PeakPeriod.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_ PeakPeriod.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_ PeakPeriod.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_ PeakPeriod.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_ PeakPeriod.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_ PeakPeriod.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_ PeakPeriod.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_ PeakPeriod.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_ PeakPeriod.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

Mean periods at all nodes in entire domain are:

1\_ MeanPeriod.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_ MeanPeriod.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_ MeanPeriod.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_ MeanPeriod.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_ MeanPeriod.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_ MeanPeriod.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_ MeanPeriod.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_ MeanPeriod.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_ MeanPeriod.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

Peak wave directions at all nodes in entire domain are:

1\_ pwd.nc: Start from 0918 00:10 2005 through 0919 00:00 2005

2\_ pwd.nc: Start from 0919 00:10 2005 through 0920 00:00 2005

3\_ pwd.nc: Start from 0920 00:10 2005 through 0921 00:00 2005

4\_ pwd.nc: Start from 0921 00:10 2005 through 0922 00:00 2005

5\_ pwd.nc: Start from 0922 00:10 2005 through 0923 00:00 2005

6\_ pwd.nc: Start from 0923 00:10 2005 through 0924 00:00 2005

7\_ pwd.nc: Start from 0924 00:10 2005 through 0925 00:00 2005

8\_ pwd.nc: Start from 0925 00:10 2005 through 0926 00:00 2005

9\_ pwd.nc: Start from 0926 00:10 2005 through 0927 00:00 2005

**Note**: This is the results for the inclusive of wave interaction. The flag of sea level for the dry point is

-999.

1. **Computational resources used** – run on ranger.tacc.utexas.edu (a high-speed computing cluster of utexas) using 1024 cores with a 48:00:00 wall time. The simulation completed in 46 hours waltime.
2. **Comments / Other** – in case something interesting or unforeseen comes up.