**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 Ike 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).

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 : 7/31/2008 12:00 UTC(GMT)
* Wind start date: 9/5/2008 12:00 UTC (GMT)
* Total run length: 48 days
* Output record start date: 9/8/2008 00:30 UTC (GMT)
* Output record end date: 9/16/2008 00:00 UTC (GMT)
* Output record time interval (s): 1800s (**30 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\_ike\_3d\_storm\_tide\_wave.IMEDS

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

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

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

Tp\_ike\_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 0908 00:30 2008 through 0909 00:00 2008

2\_WaterLevel.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_WaterLevel.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_WaterLevel.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_WaterLevel.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_WaterLevel.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_WaterLevel.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_WaterLevel.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

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

1\_hvel.nc: Start from 0908 00:30 2008 through 0909 00:00 2008

2\_ hvel.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_ hvel.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_ hvel.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_ hvel.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_ hvel.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_ hvel.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_ hvel.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

Significant wave heights at all nodes in entire domain are:

1\_ SigWaveHeight.nc: Start from 0908 00:30 2008 through 0909 00:00 2008

2\_ SigWaveHeight.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_ SigWaveHeight.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_ SigWaveHeight.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_ SigWaveHeight.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_ SigWaveHeight.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_ SigWaveHeight.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_ SigWaveHeight.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

Peak periods at all nodes in entire domain are:

1\_ PeakPeriod.nc: Start from 0908 00:30 2008 through 0909 00:00 2008

2\_ PeakPeriod.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_ PeakPeriod.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_ PeakPeriod.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_ PeakPeriod.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_ PeakPeriod.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_ PeakPeriod.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_ PeakPeriod.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

Mean periods at all nodes in entire domain are:

1\_ MeanPeriod.nc: Start from 0908 00:30 2008 through 0909 00:00 2008

2\_ MeanPeriod.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_ MeanPeriod.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_ MeanPeriod.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_ MeanPeriod.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_ MeanPeriod.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_ MeanPeriod.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_ MeanPeriod.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

Peak wave directions at all nodes in entire domain are:

1\_ pwd.nc: Start from 0908 00:30 2008 through 0909 00:00 2008

2\_ pwd.nc: Start from 0909 00:30 2008 through 0910 00:00 2008

3\_ pwd.nc: Start from 0910 00:30 2008 through 0911 00:00 2008

4\_ pwd.nc: Start from 0911 00:30 2008 through 0912 00:00 2008

5\_ pwd.nc: Start from 0912 00:30 2008 through 0913 00:00 2008

6\_ pwd.nc: Start from 0913 00:30 2008 through 0914 00:00 2008

7\_ pwd.nc: Start from 0914 00:30 2008 through 0915 00:00 2008

8\_ pwd.nc: Start from 0915 00:30 2008 through 0916 00:00 2008

**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 512 cores with a 48:00:00 wall time. The simulation completed in 43 hours waltime.
2. **Comments / Other** – in case something interesting or unforeseen comes up.