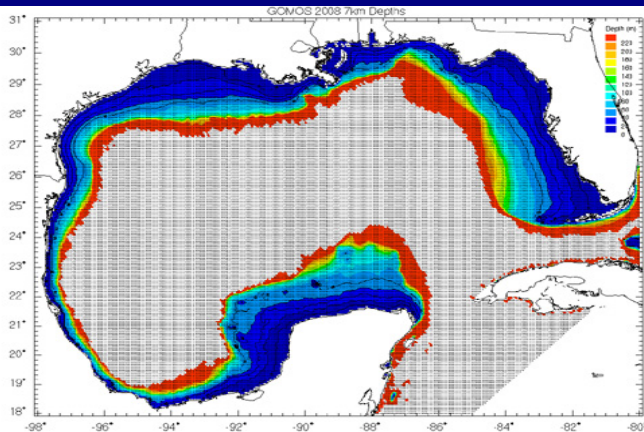


# GOMOS08: Gulf Of Mexico MetOcean Statistics



## *Gulf of Mexico*

- 379 tropical storms for the period 1900-2008
- 68 winter storms for the period 1950-2008
- 29 Year continuous/operational for the period 1980-2008

### **Description**

GOMOS08 is Oceanweather's new comprehensive metocean study of the Gulf of Mexico. This hindcast is an update of Oceanweather's previous studies because it utilizes hindcast models of higher resolution and more powerful physics. Previous studies GUMSHOE and GOMOS essentially set the standard for metocean design data in the Gulf of Mexico at their time and GOMOS08 is yet another state-of-the-art database widely accepted as the standard for the Gulf of Mexico.

GOMOS08 improves upon the previous GOMOS and GUMSHOE hindcasts in several key areas. First, the tropical cyclone wind model and the data source and analysis methodology used to drive it have been greatly enhanced and applied in a complete reanalysis of every tropical system within the Gulf of Mexico in the historical period addressed. Second, all wave hindcasting was carried out with a wave model incorporating third generation (3G) physics with higher spatial resolutions than previous efforts. For the first time storm wave model runs also include the effect of storm driven water level changes on depth. Third, the hydrodynamic model has been upgraded and includes tidal and wave radiation-stress inputs. Finally, the continuous hindcast addresses a much longer hindcast period than previous efforts, and by extending back to 1980 covers almost three decades.

GOMOS08 is an update of the previous studies because the continuous hindcast now covers 29 years to ensure that it simulates the recent and current climate, and it adds over a decade of hurricane and winter storm experience to the previous studies which results in a much larger storm population to provide more reliable extremes.

### **Standard Products**

- **Hindcast Time Series** - Time series of winds, waves, water level, 1-D and 2-D currents are provided for hindcasts of all tropical storms from the period 1900-2008. Time series of winds, waves, water level, and 2-D currents are provided for the 68 significant winter storms from the period 1950-2008, and the continuous period 1980-2008.
- **Extremes** - Return-period extremes of wind speed, wave height and period and surge and 1-D or 2-D currents are derived in both omni-directional and sector stratified form.
- **Normals** - Fatigue and operability data expressed as monthly and annual frequency of occurrence tables of wind speed by wind direction (45-degree sectors), wave height by wave period and direction (45-degree sectors), and exceedance and non-exceedance duration statistics for wind speed and wave height.
- **Final Report** - A final GOMOS08 report with derivative extremes and sample normals. Time series and all derivative products delivered as ASCII or some products may be delivered as OSMOSIS formatted files (separate OSMOSIS License required).

**oceanweather inc.**

5 River Road, Suite 1, Cos Cob, CT 06807, USA

**Telephone:** (203) 661-3091

**Fax:** (203) 661-6809

**Email:** [oceanwx@oceanweather.com](mailto:oceanwx@oceanweather.com)

**Web:** [www.oceanweather.com](http://www.oceanweather.com)