initial date: 2016/09/04

# 2016年台風12号高潮予測実験

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VERSION 0.1

#### RESEARCH MEMBERS

- Members
  - 金 洙列(鳥取大学)

- 松見吉晴 (鳥取大学)
- 間瀬 肇 (DPRI, 京都大学)

Tracey H. A. Tom (Surflegend, Inc.)



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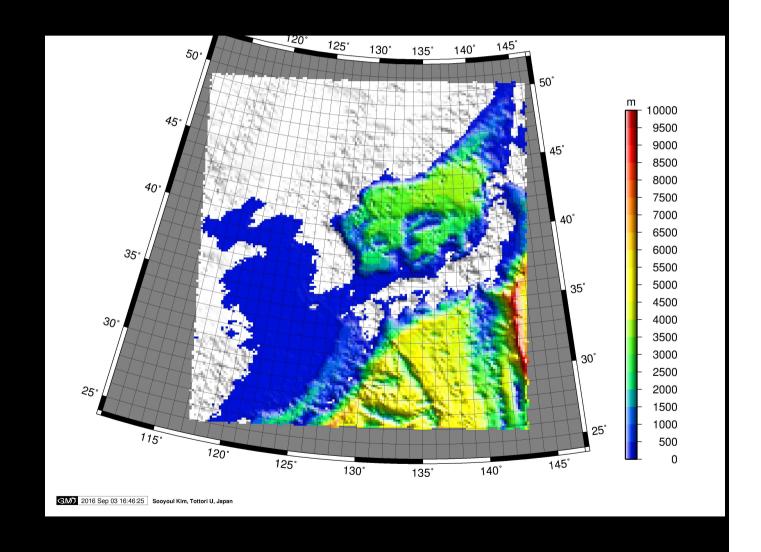
- Grid configuration
- Run configuration
- Results



# GEOPHYSICAL REGIONS OF THREE LEVEL DOMAINS

#### D1

- The number of grids: 216 x 230
- Grid size : delx= 12000m,
- Grid size : dely = 12000m,
- Region: 117.5-143E, 25N-50N



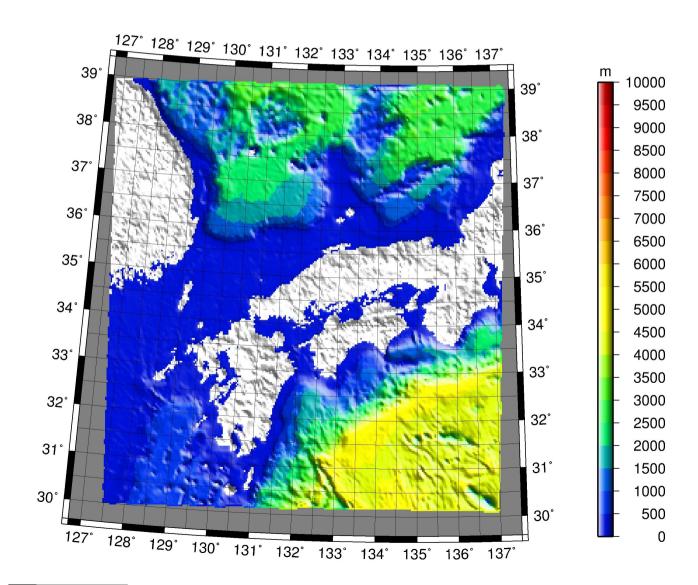


# GEOPHYSICAL REGIONS OF THREE LEVEL DOMAINS

#### D2

- The number of grids: 382 x 416
- Grid size : delx= 2400m,
- Grid size : dely= 2400m,
- Region: 127.5-137E, 30N-39N

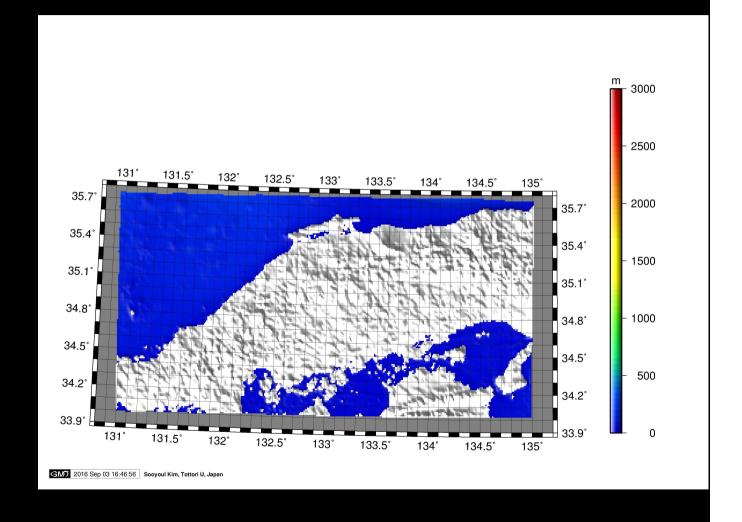




# GEOPHYSICAL REGIONS OF THREE LEVEL DOMAINS

#### D3

- The number of grids: 460 x 243
- Grid size : delx= 800m,
- Grid size : dely= 800m,
- Region: 131-1358E, 34N-35.75N





#### MODEL DESCRIPTION

- A parametric wind and pressure model
  - 気圧場:Schloemer 式 (1954),
    - Schloemer, R.W., 1954. Analysis and synthesis of hurricane wind patterns over Lake Okechobee, FL. Hydromet. Rep. 31, 49 (Govt. Printing Office, No. C30.70:32).
  - 風速場:藤井·光田 (1986)
    - 藤井健,光田寧: 台風の確率モデルの作成とそれによる強風のシミュレイション,京都大学防災研究所年報, Vol.29, No.B-1, PP.229-239, 1986.
- Storm surge model
  - Coupled model of Surge, WAve and Tide: SuWAT
  - Kim et al., 2008; 2010
- 風速制限:30m/s
- 風速低減係数:0.9



#### CONFIGURATION OF RUNS

● <u>http://www.jma.go.jp/jp/typh/1612.html</u> を参照



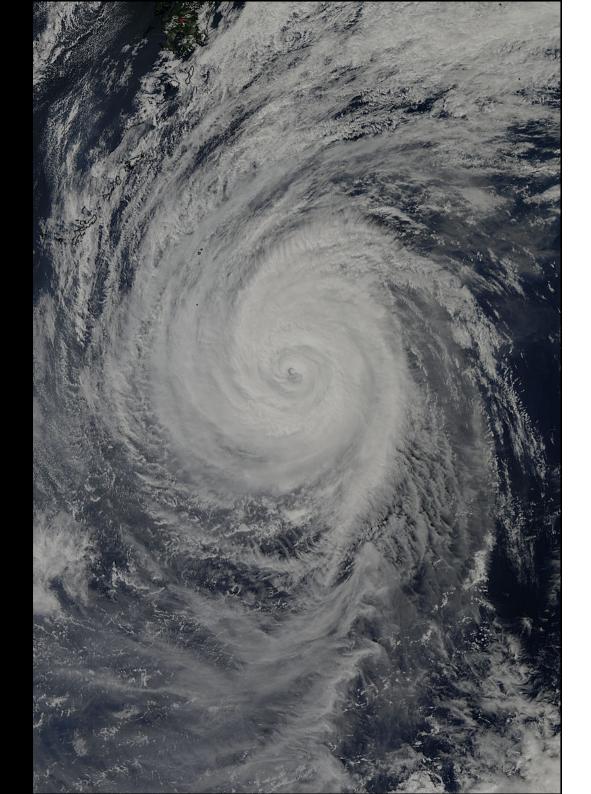
#### CONFIGURATION OF RUNS

- 最大半径(Rmax): 90, 80, 70, 60 kmの4種類
- 1回目の予測実験:台風第12号 (ナムセーウン)平成28年09月02日17時40分 発表
- 2回目の予測実験:台風第12号 (ナムセーウン)平成28年09月02日18時45分 発表
- 3回目の予測実験:台風第12号 (ナムセーウン)平成28年09月02日21時50分 発表
- 4回目の予測実験:台風第12号 (ナムセーウン)平成28年09月02日22時40分 発表



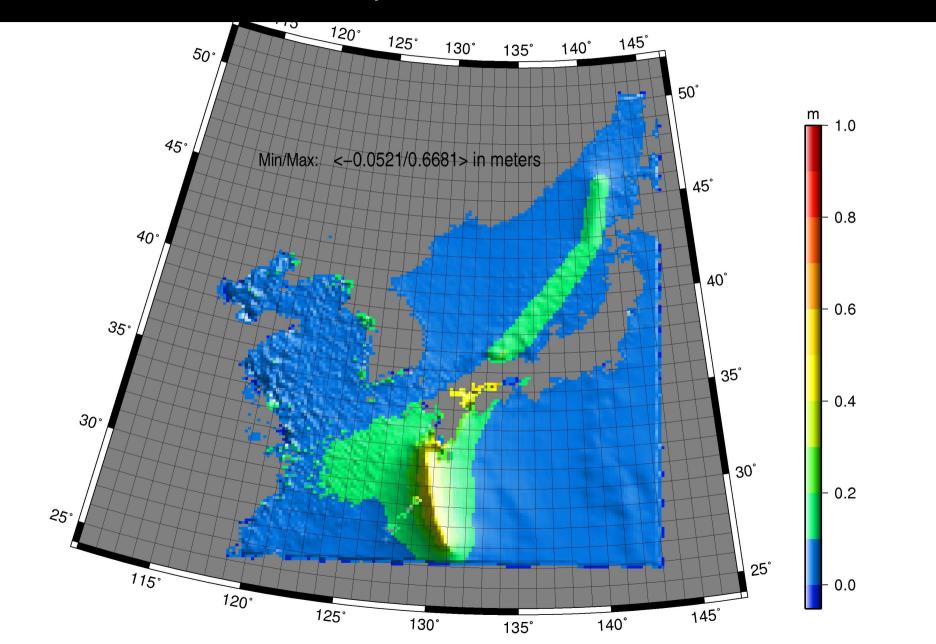
# RESULTS OF A SERIES OF RUNS

1回目の予測実験:台風第 12号 (ナムセーウン)平成 28年09月02日17時40分 発表



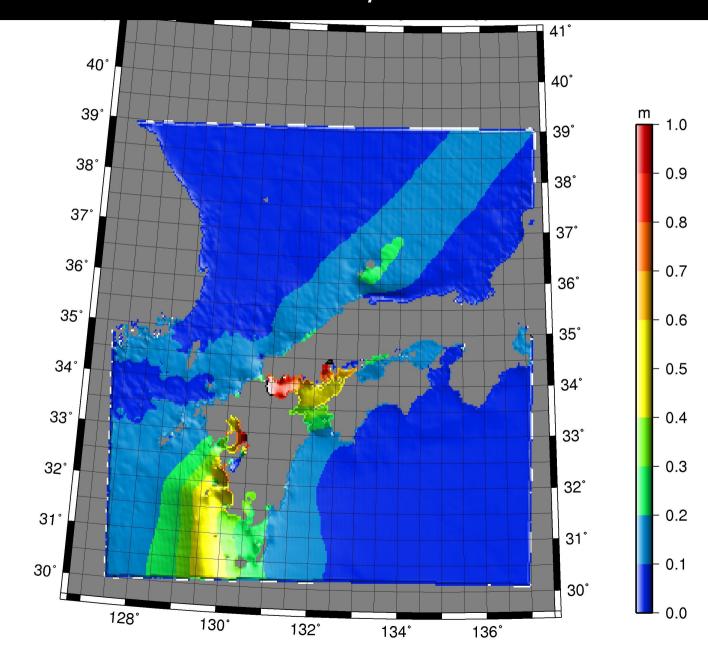


#### 最大高潮偏差值分布, D1: RMAX=60 KM





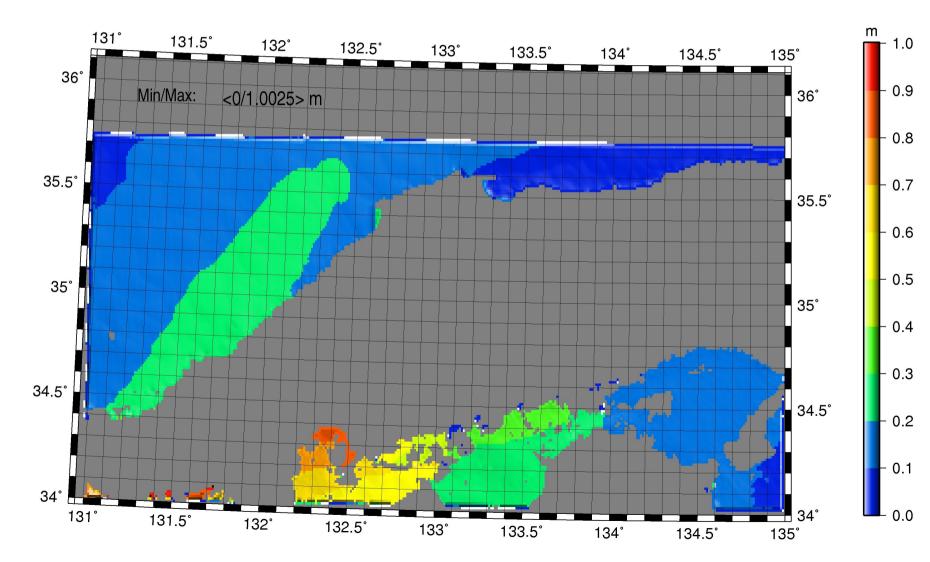
#### 最大高潮偏差值分布, D2: RMAX=60 KM





GMD 2016 Sep 04 11:24:35 Sooyoul Kim, Tottori U, Japan

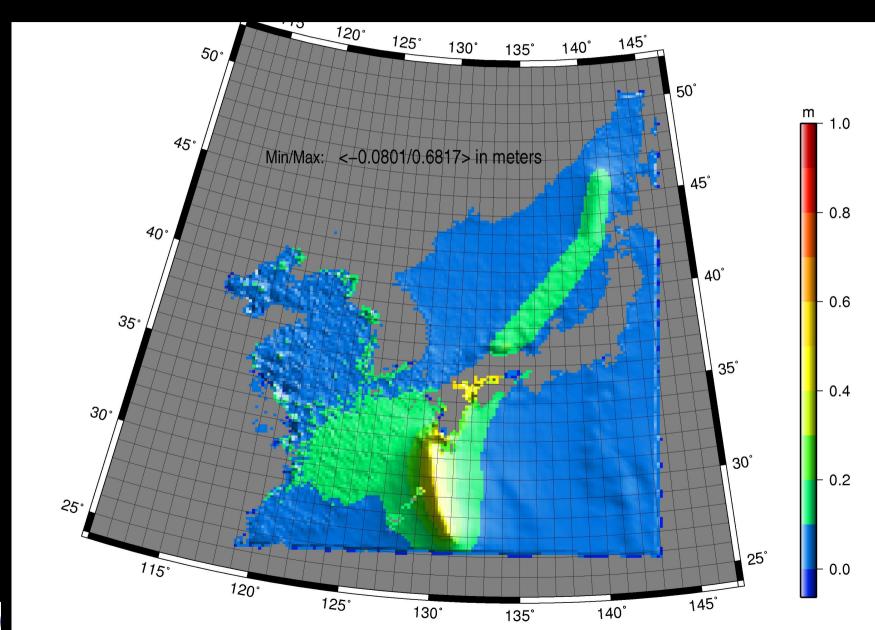
#### 最大高潮偏差值分布, D3: RMAX=60 KM





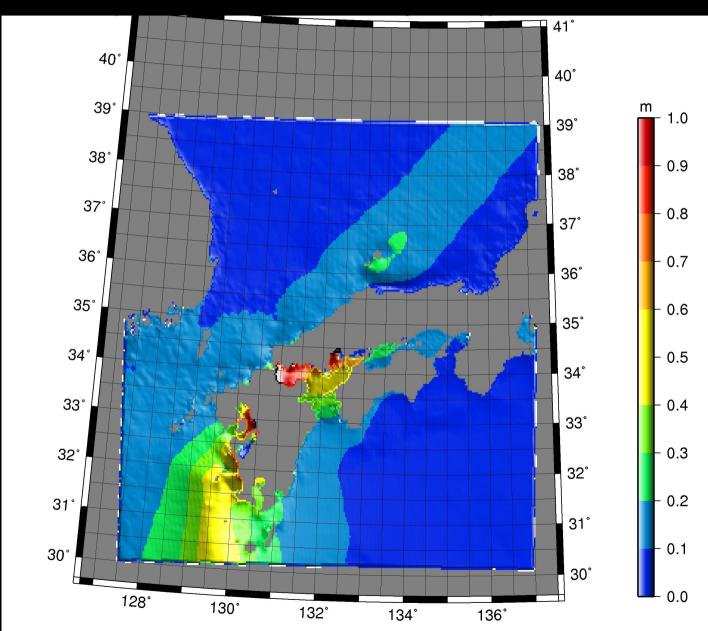
GMD 2016 Sep 04 11:26:44 Sooyoul Kim, Tottori U, Japan

#### 最大高潮偏差值分布, D1: RMAX=70 KM





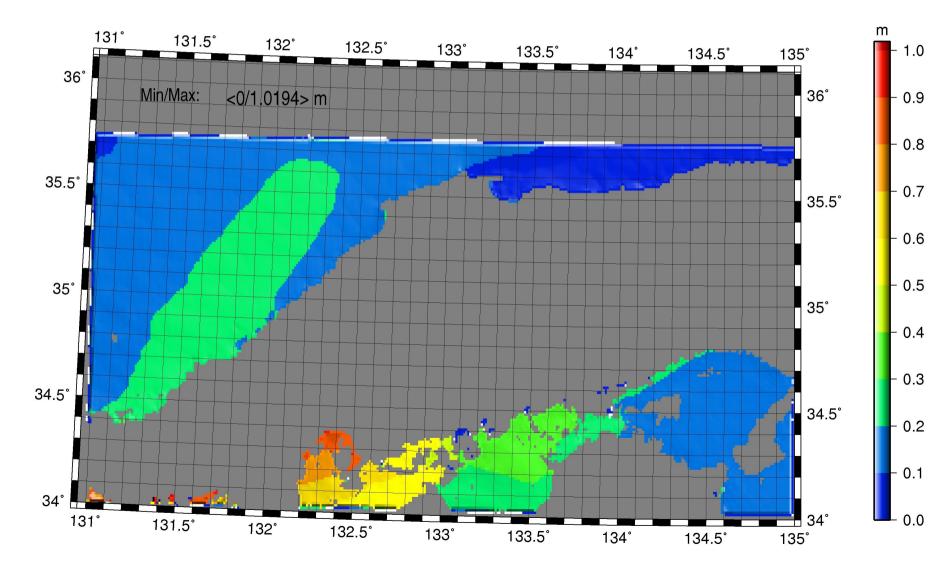
# 最大高潮偏差值分布, D2: RMAX=70 KM





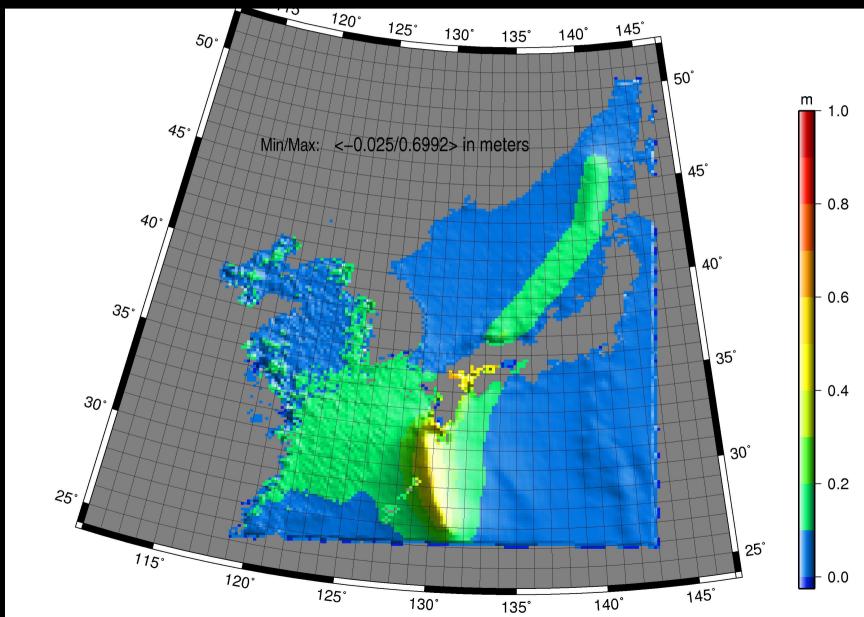
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#### 最大高潮偏差值分布, D3: RMAX=70 KM





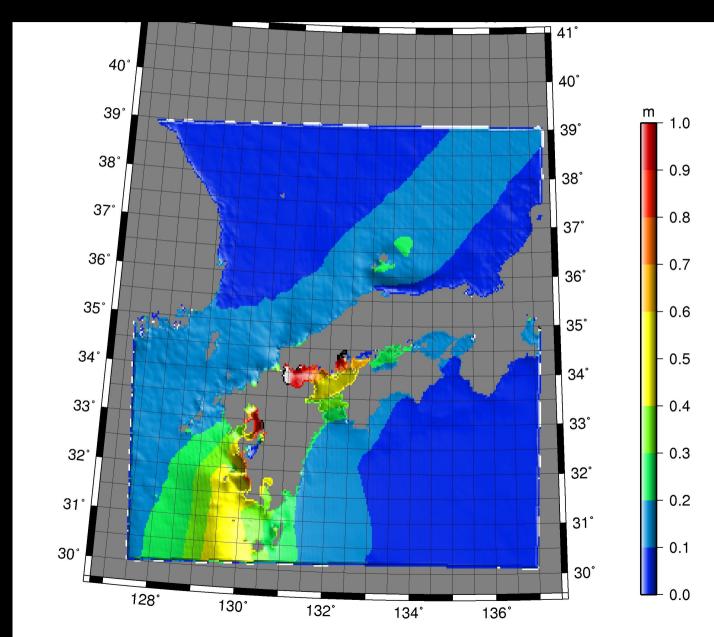
#### 最大高潮偏差值分布, D1: RMAX=80 KM





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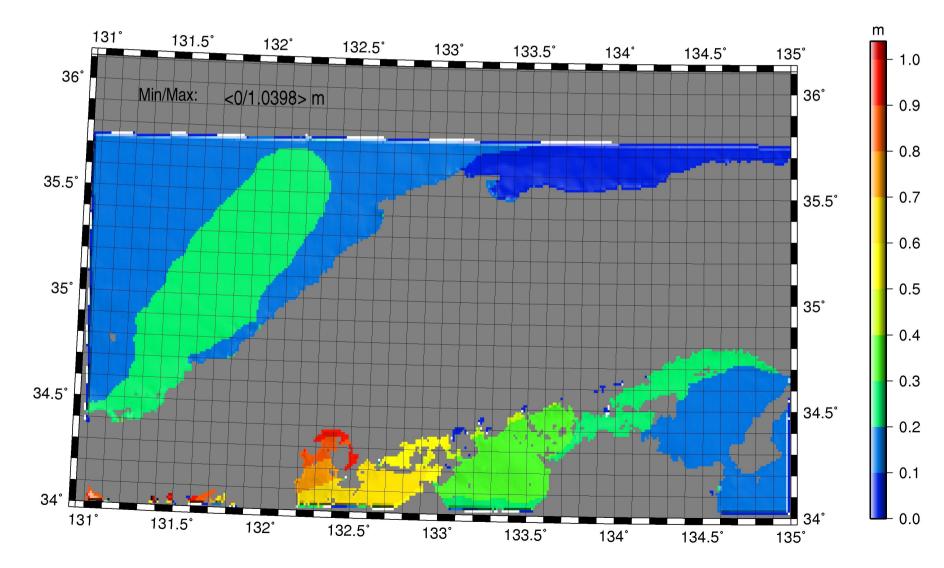
# 最大高潮偏差值分布, D2: RMAX=80 KM





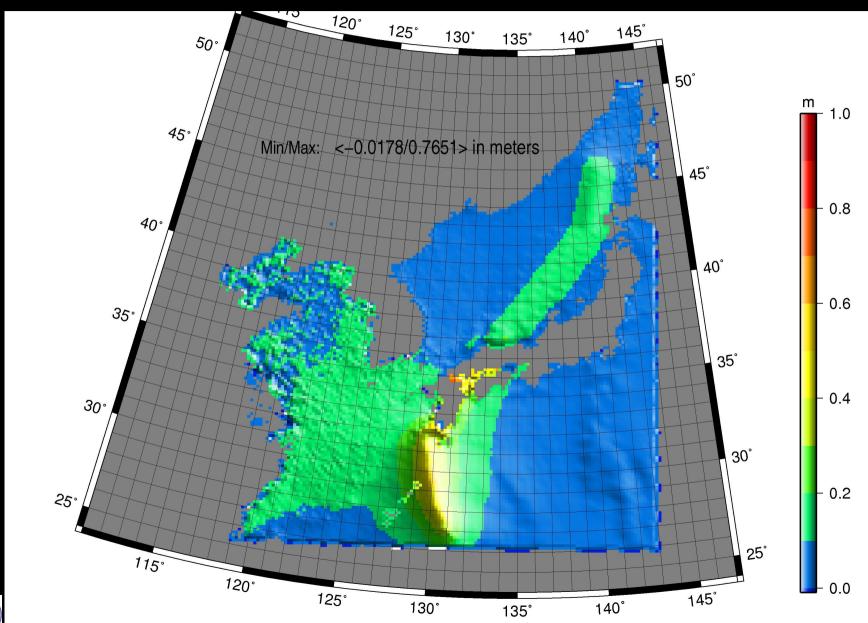
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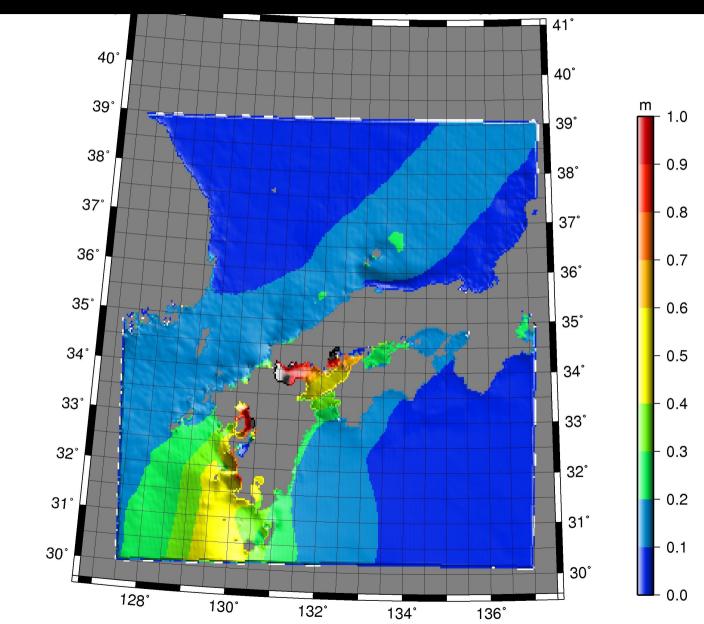


#### 最大高潮偏差值分布, D1: RMAX=90 KM



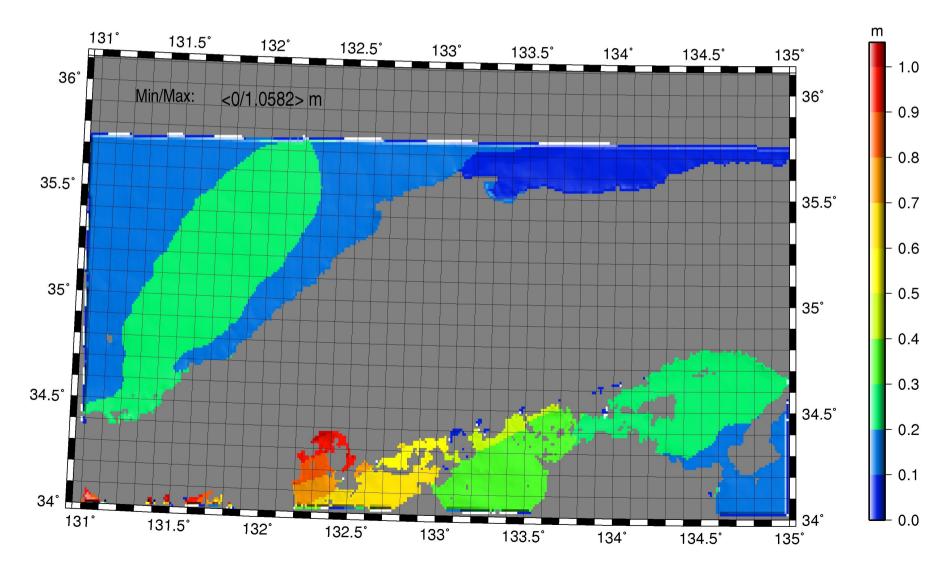


# 最大高潮偏差值分布, D2: RMAX=90 KM





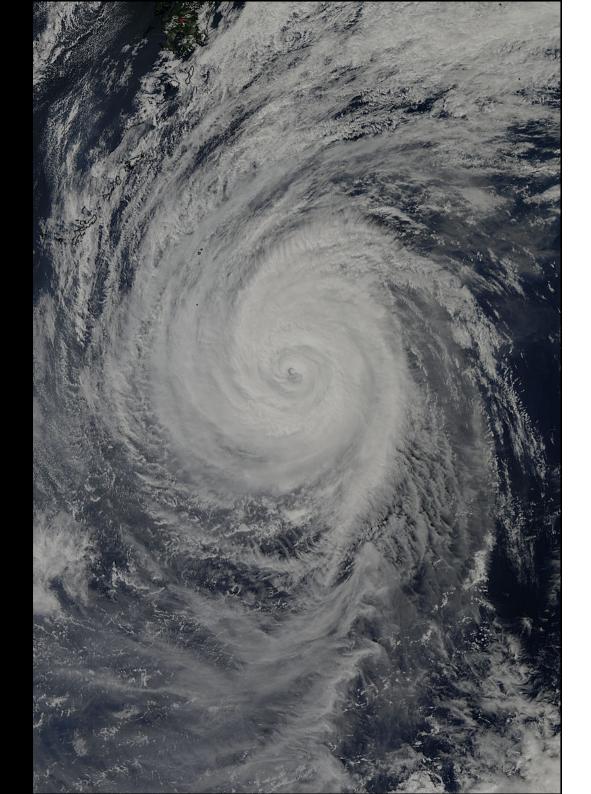
#### 最大高潮偏差值分布, D3: RMAX=90 KM





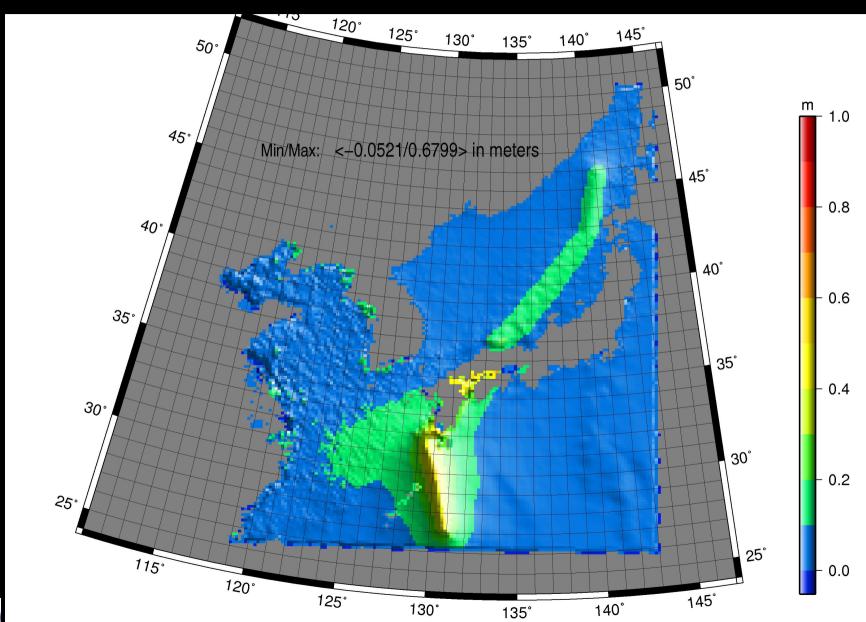
# RESULTS OF A SERIES OF RUNS

2回目の予測実験:台風第 12号 (ナムセーウン)平成 28年09月02日18時45分 発表



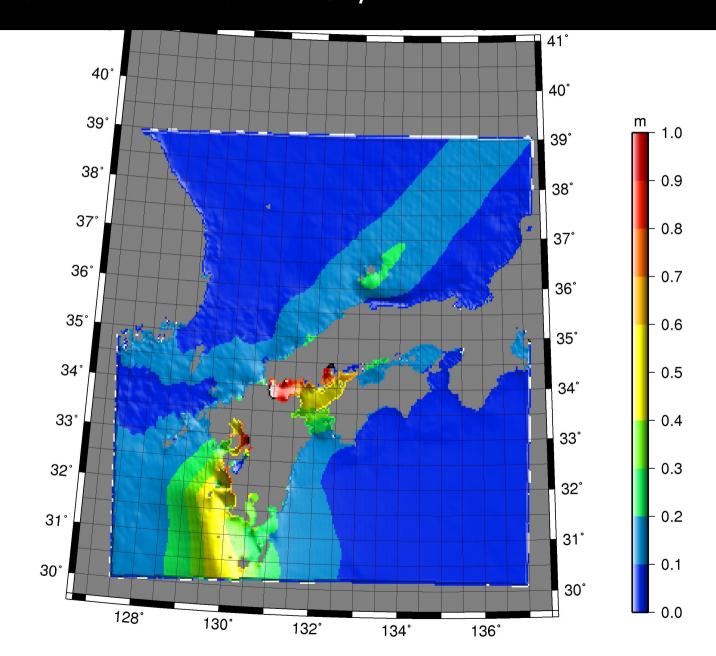


#### 最大高潮偏差值分布, D1: RMAX=60 KM



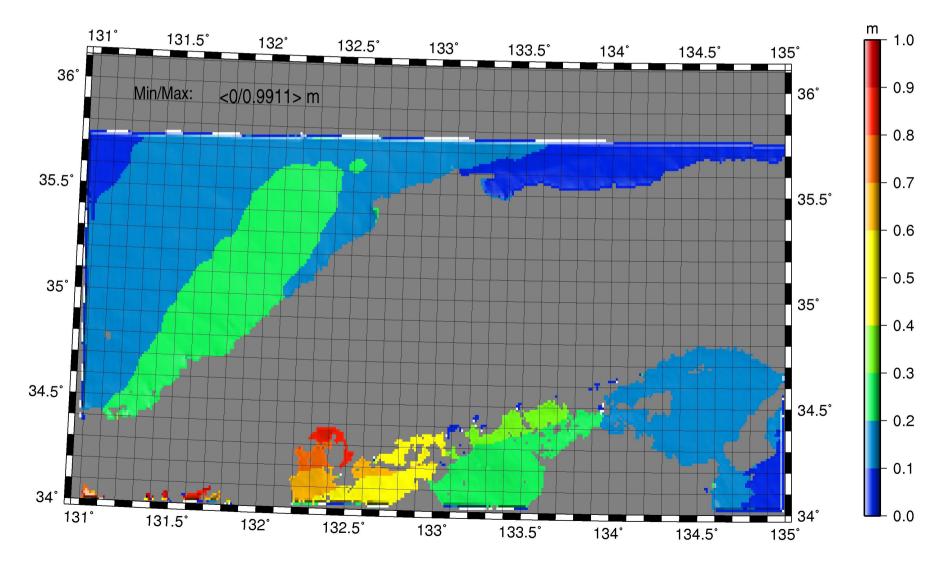


#### 最大高潮偏差值分布, D2: RMAX=60 KM





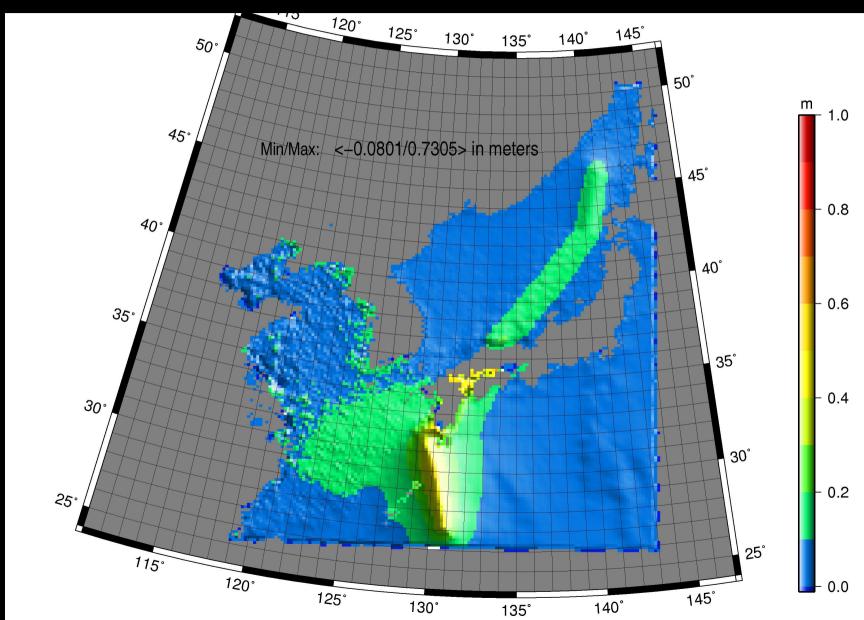
#### 最大高潮偏差值分布, D3: RMAX=60 KM





GMD 2016 Sep 04 11:26:58 Sooyoul Kim, Tottori U, Japan

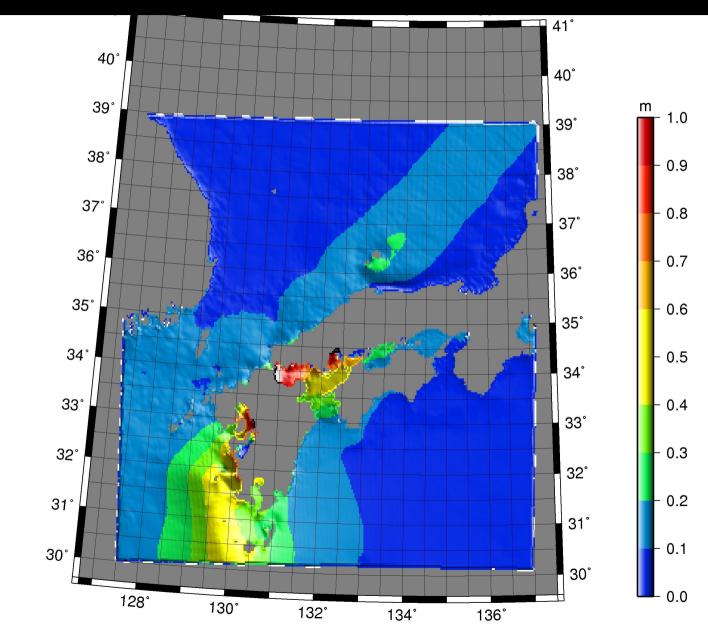
#### 最大高潮偏差值分布, D1: RMAX=70 KM





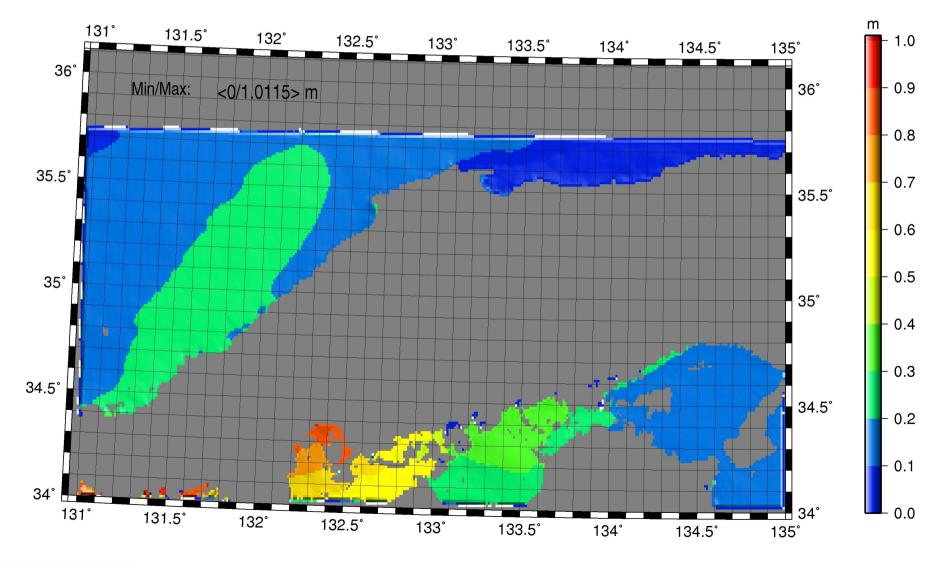
GMD 2016 Sep 04 11:22:34 Sooyoul Kim, Tottori U, Japan

# 最大高潮偏差值分布, D2: RMAX=70 KM



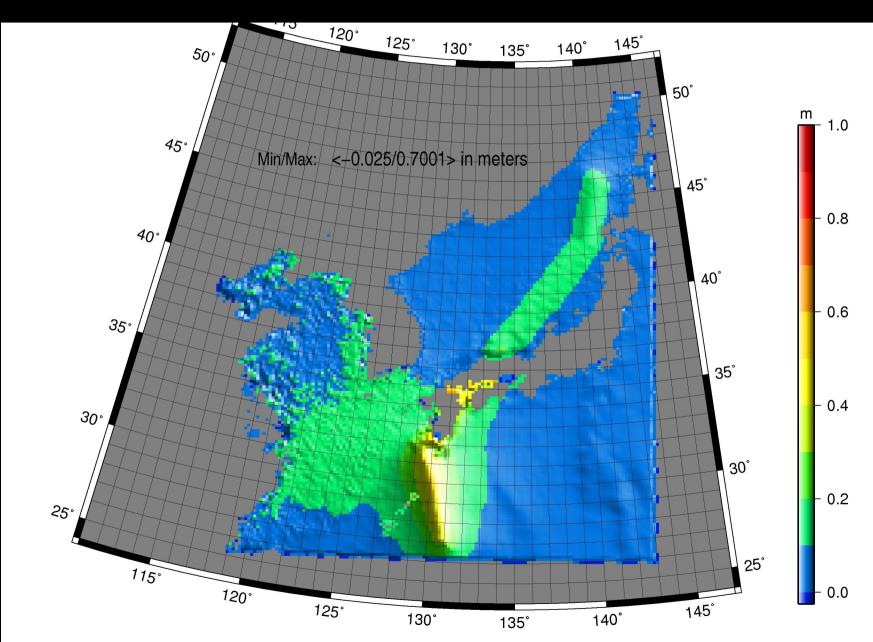


# 最大高潮偏差值分布, D3: RMAX=70 KM





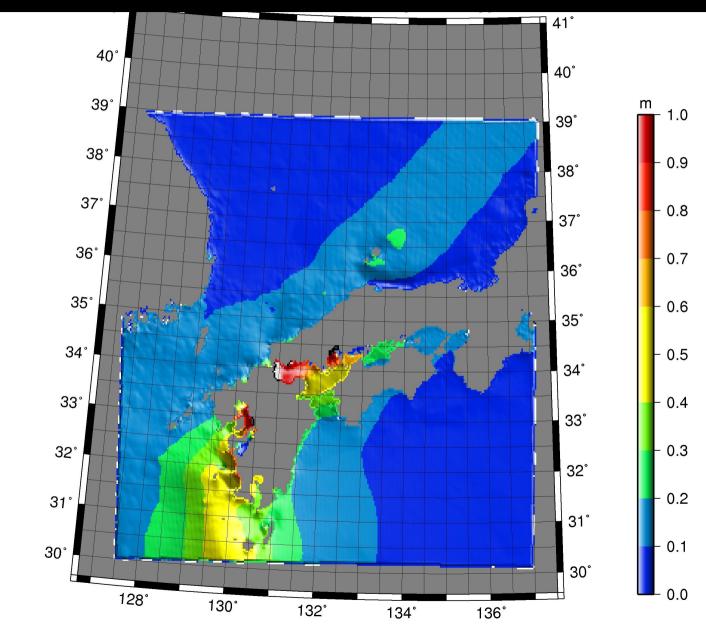
#### 最大高潮偏差值分布, D1: RMAX=80 KM





GM7 2016 Sep 04 11:22:38 Sooyoul Kim, Tottori U, Japan

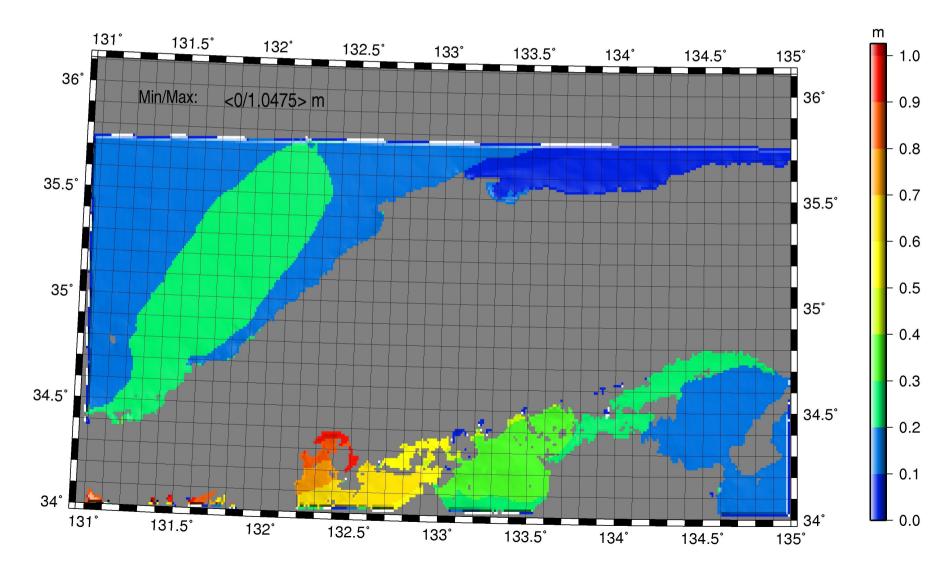
#### 最大高潮偏差值分布, D2: RMAX=80 KM





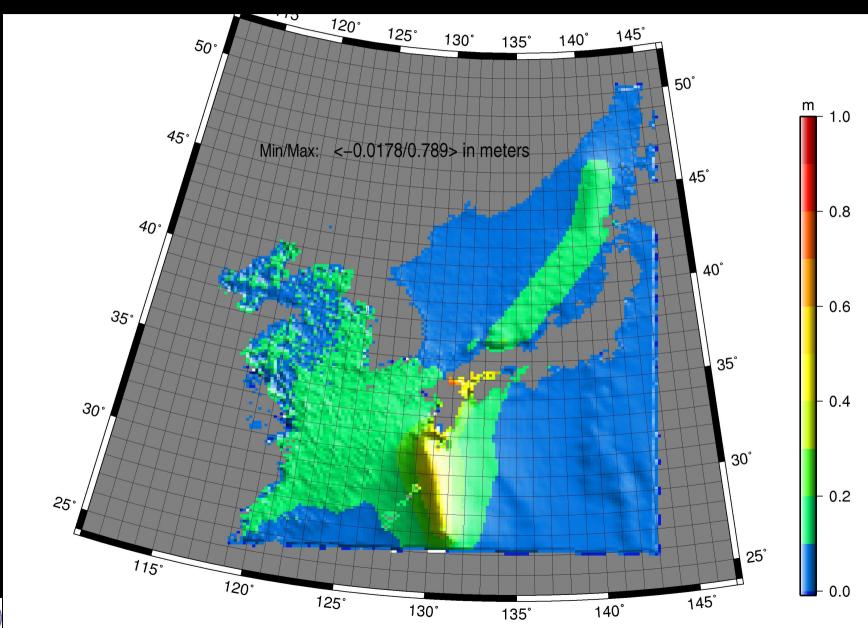
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#### 最大高潮偏差值分布, D3: RMAX=80 KM



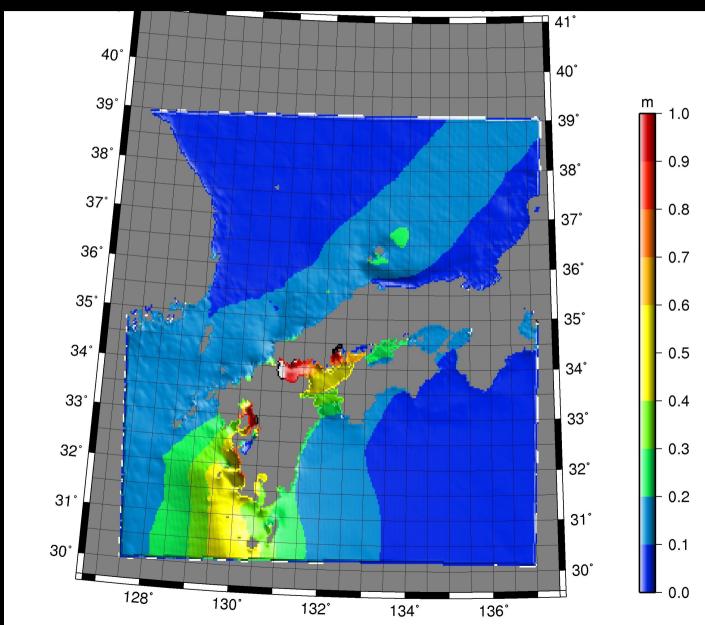


#### 最大高潮偏差值分布, D1: RMAX=90 KM





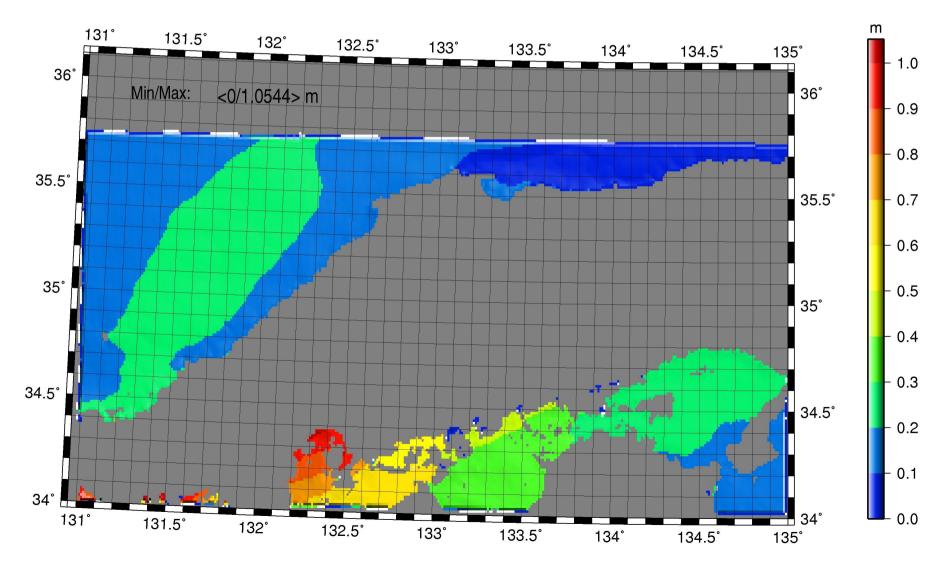
# 最大高潮偏差值分布, D2: RMAX=90 KM





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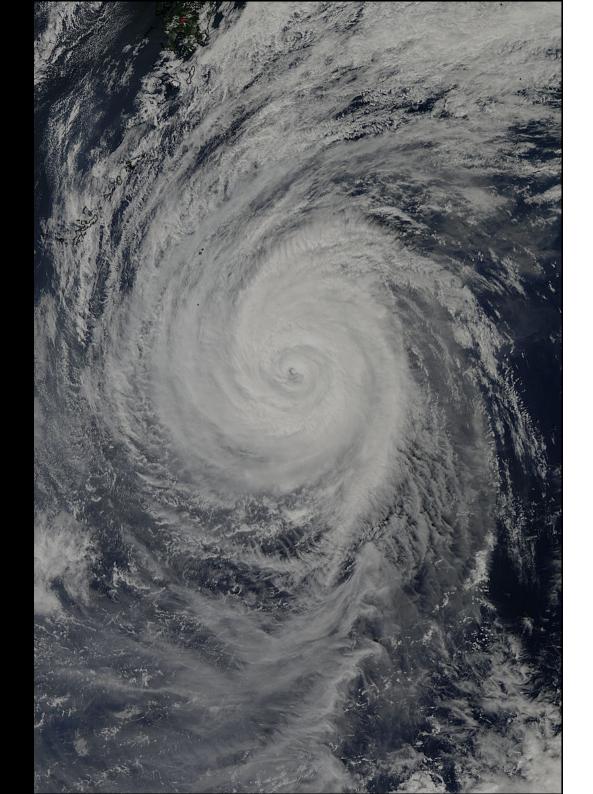
#### 最大高潮偏差值分布, D3: RMAX=90 KM





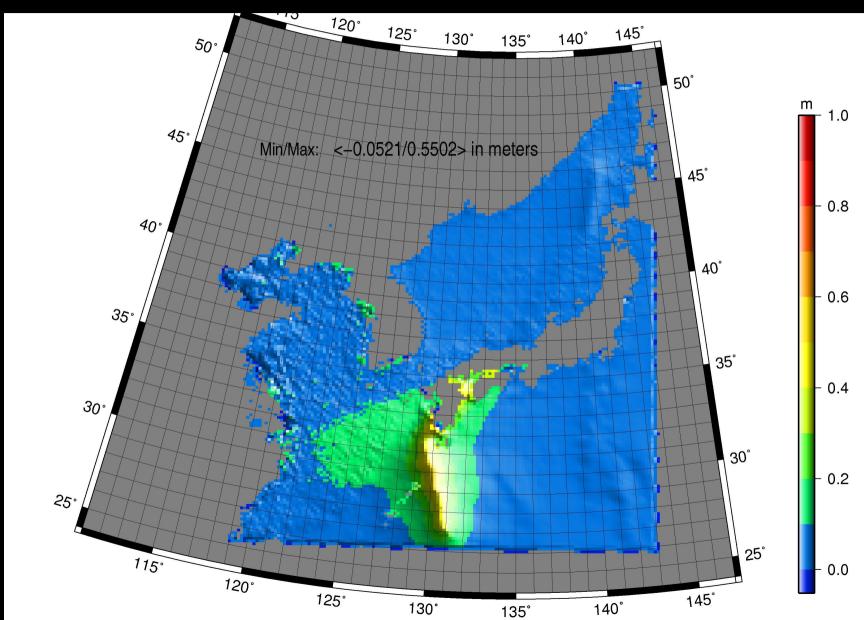
# RESULTS OF A SERIES OF RUNS

3回目の予測実験:台風第 12号 (ナムセーウン)平成 28年09月02日21時50分 発表



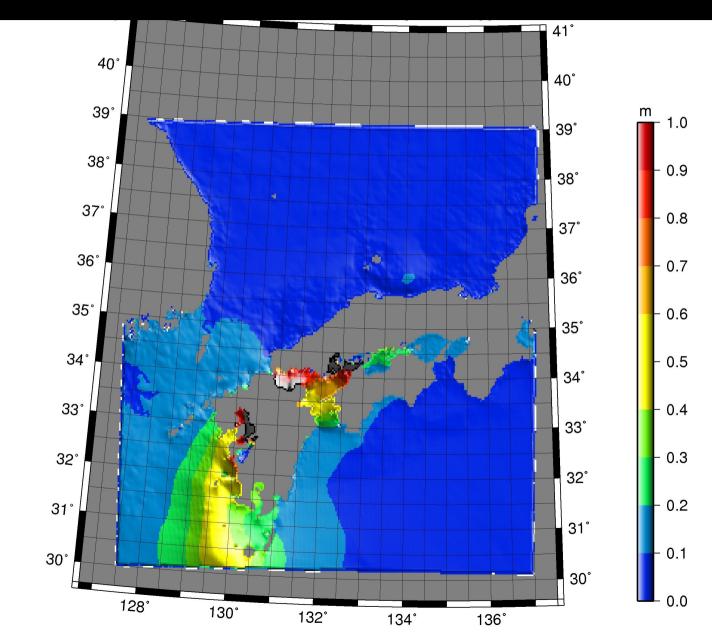


## 最大高潮偏差值分布, D1: RMAX=60 KM





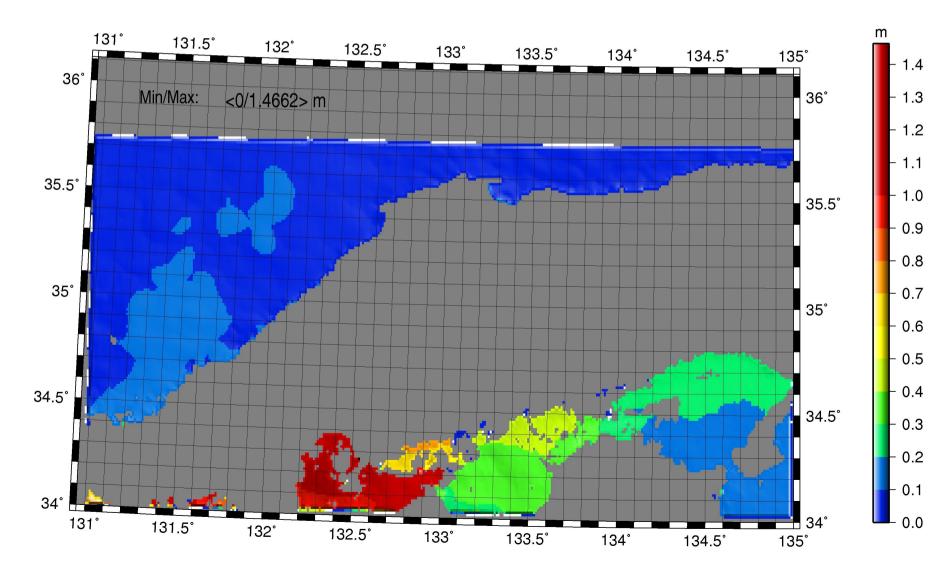
## 最大高潮偏差值分布, D2: RMAX=60 KM





GMD 2016 Sep 04 11:25:20 Sooyoul Kim, Tottori U, Japan

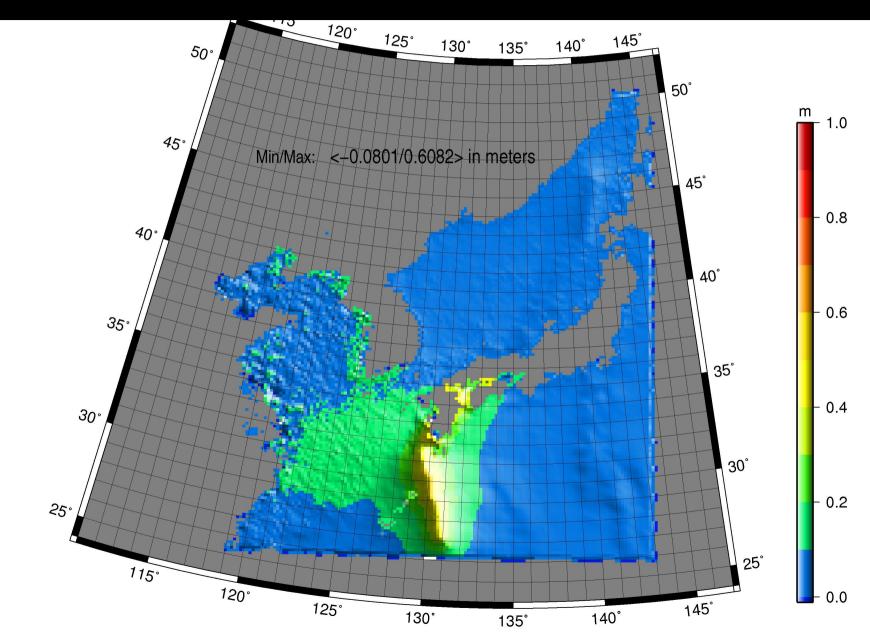
#### 最大高潮偏差值分布, D3: RMAX=60 KM





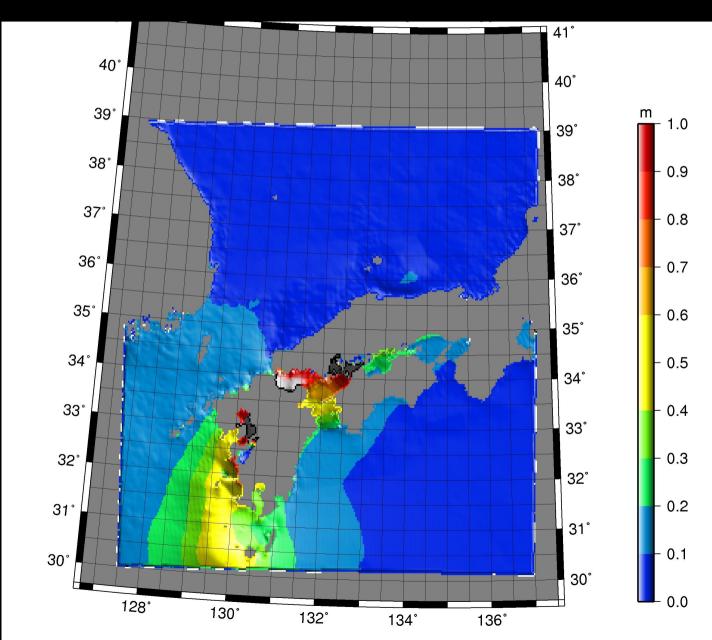
GMD 2016 Sep 04 11:27:38 Soovoul Kim, Tottori U. Japa

## 最大高潮偏差值分布, D1: RMAX=70 KM



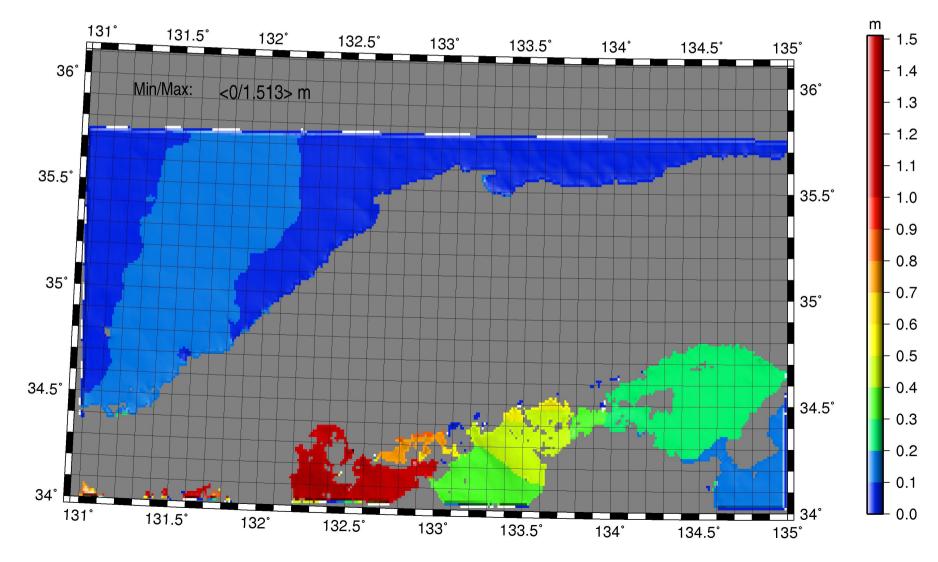


## 最大高潮偏差值分布, D2: RMAX=70 KM



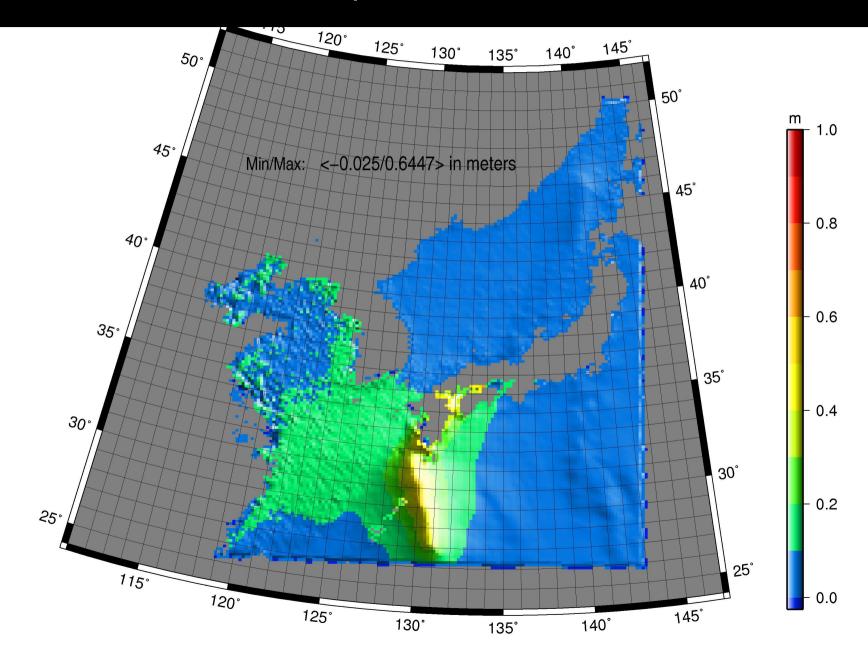


#### 最大高潮偏差值分布, D3: RMAX=70 KM



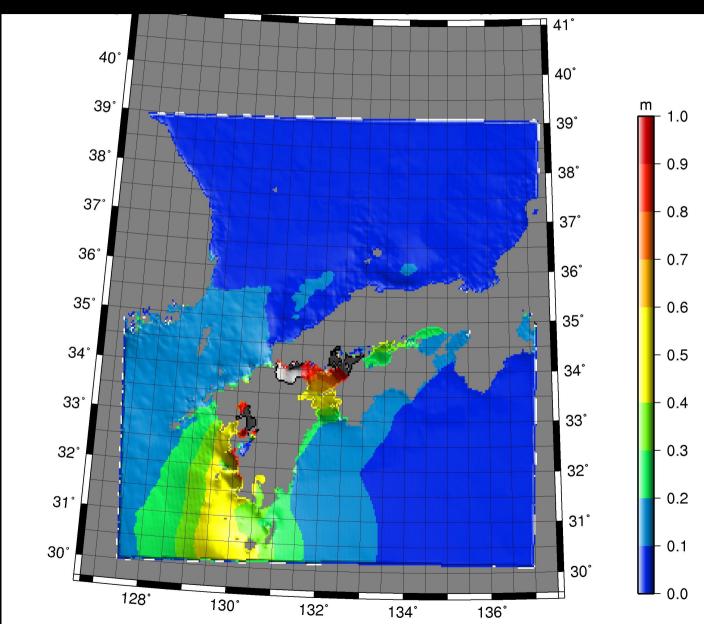


## 最大高潮偏差值分布, D1: RMAX=80 KM





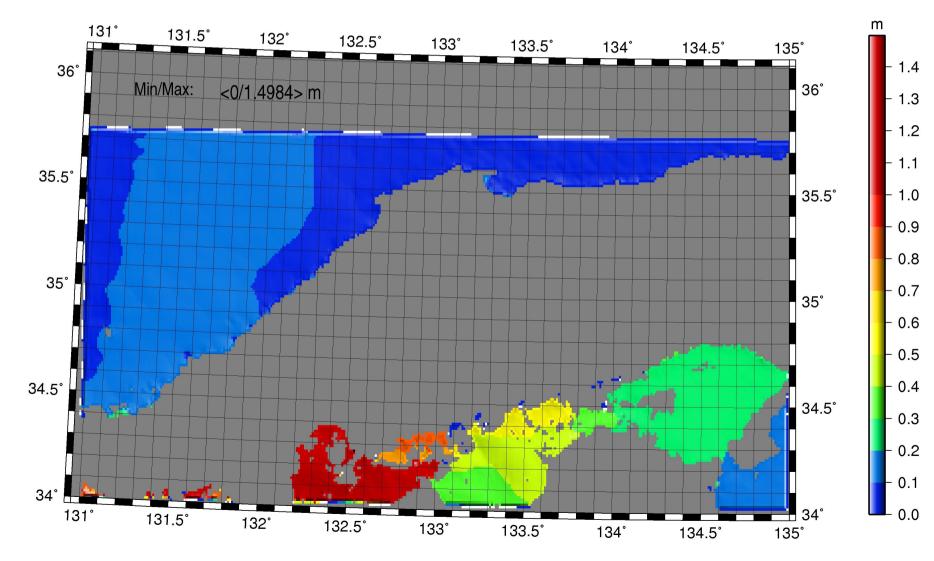
## 最大高潮偏差值分布, D2: RMAX=80 KM





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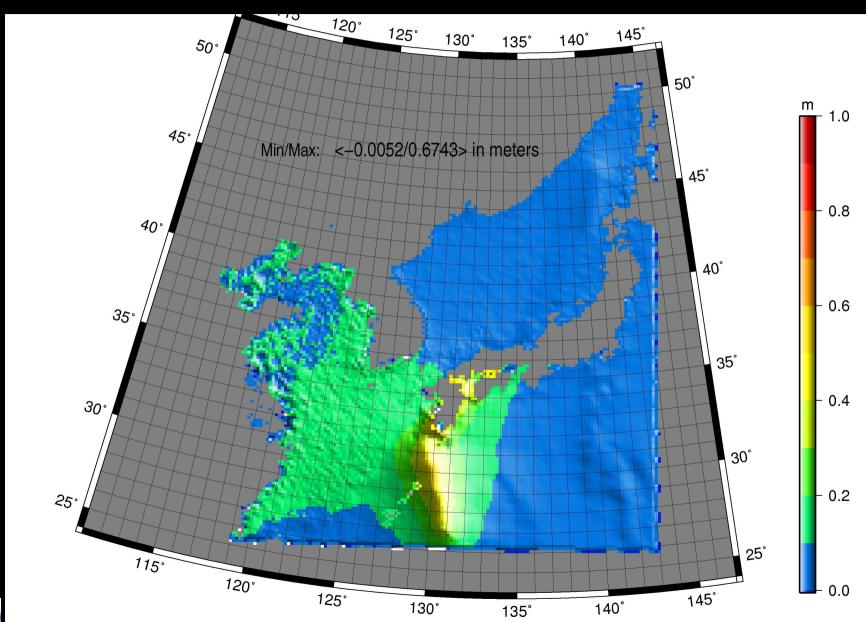
#### 最大高潮偏差值分布, D3: RMAX=80 KM





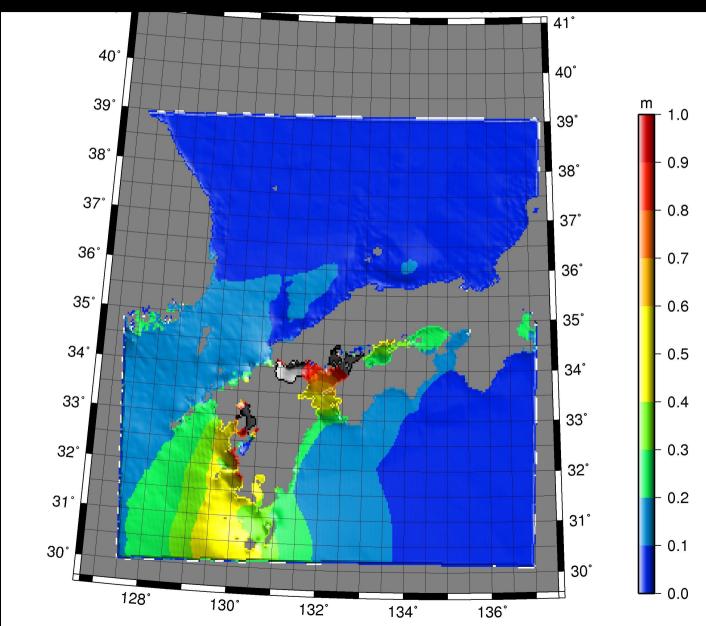
GMD 2016 Sep 04 11:27:44 Sooyoul Kim, Tottori U, Japan

# 最大高潮偏差值分布, D1: RMAX=90 KM





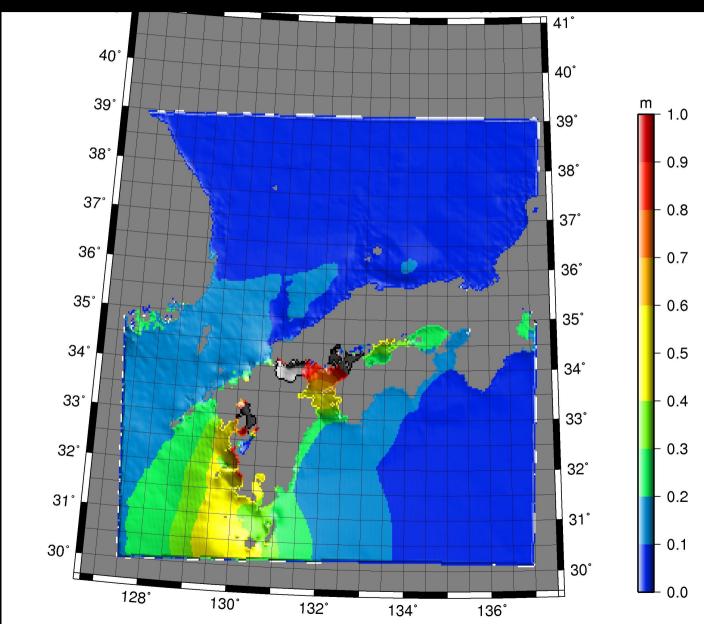
#### 最大高潮偏差值分布, D2: RMAX=90 KM





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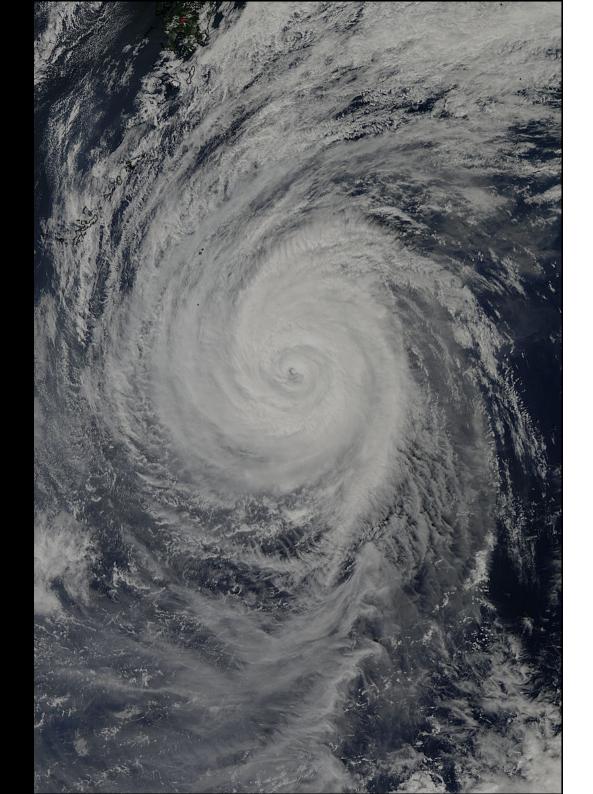
## 最大高潮偏差值分布, D3: RMAX=90 KM





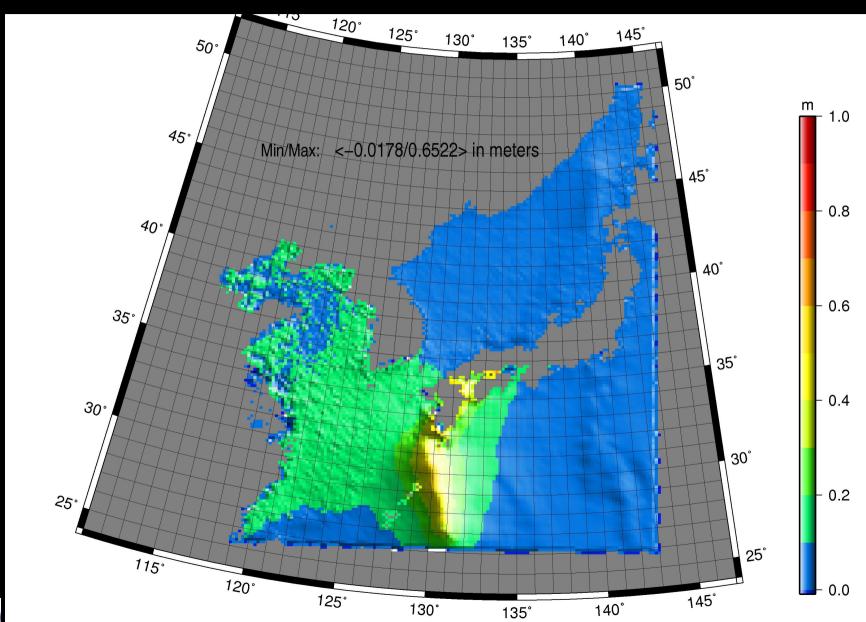
# RESULTS OF A SERIES OF RUNS

4回目の予測実験:台風第12号 (ナムセーウン)平成28年09月02 日22時40分 発表



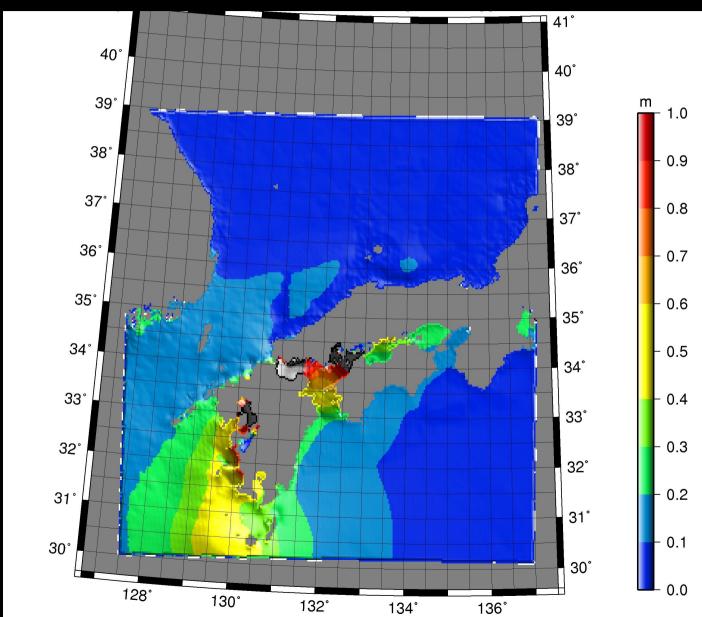


## 最大高潮偏差值分布, D1: RMAX=60 KM





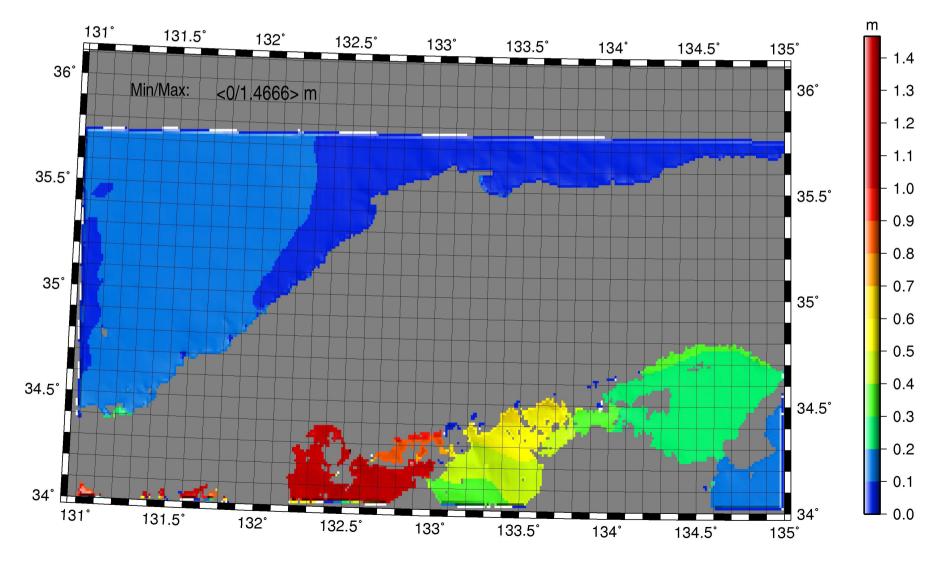
#### 最大高潮偏差值分布, D1: RMAX=60 KM





GMD 2016 Sep 04 11:25:32 Sooyoul Kim, Tottori U, Japan

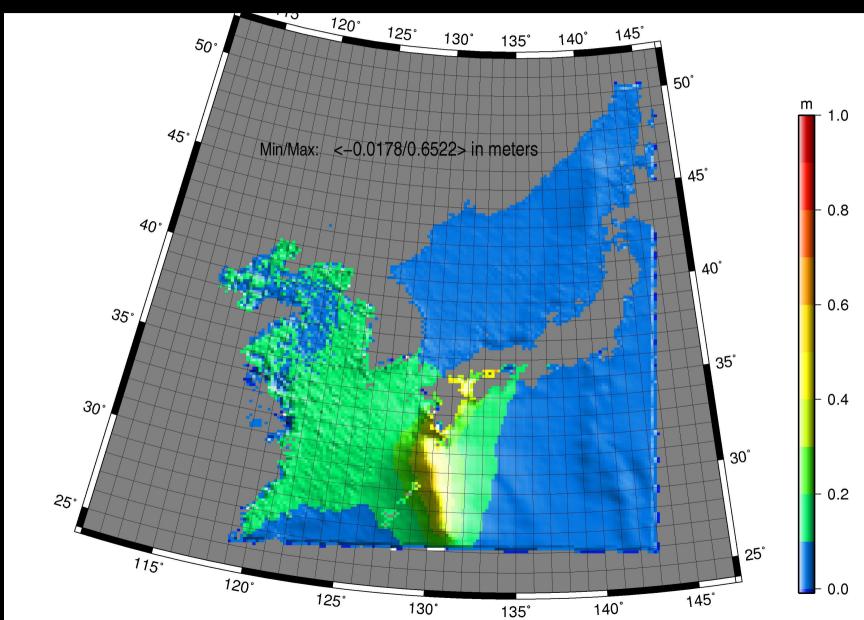
#### 最大高潮偏差值分布, D1: RMAX=80 KM





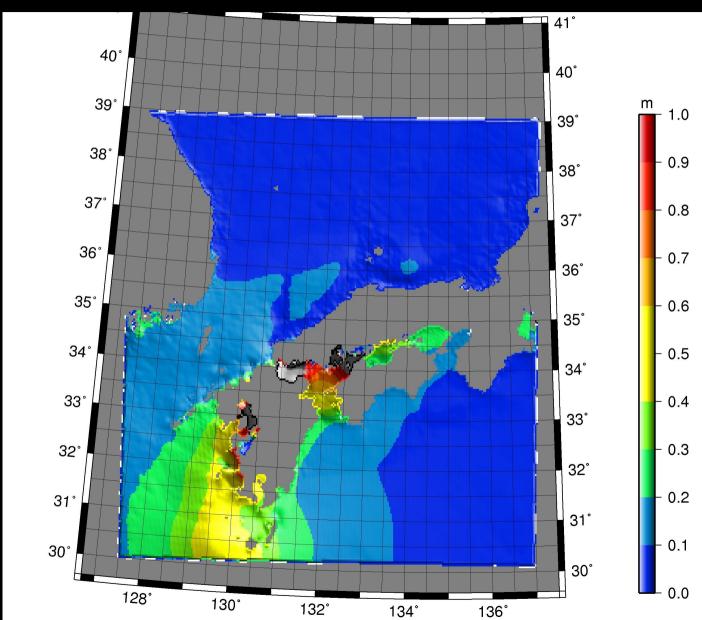
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## 最大高潮偏差值分布, D1: RMAX=70 KM



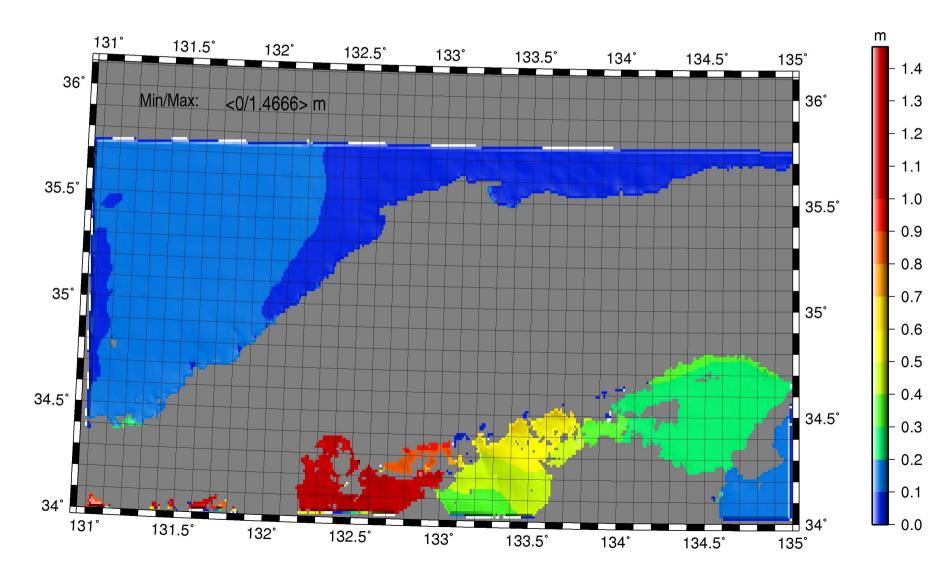


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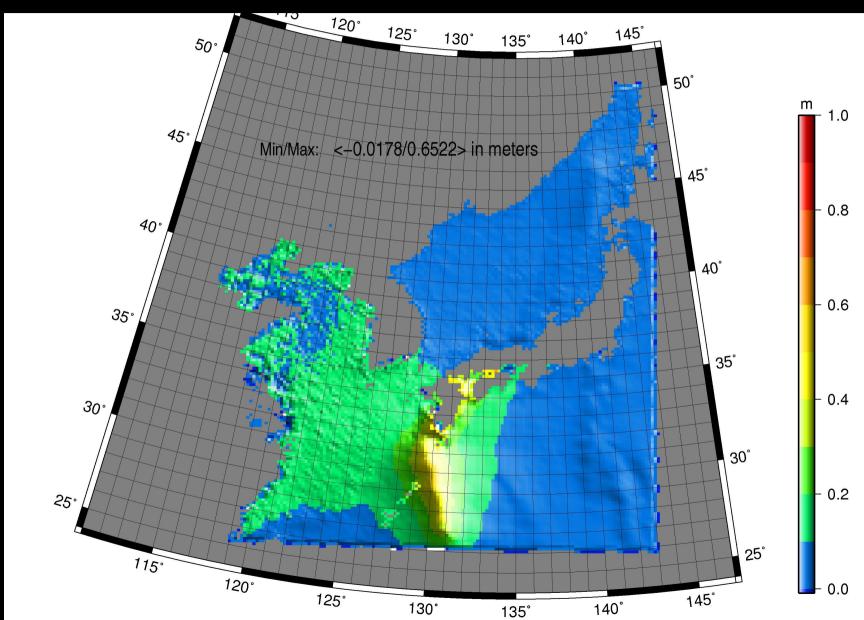


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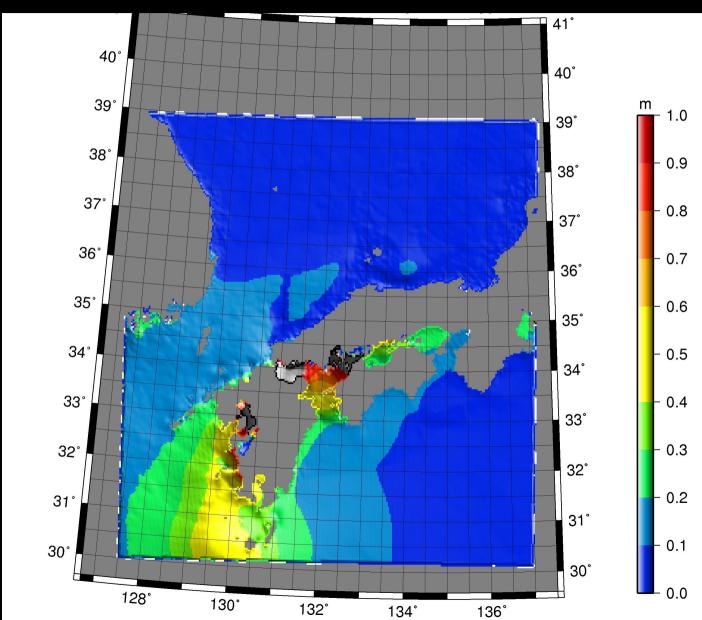


# 最大高潮偏差值分布, D1: RMAX=80 KM





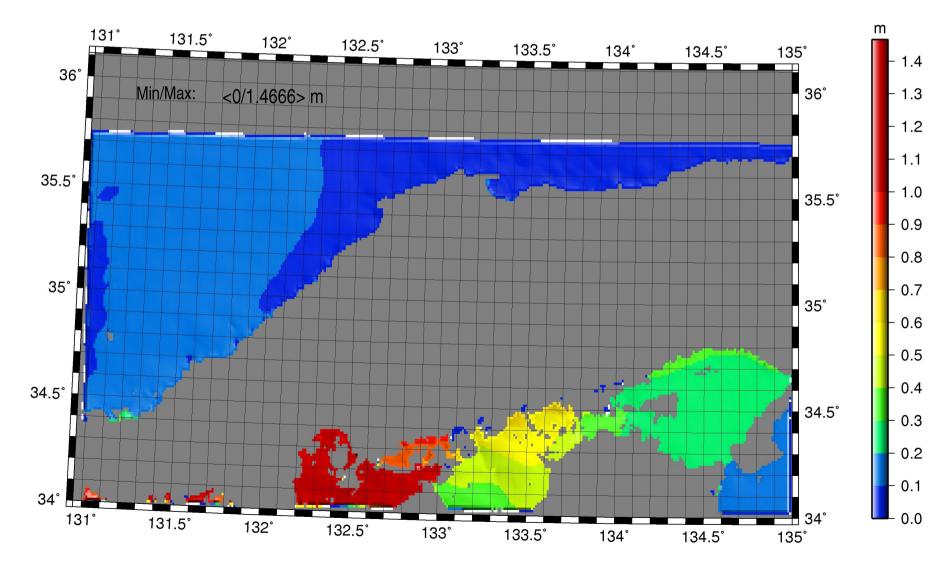
## 最大高潮偏差值分布, D2: RMAX=80 KM





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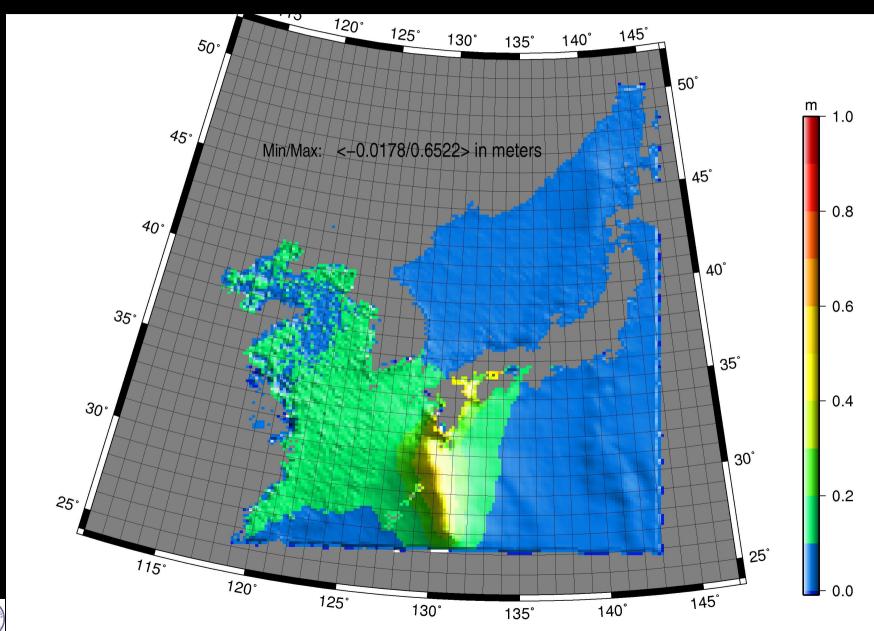
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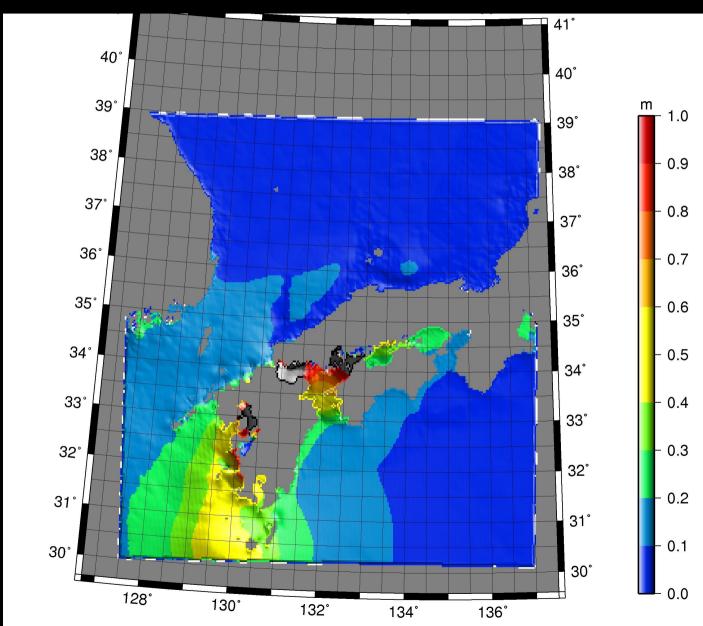
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# 最大高潮偏差值分布, D1: RMAX=90 KM





## 最大高潮偏差值分布, D2: RMAX=90 KM





#### 最大高潮偏差值分布, D3: RMAX=90 KM

