

2021年台風9号 高潮予測実験

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Model Description

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- Kim et al., 2008; 2010
- A parametric wind and pressure model
 - 気圧場
 - Myers (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).
 - 藤田式 (1974),
 - 光田 寧, 藤井 健, 川平浩二, 1974:台風の構造のモデル化について(1), 京都大学防災研究所年報, 17B, 227-234

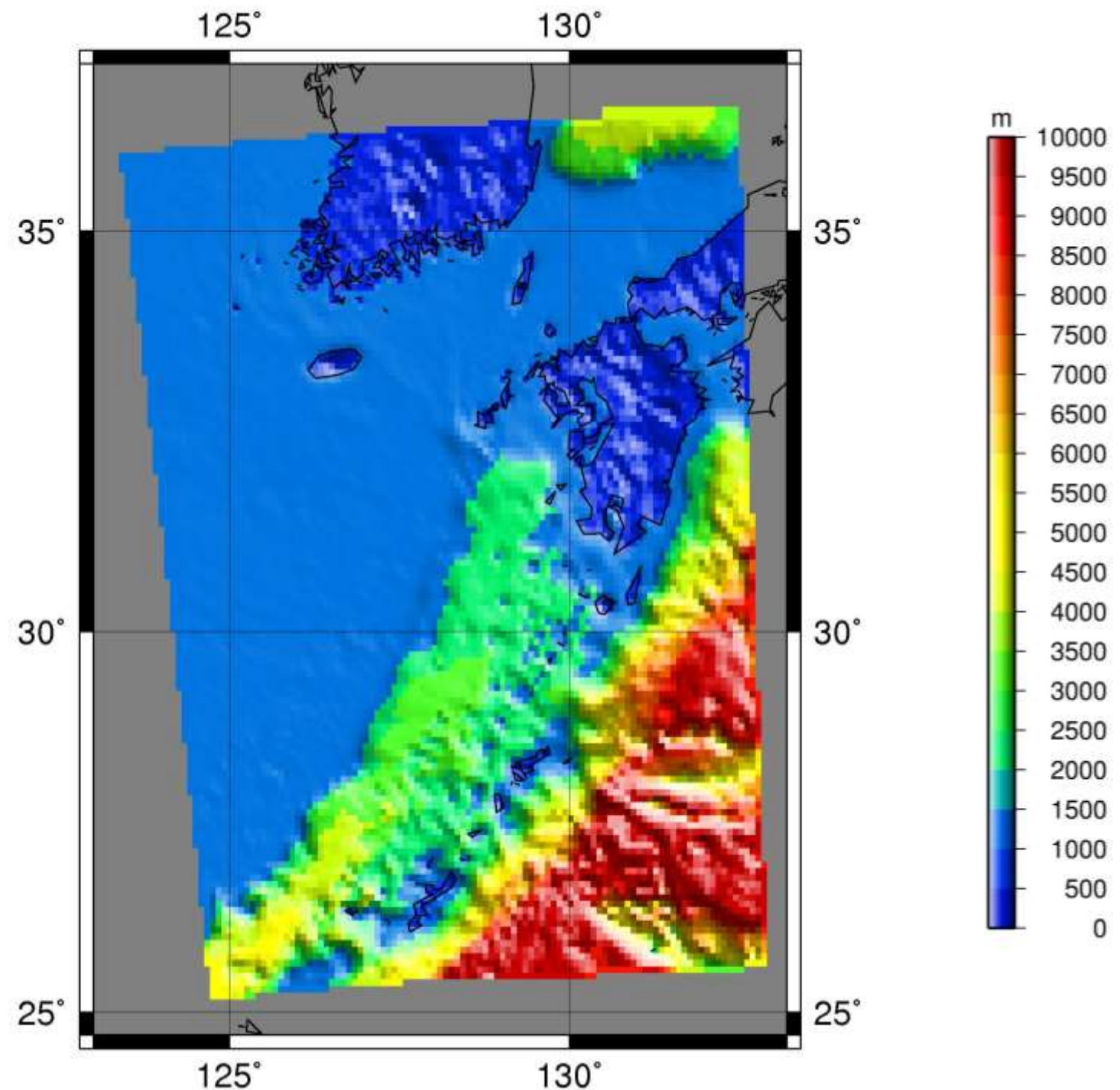
Model 1: SuWAT Model

Model Description

- 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ーション, 京都大学防災研究所年報, Vol.29, No.B-1, PP.229-239, 1986.
 - 藤田 (1974)
 - 光田 寧, 藤井 健, 川平浩二, 1974: 台風の構造のモデル化について(1), 京都大学防災研究所年報, 17B, 227-234.
- Myers (Myers式)
 - 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).

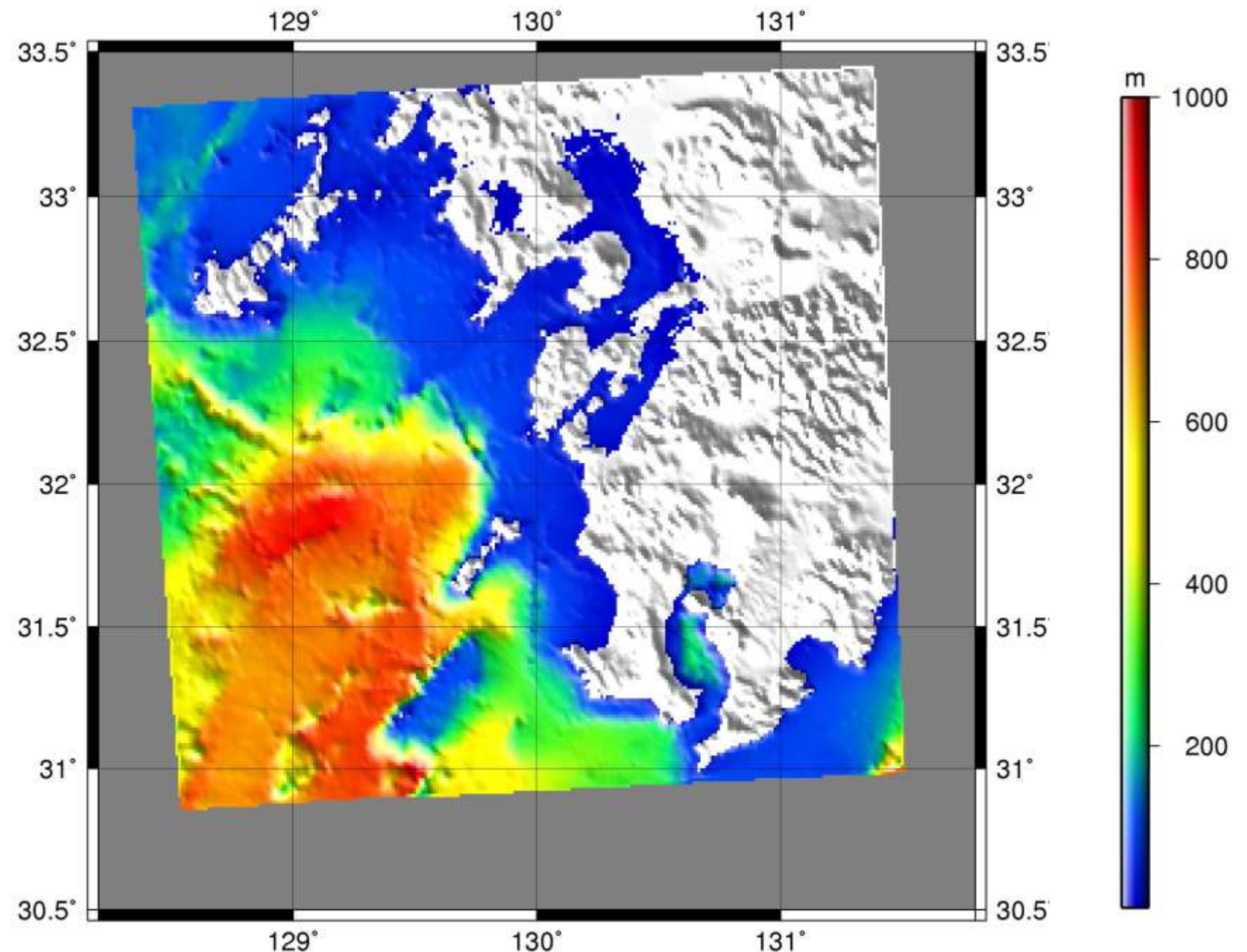
Geophysical regions of two level domains

- D1
 - The number of grids: 200 x 210
 - Grid size : $\text{delx} = 4108 \text{ m}$,
 - Grid size : $\text{dely} = 4488.3 \text{ m}$,



Geophysical regions of two level domains (九州)

- D2
 - The number of grids: 280 x 280
 - Grid size : $\text{delx} = 1016.1 \text{ m}$,
 - Grid size : $\text{dely} = 978.8 \text{ m}$,



気象庁：台風予報値

- <https://www.jma.go.jp/bosai/map.html#6/32.926/132.155/&elem=root&typhoon=TC2114&contents=typhoon>

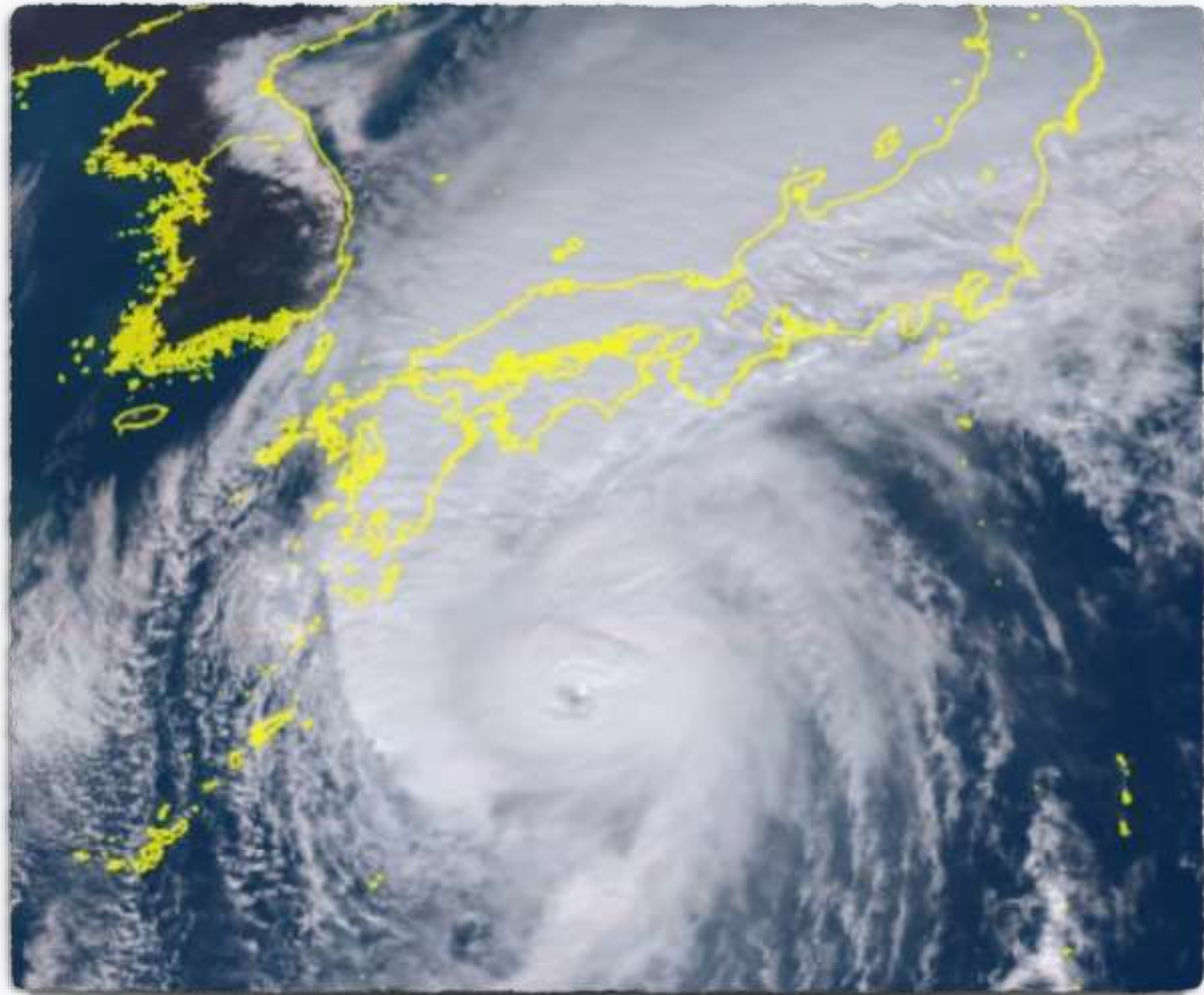


RESULTS OF A SERIES OF RUNS

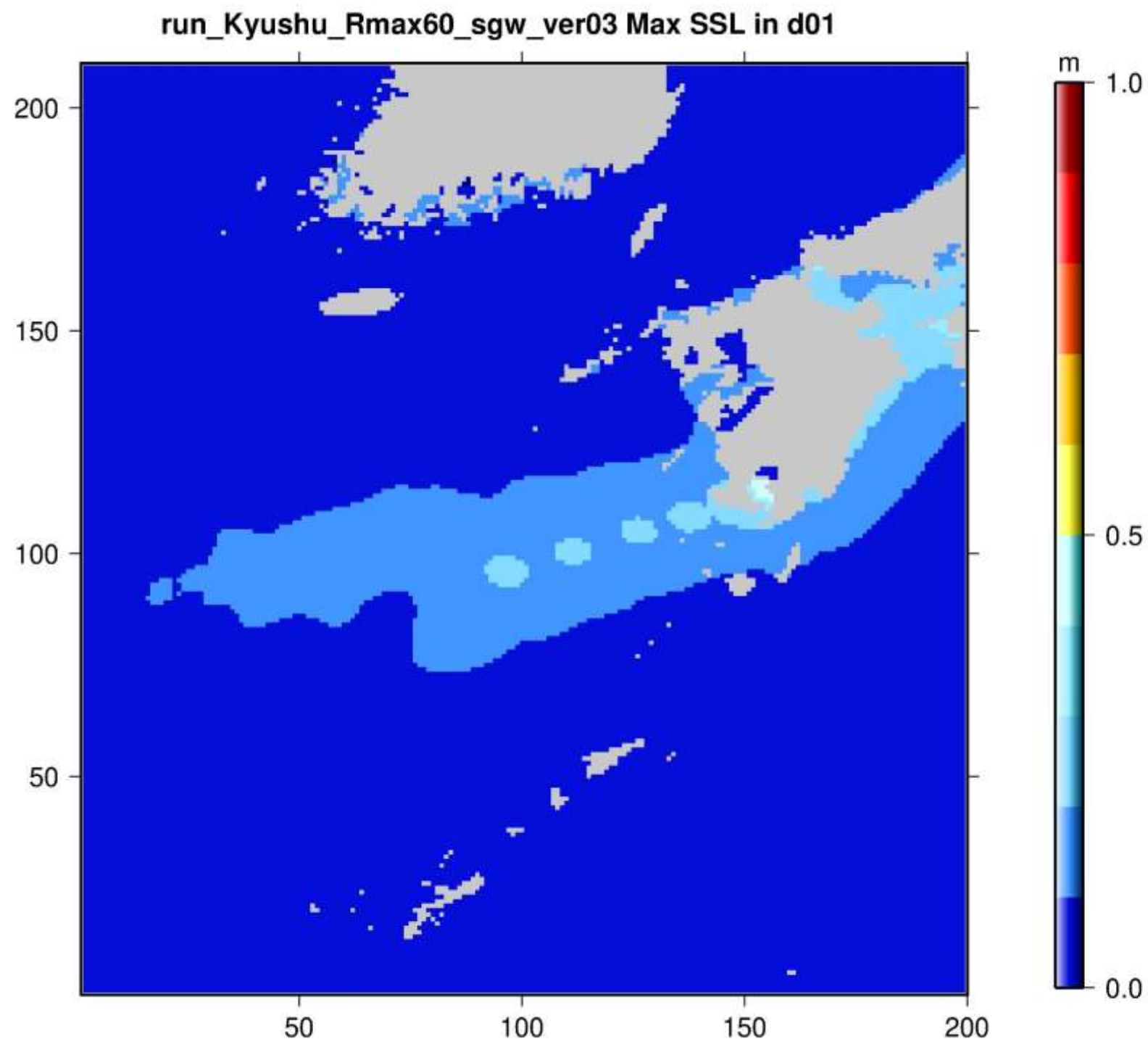
❖ 予測実験：台風最大半径 60 km

予報時間:

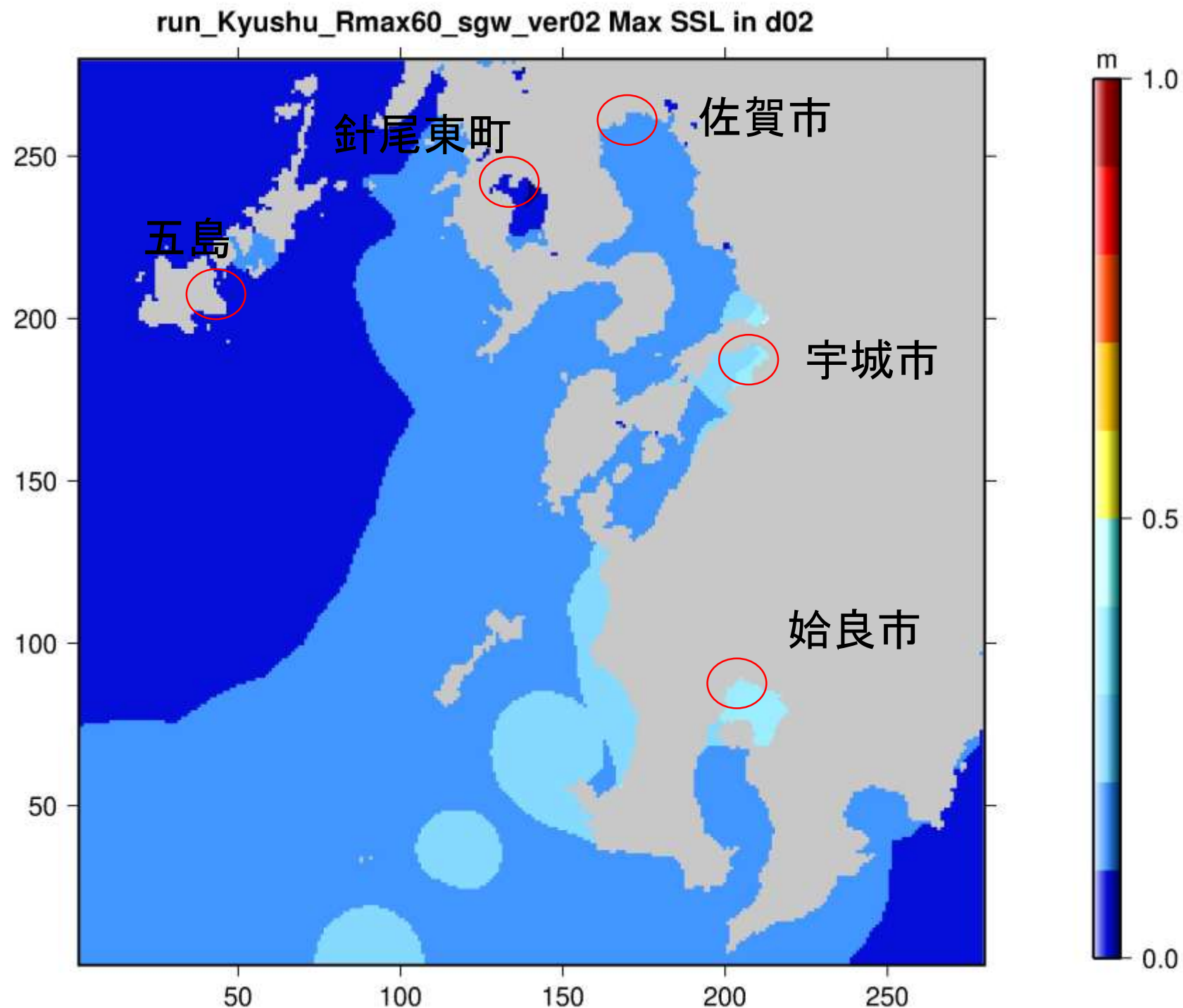
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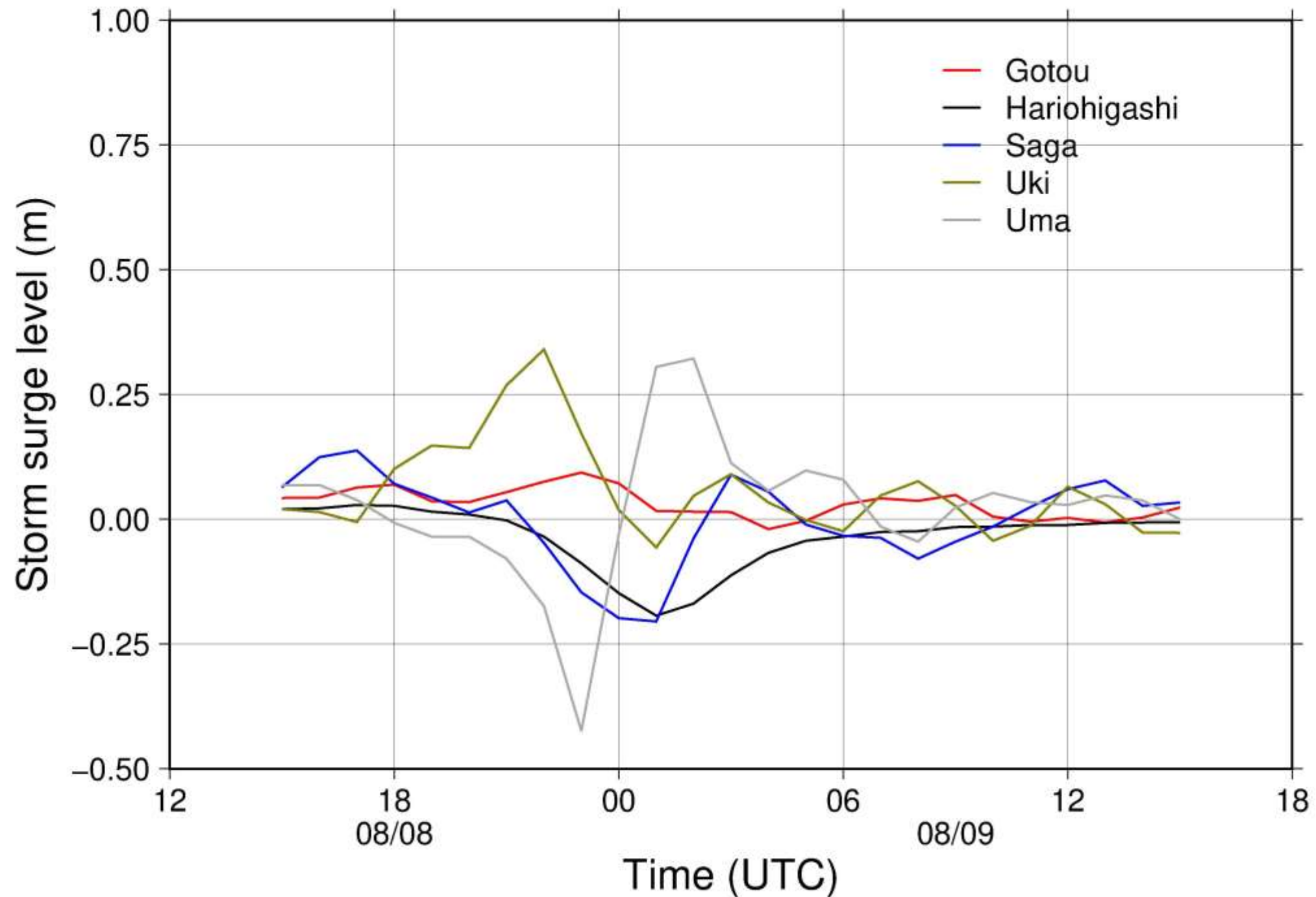
最大高潮偏差値分布, D1: $R_{max}=60$ km, 藤井・光田 (1986)



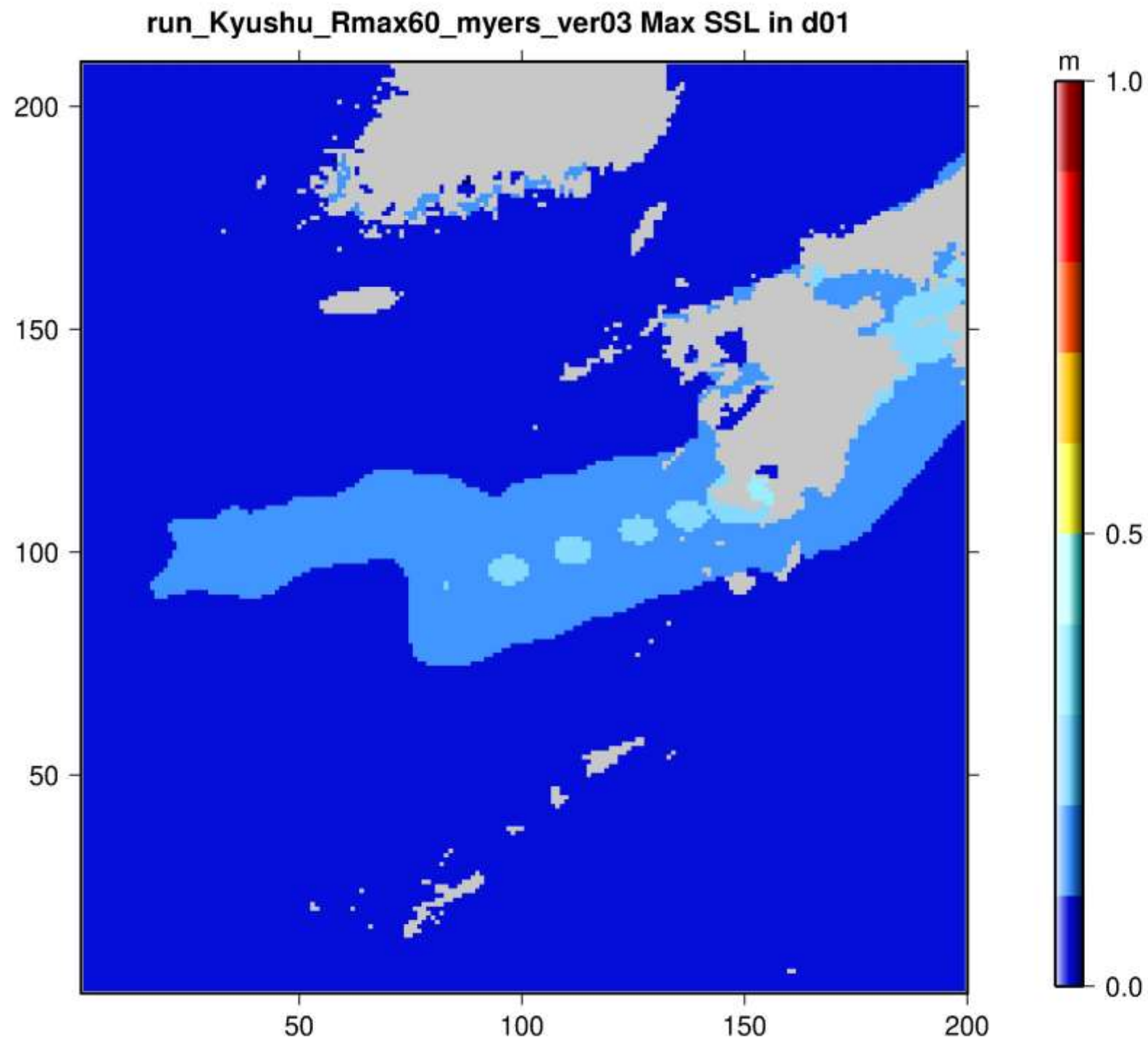
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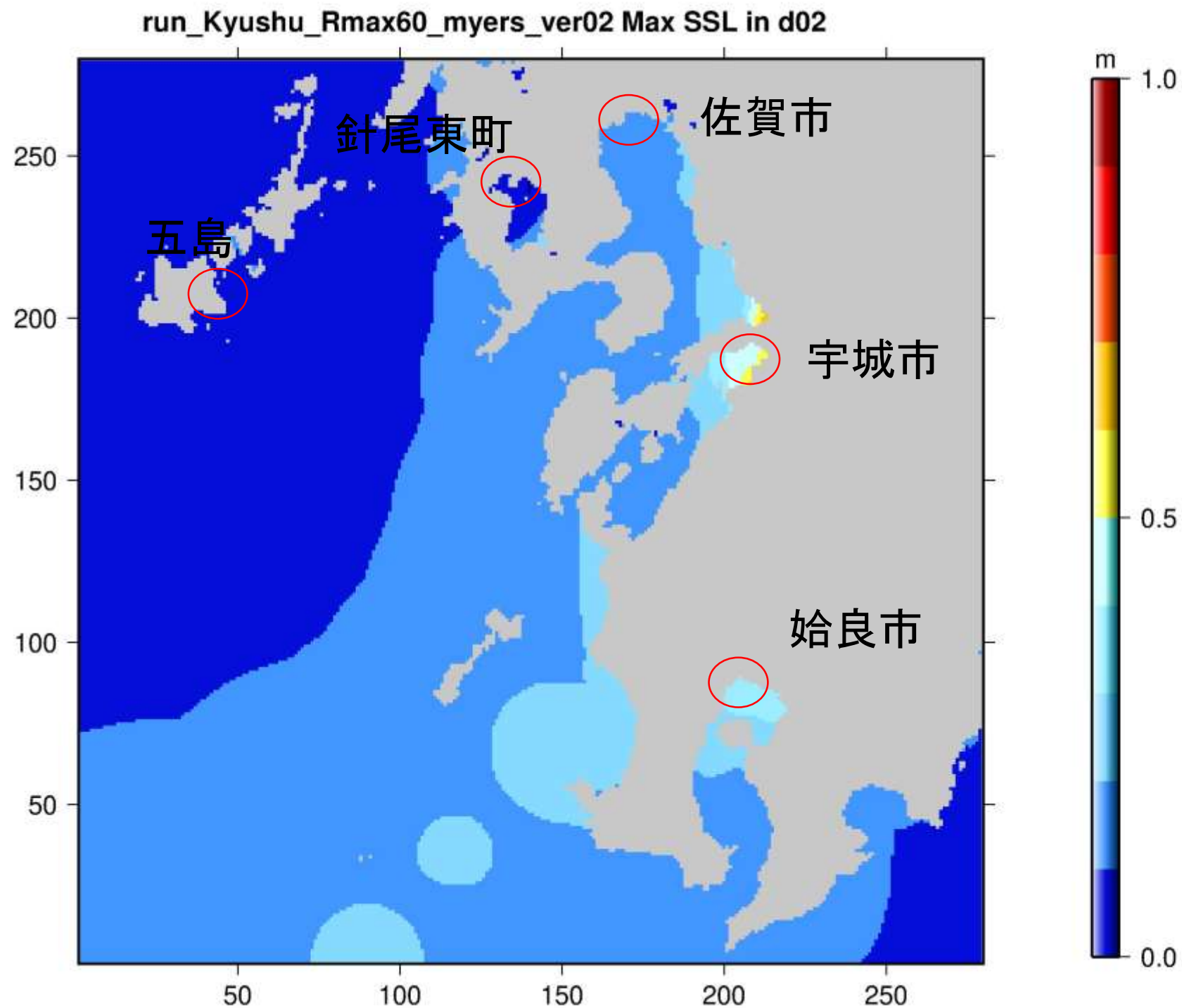
最大高潮偏差値分布, D1: $R_{max}=60$ km, 藤井・光田 (1986)



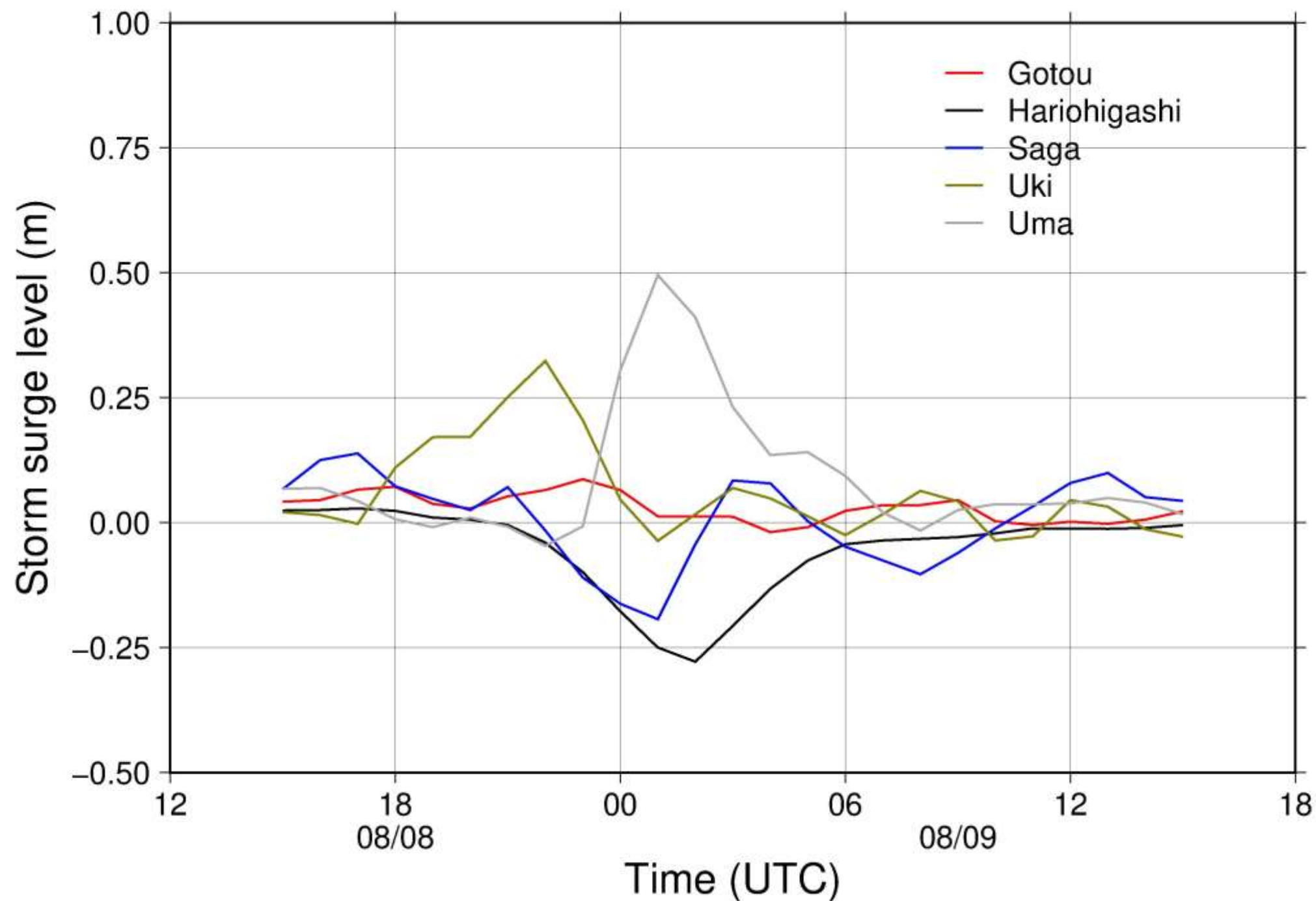
最大高潮偏差値分布, D1: Rmax=60 km, Myers (Myers式)



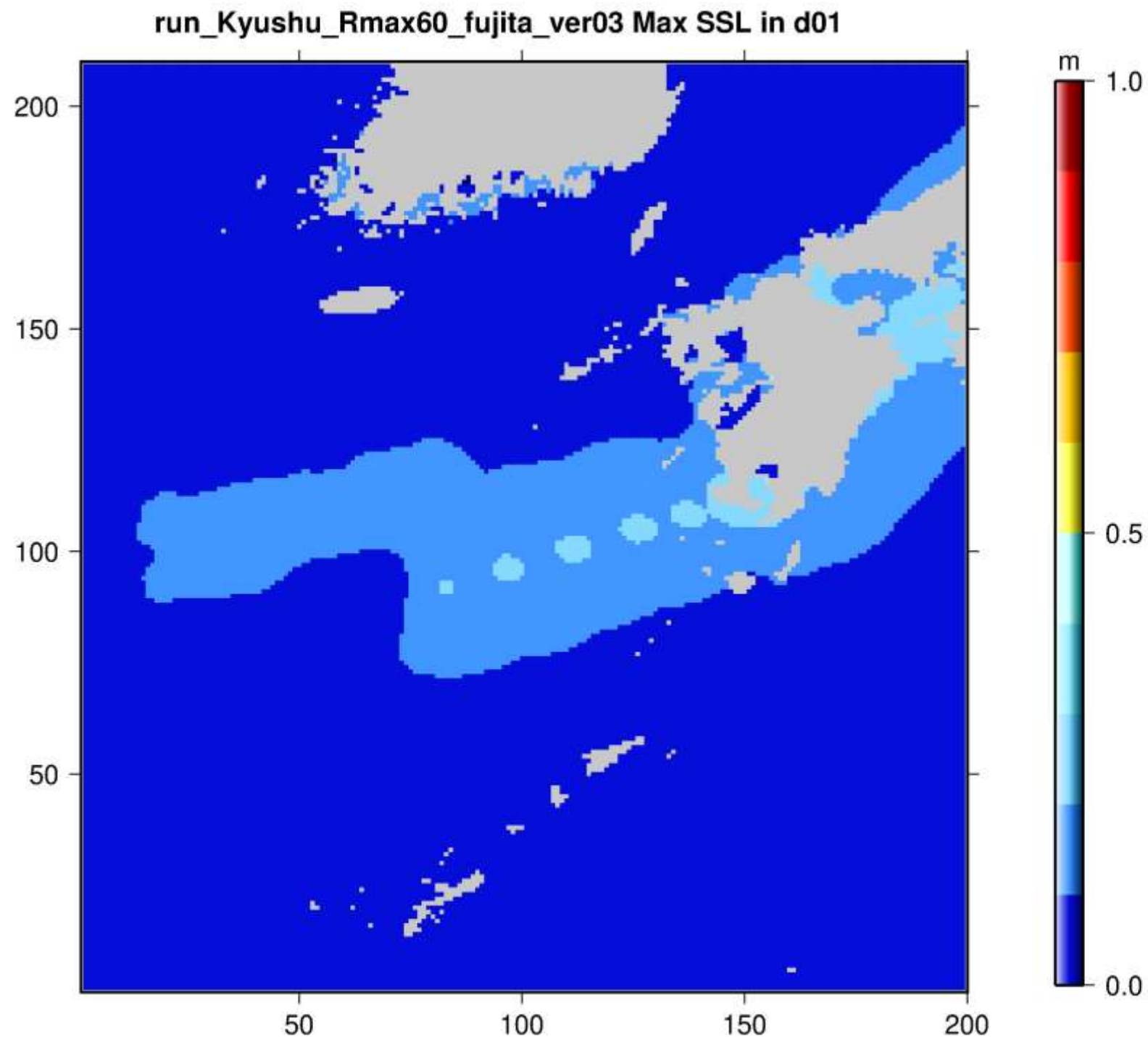
最大高潮偏差値分布, D2: $R_{max}=60$ km, Myers (Myers式)



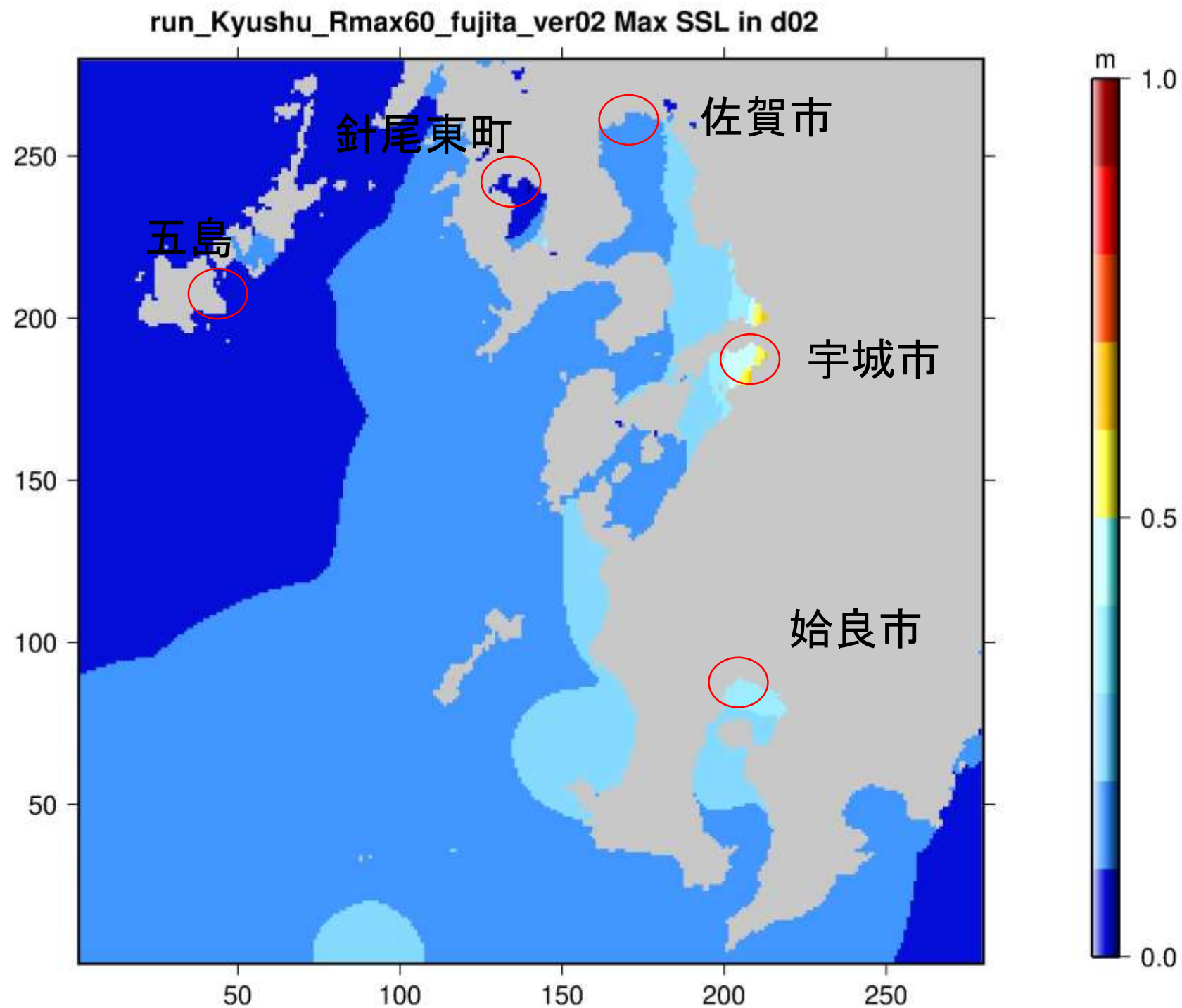
最大高潮偏差値分布, D2: $R_{max}=60$ km, Myers (Myers式)



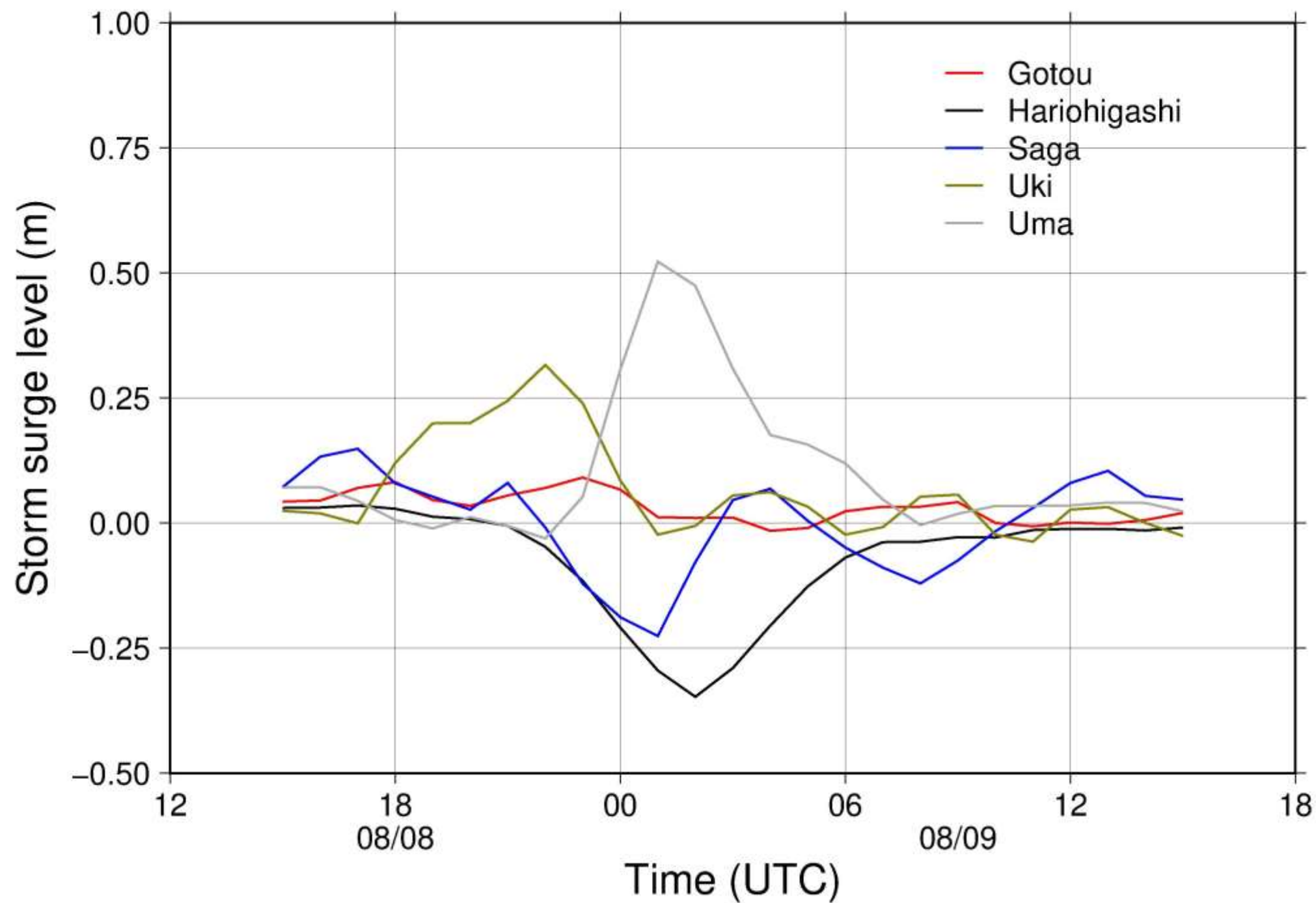
最大高潮偏差値分布, D1: $R_{max}=60$ km, 藤田 (1974)



最大高潮偏差値分布, D2: $R_{max}=60 \text{ km}$,
藤田 (1974)



最大高潮偏差値分布, D2: $R_{max}=60$ km, 藤田 (1974)

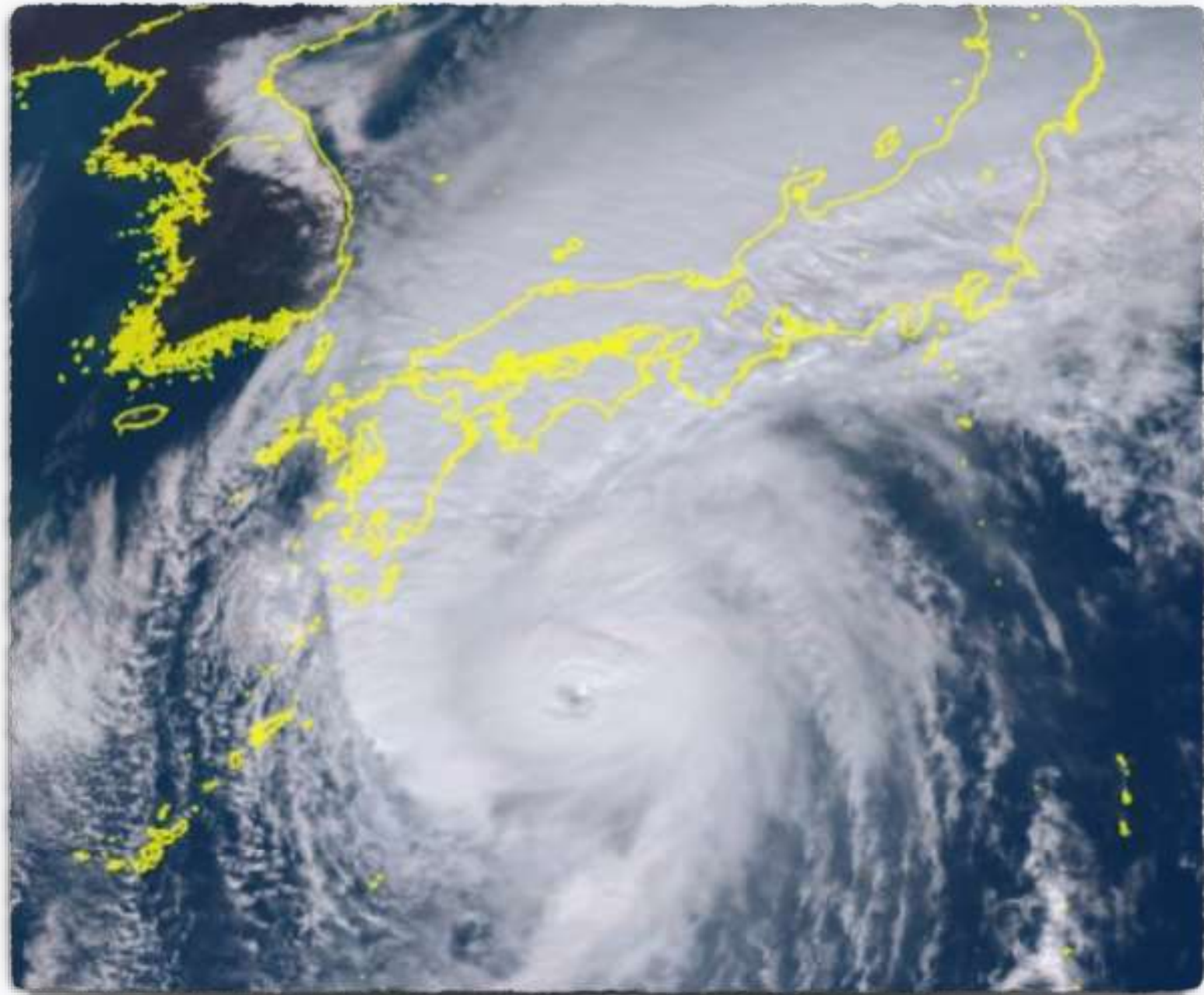


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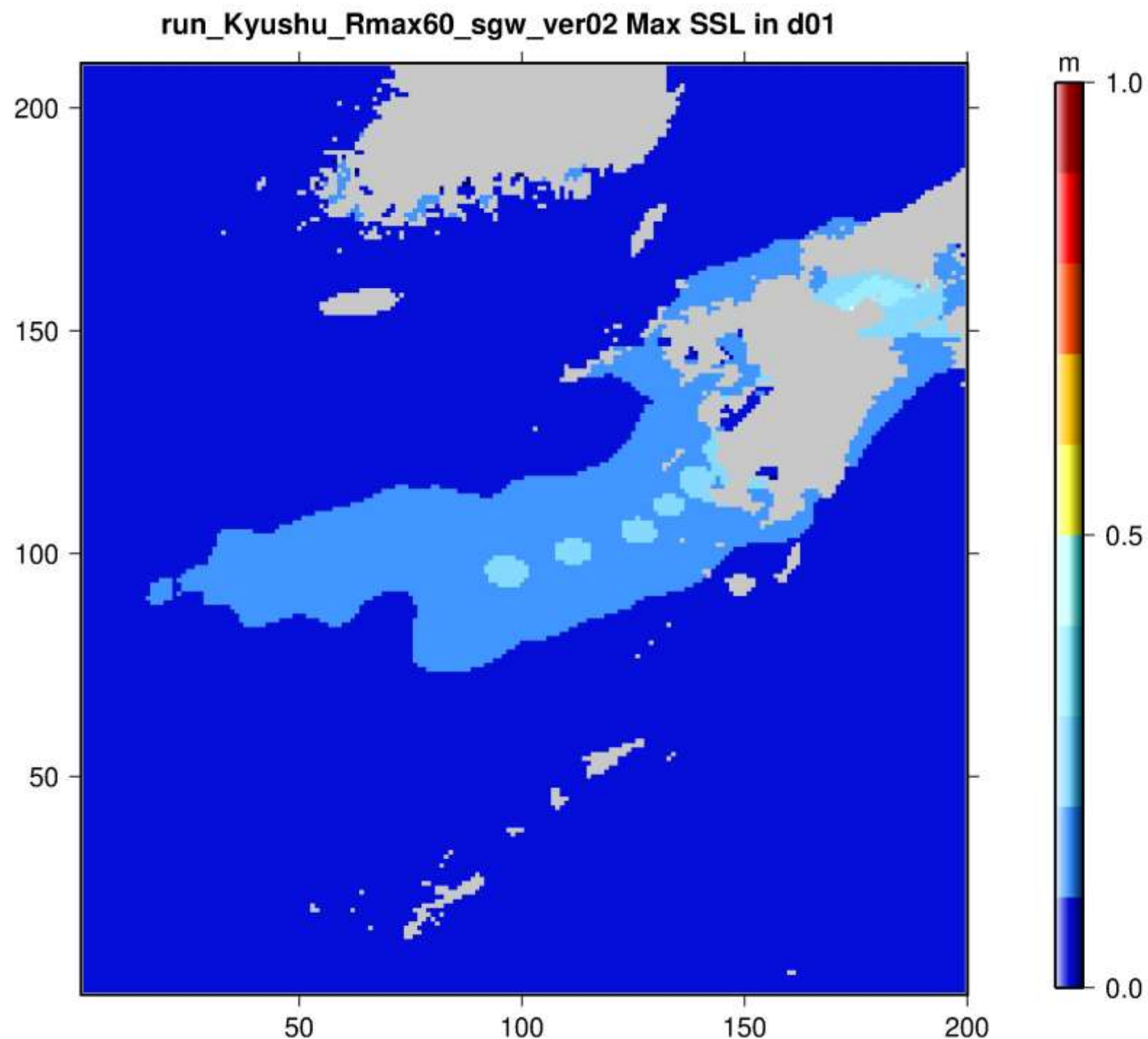
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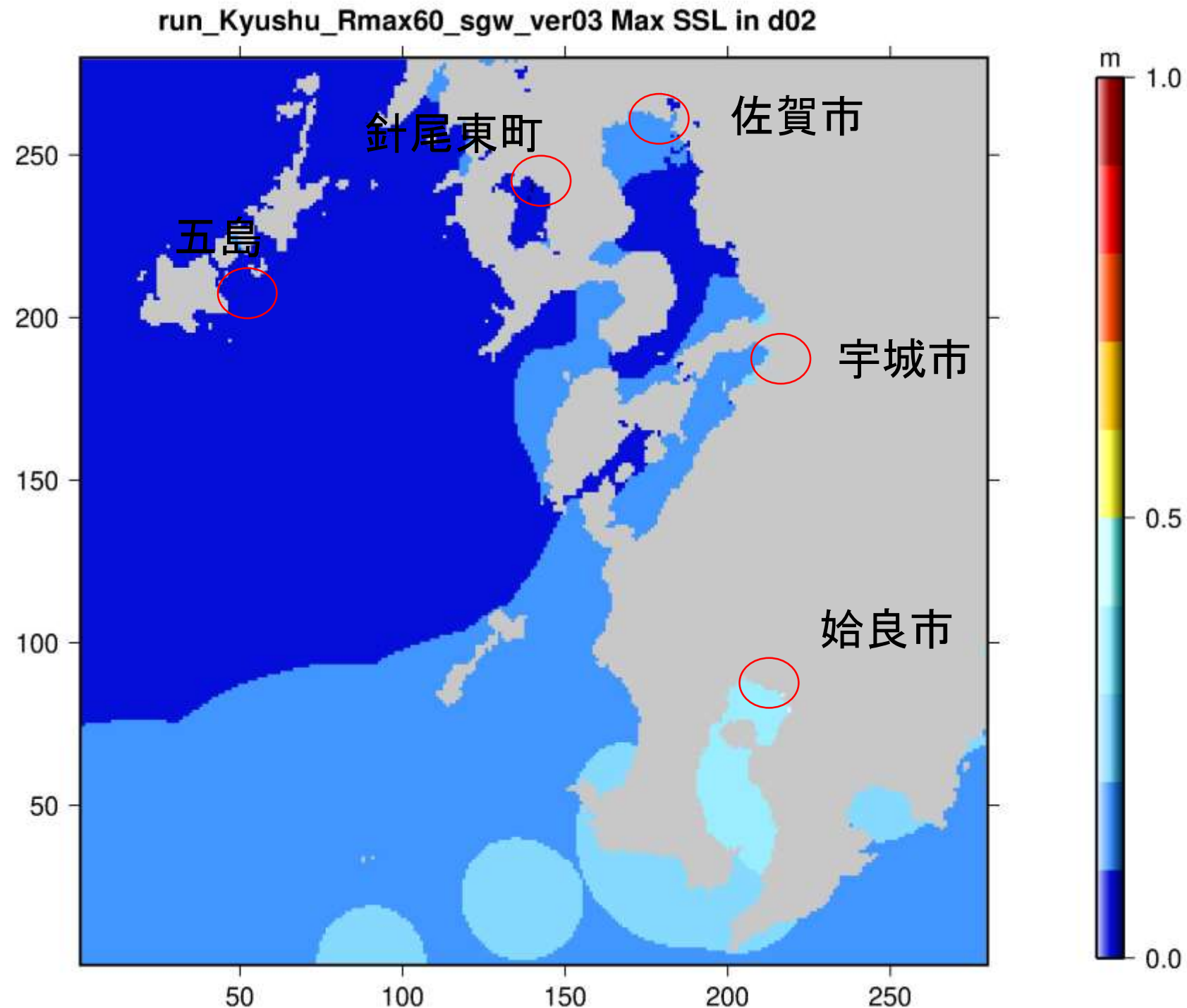
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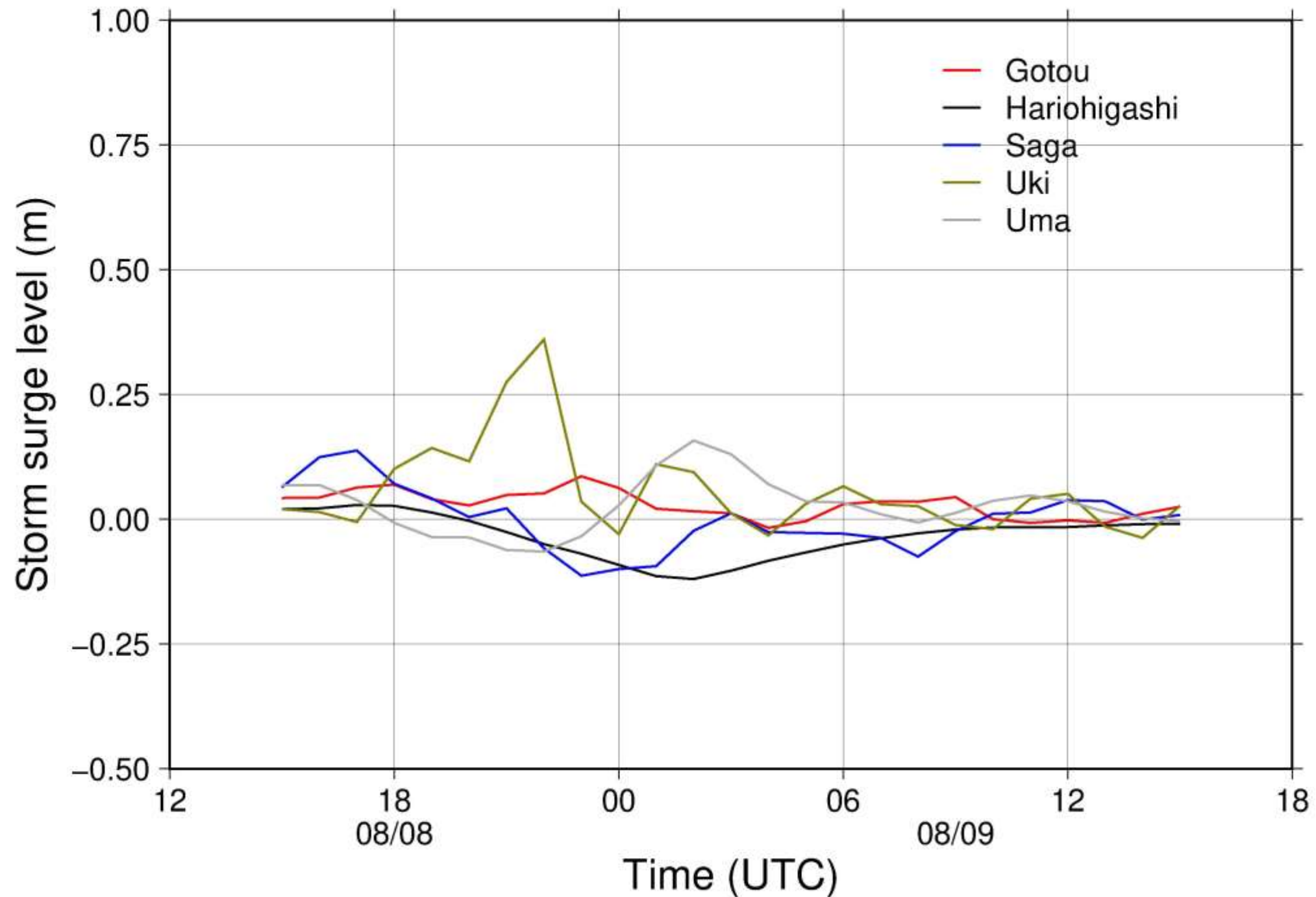
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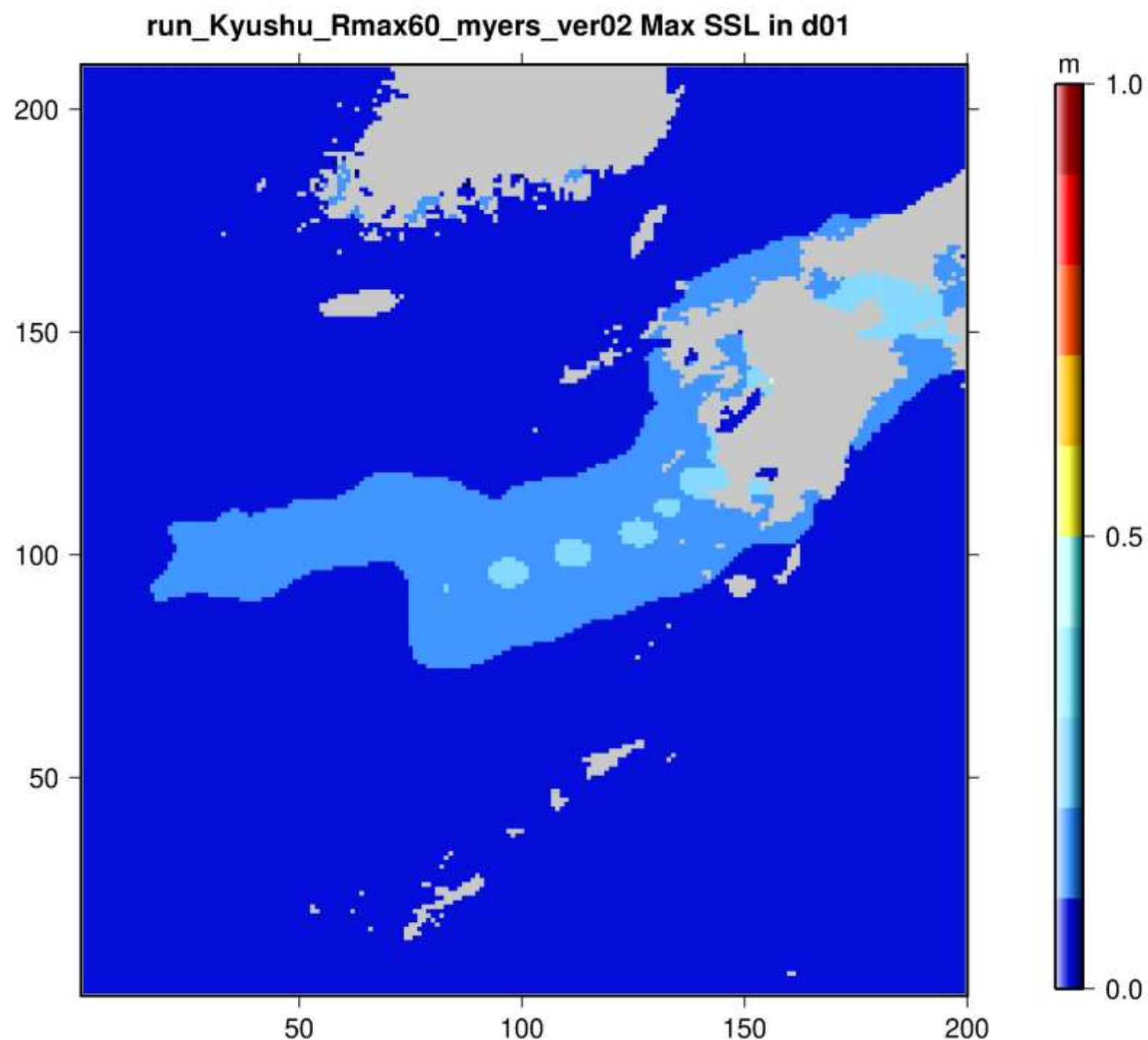
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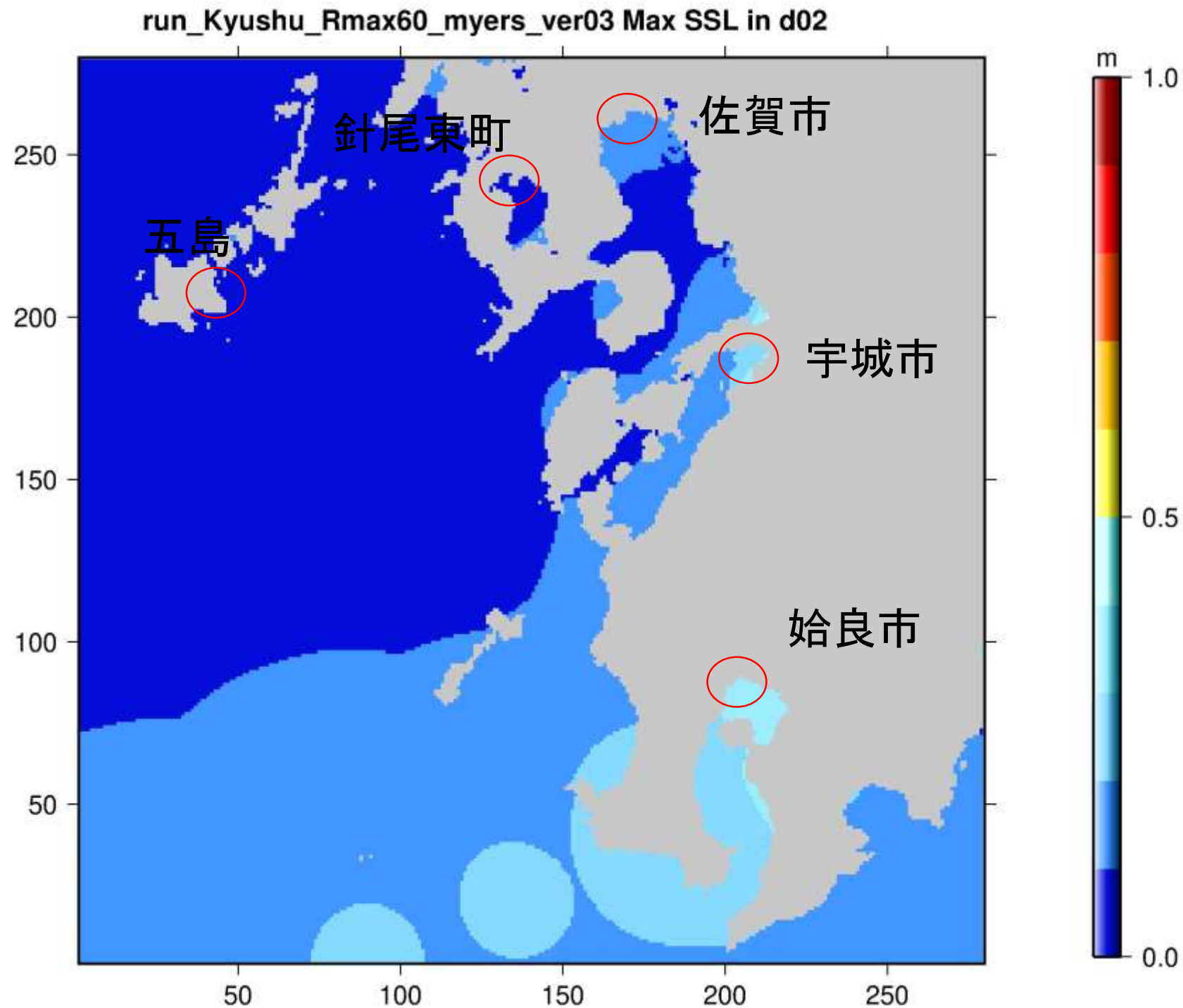
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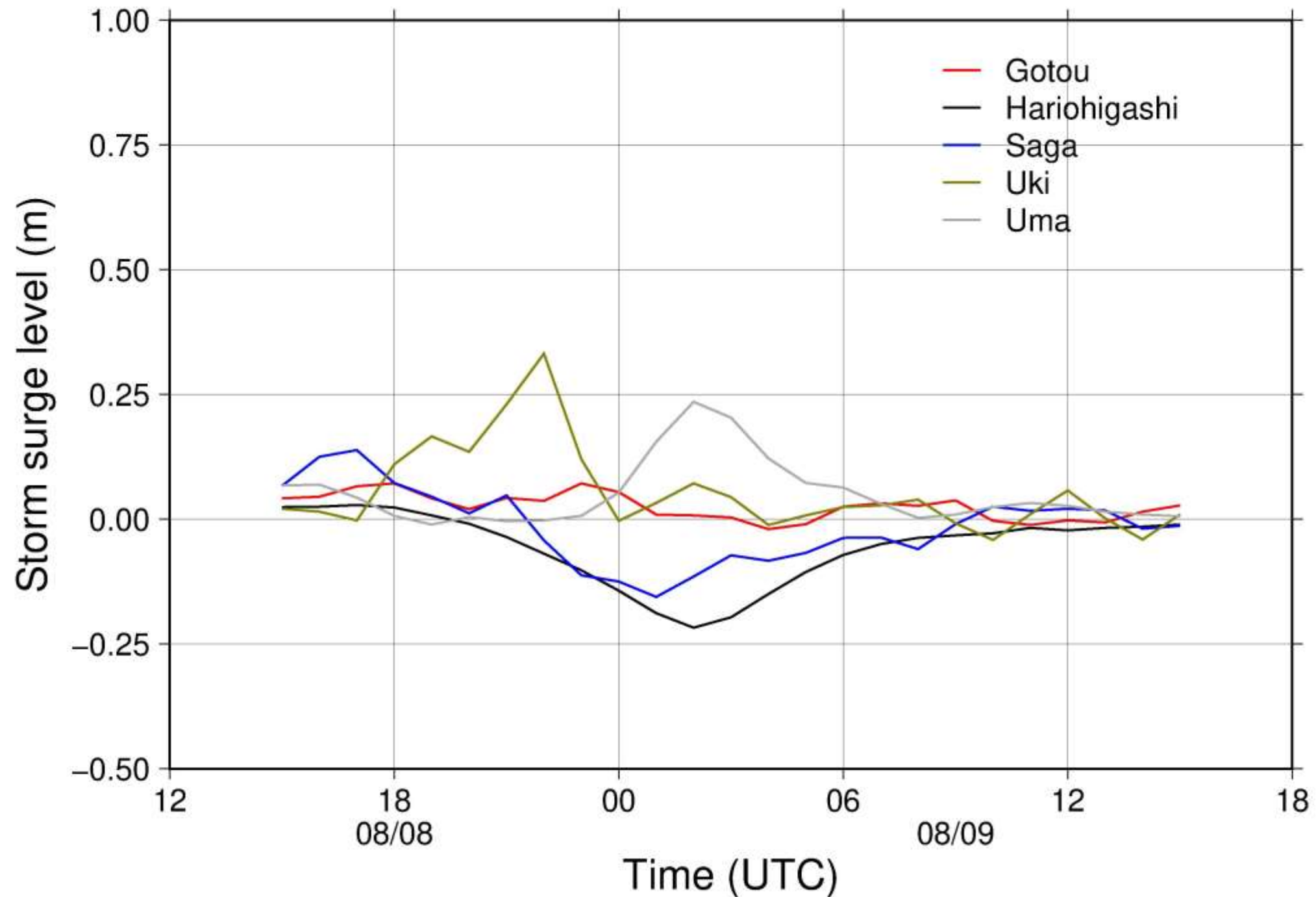
最大高潮偏差値分布, D1: Rmax=60 km, Myers (Myers式)



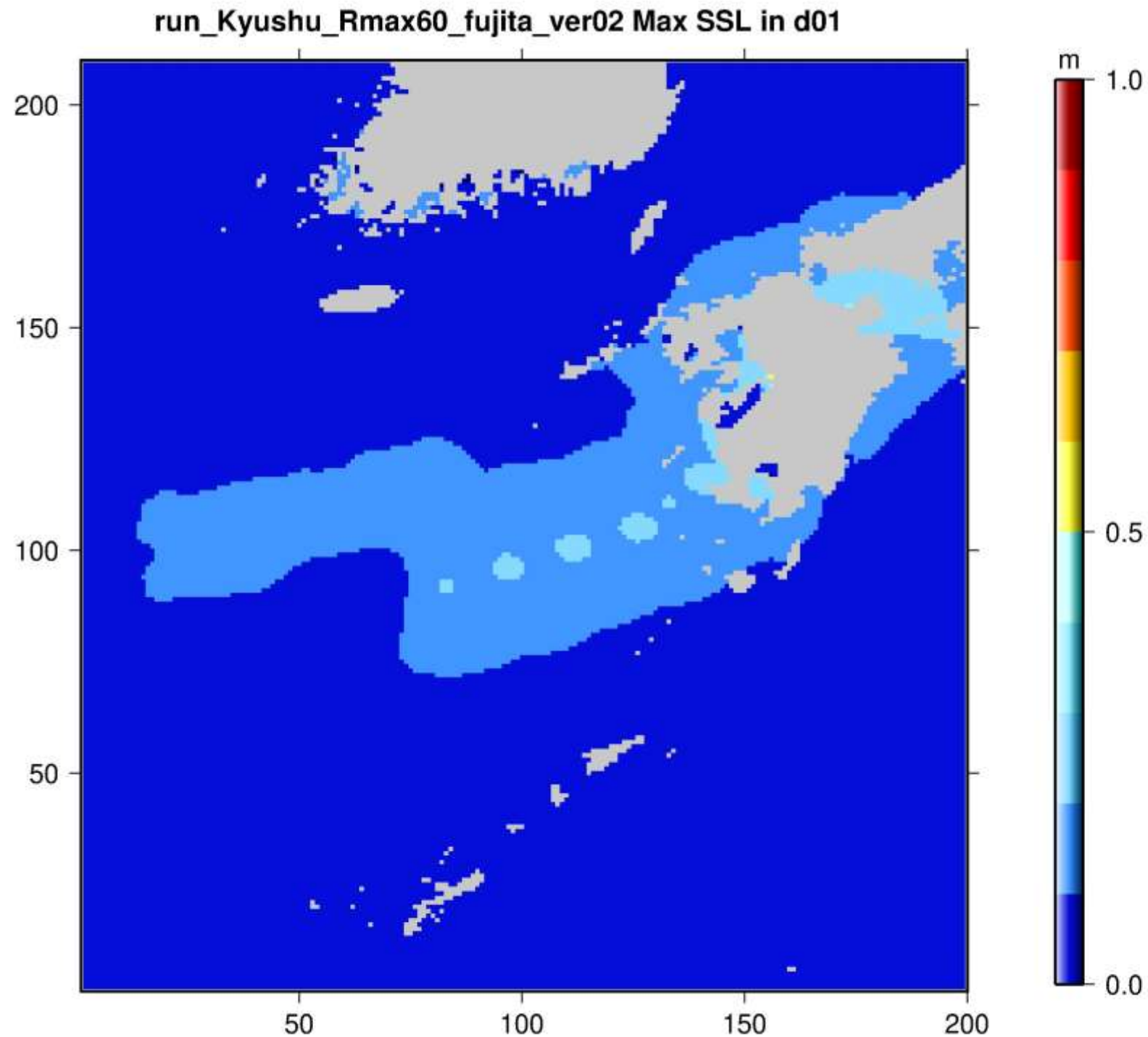
最大高潮偏差値分布, D2: $R_{max}=60$ km, Myers (Myers式)



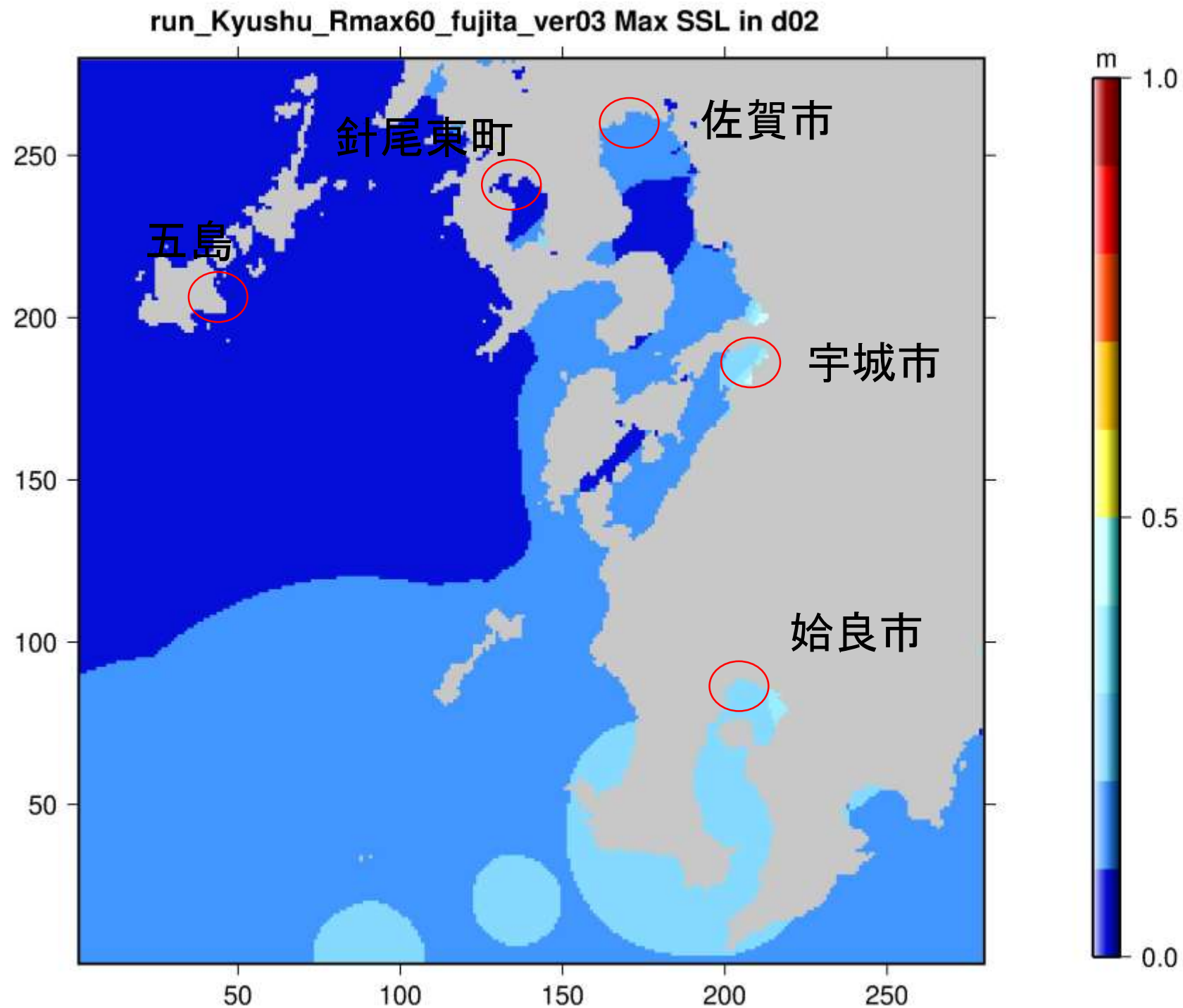
最大高潮偏差値分布, D2: $R_{max}=60$ km, Myers (Myers式)



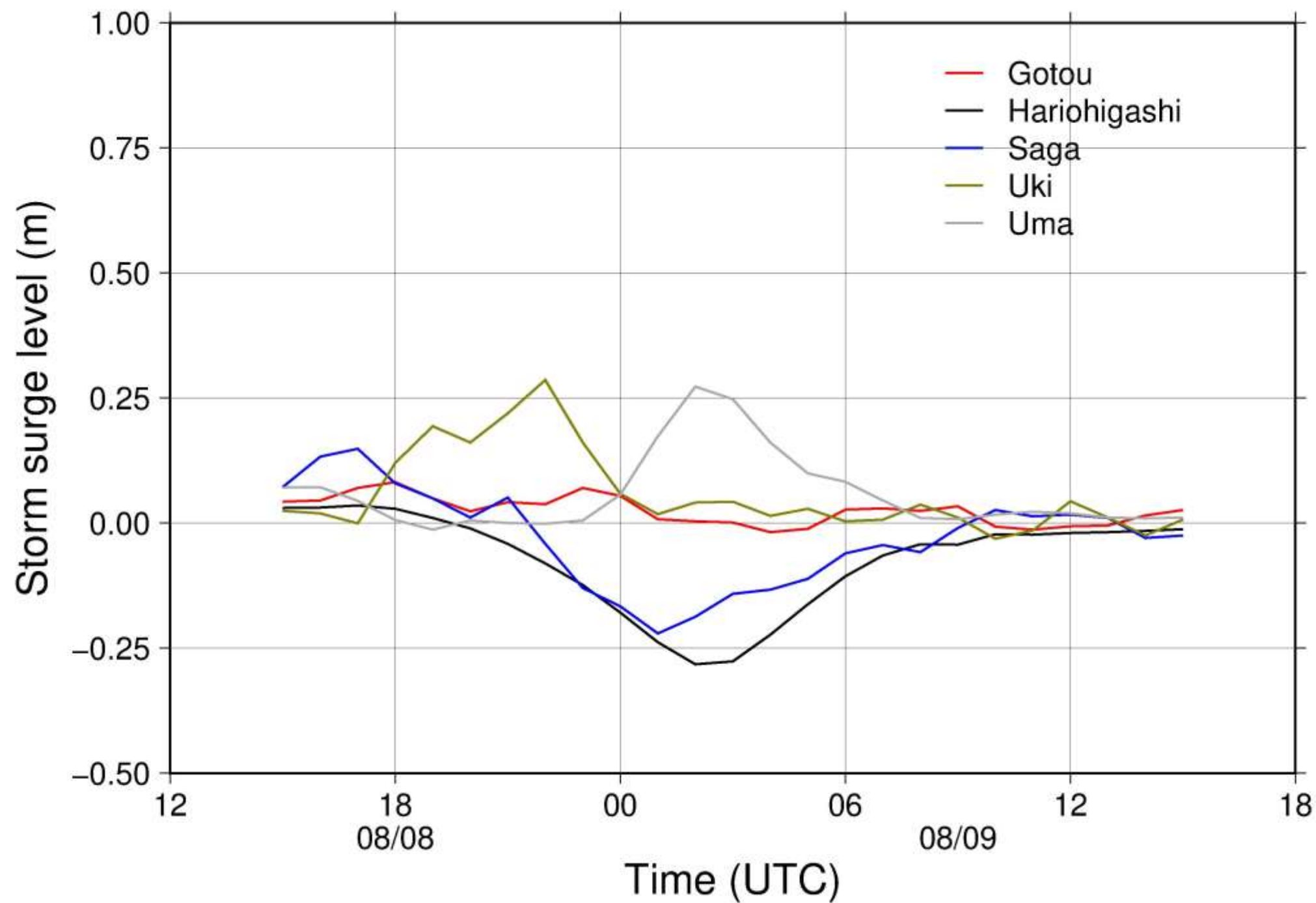
最大高潮偏差値分布, D1: $R_{max}=60$ km, 藤田 (1974)



最大高潮偏差値分布, D2: $R_{max}=60$ km, 藤田 (1974)



最大高潮偏差値分布, D2: $R_{max}=60$ km, 藤田 (1974)

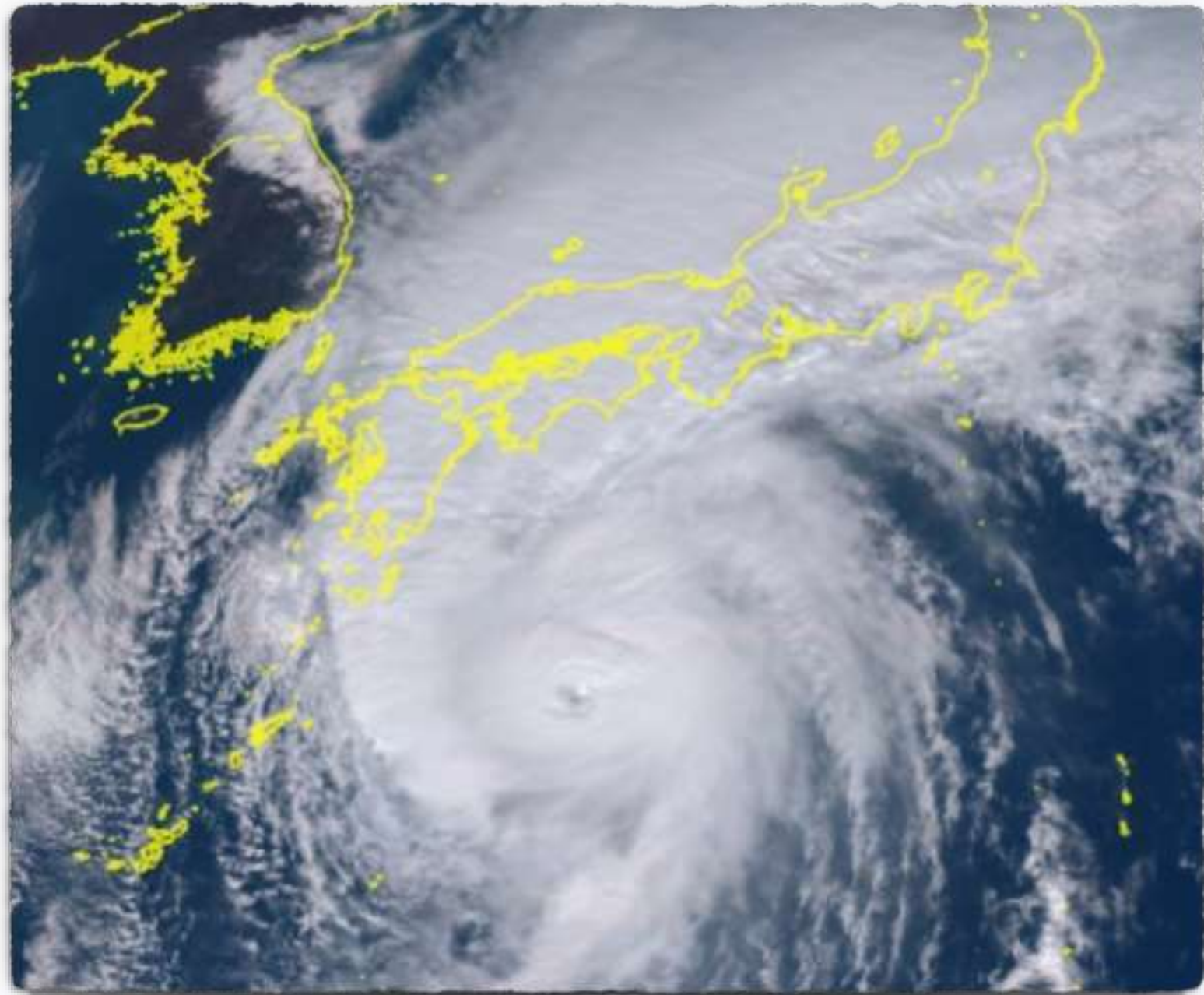


RESULTS OF A SERIES OF RUNS

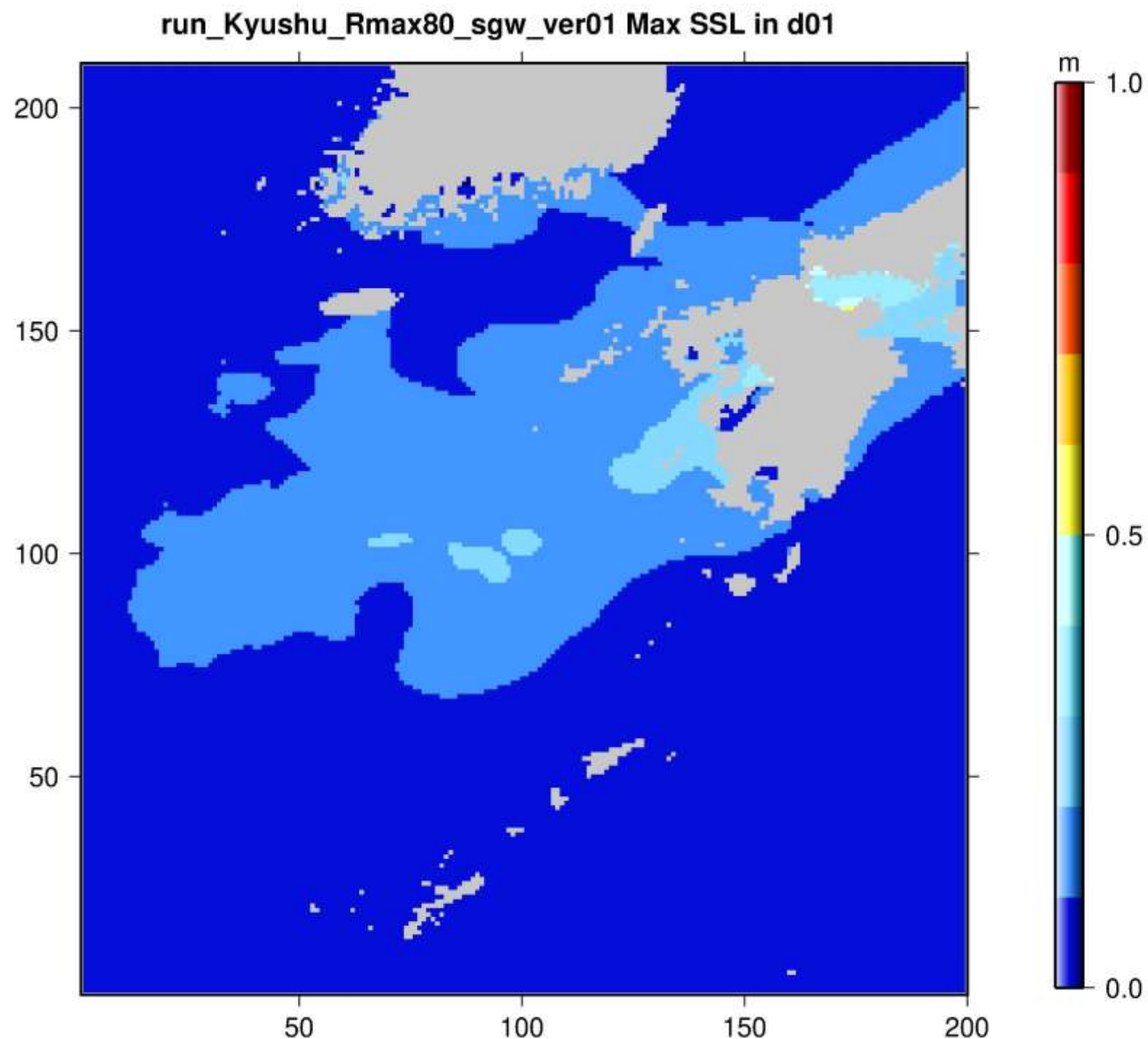
❖ 予測実験：台風最大半径 80 km

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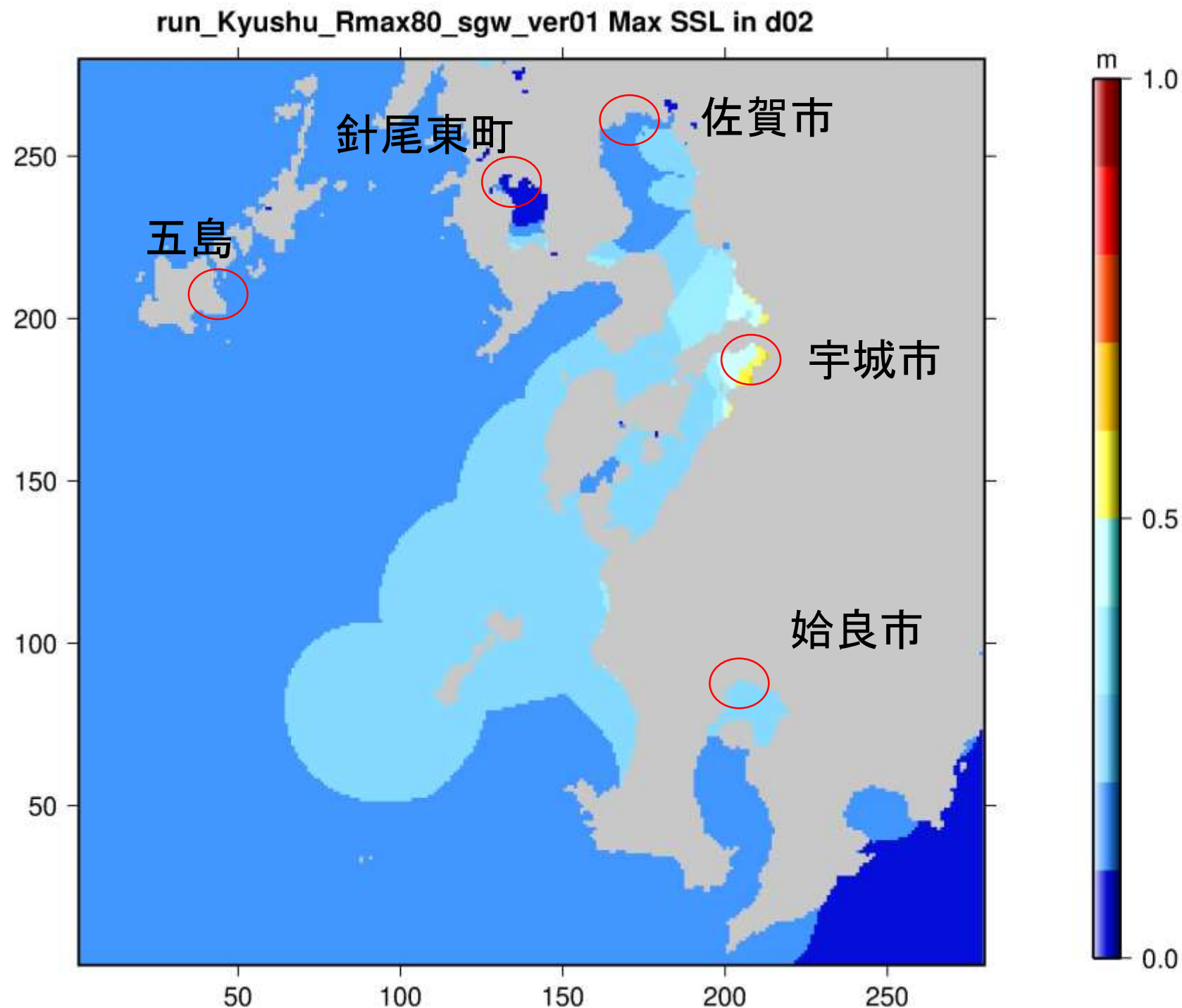
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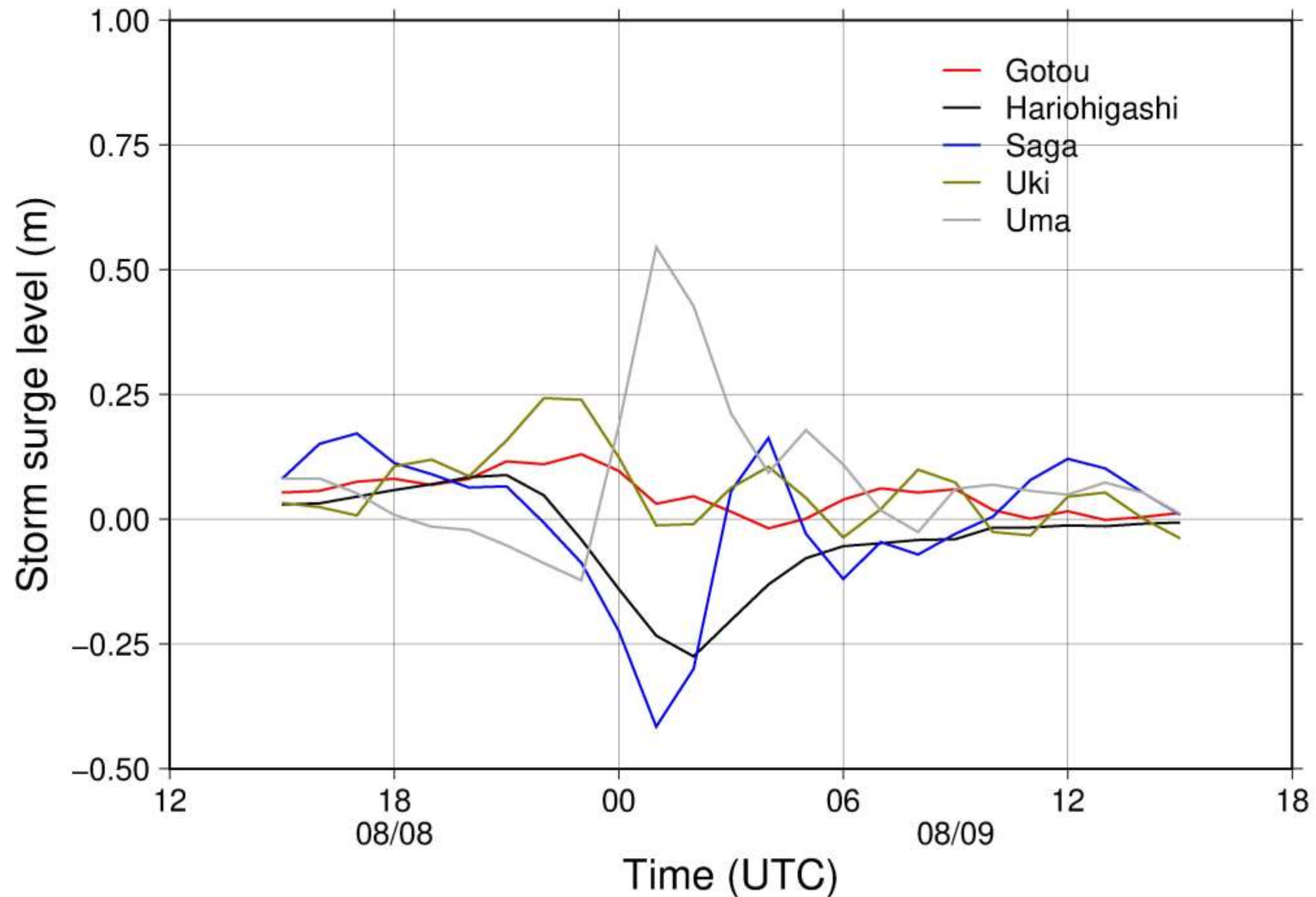
最大高潮偏差値分布, D1: $R_{max}=80$ km, 藤井・光田 (1986)



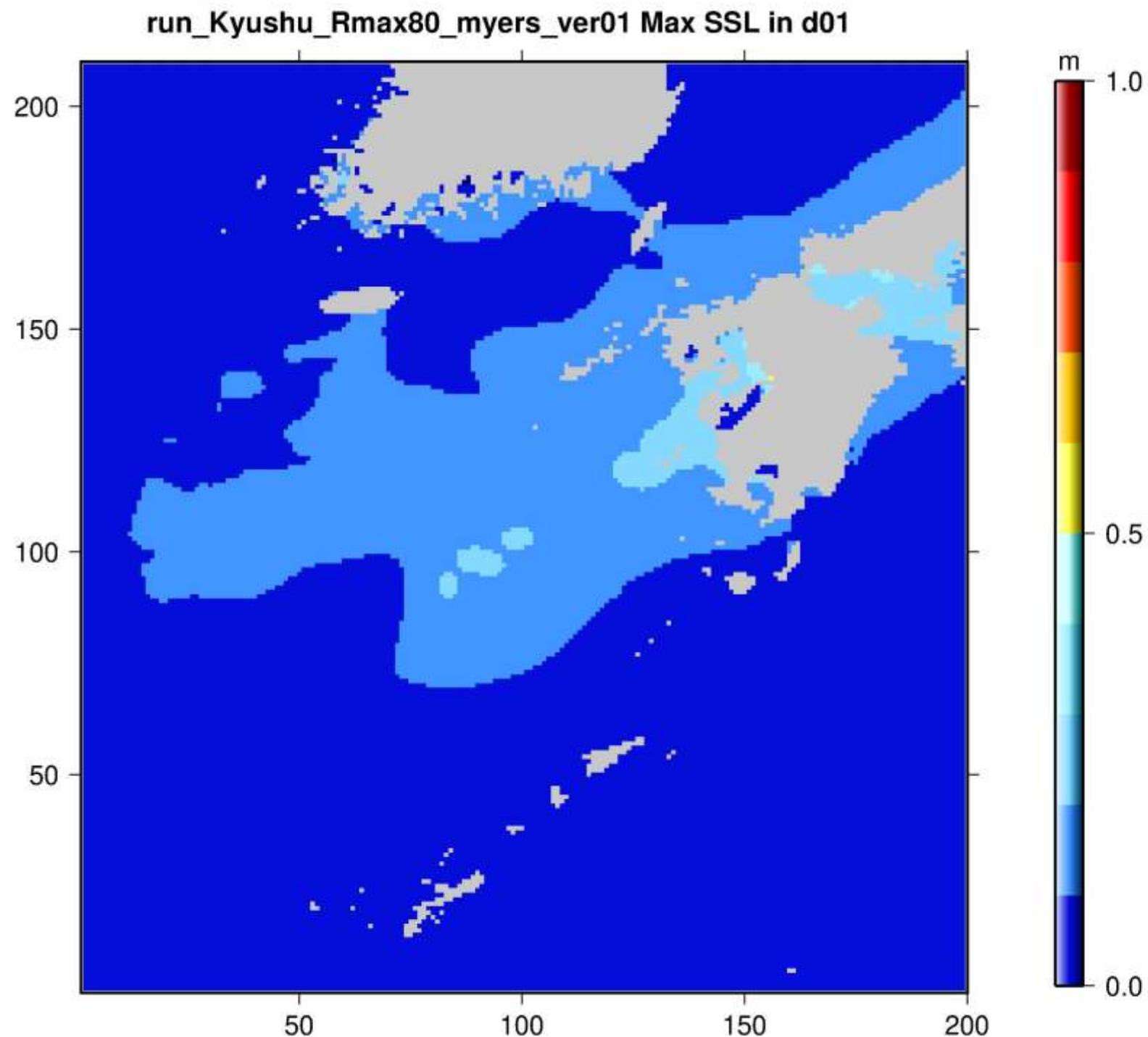
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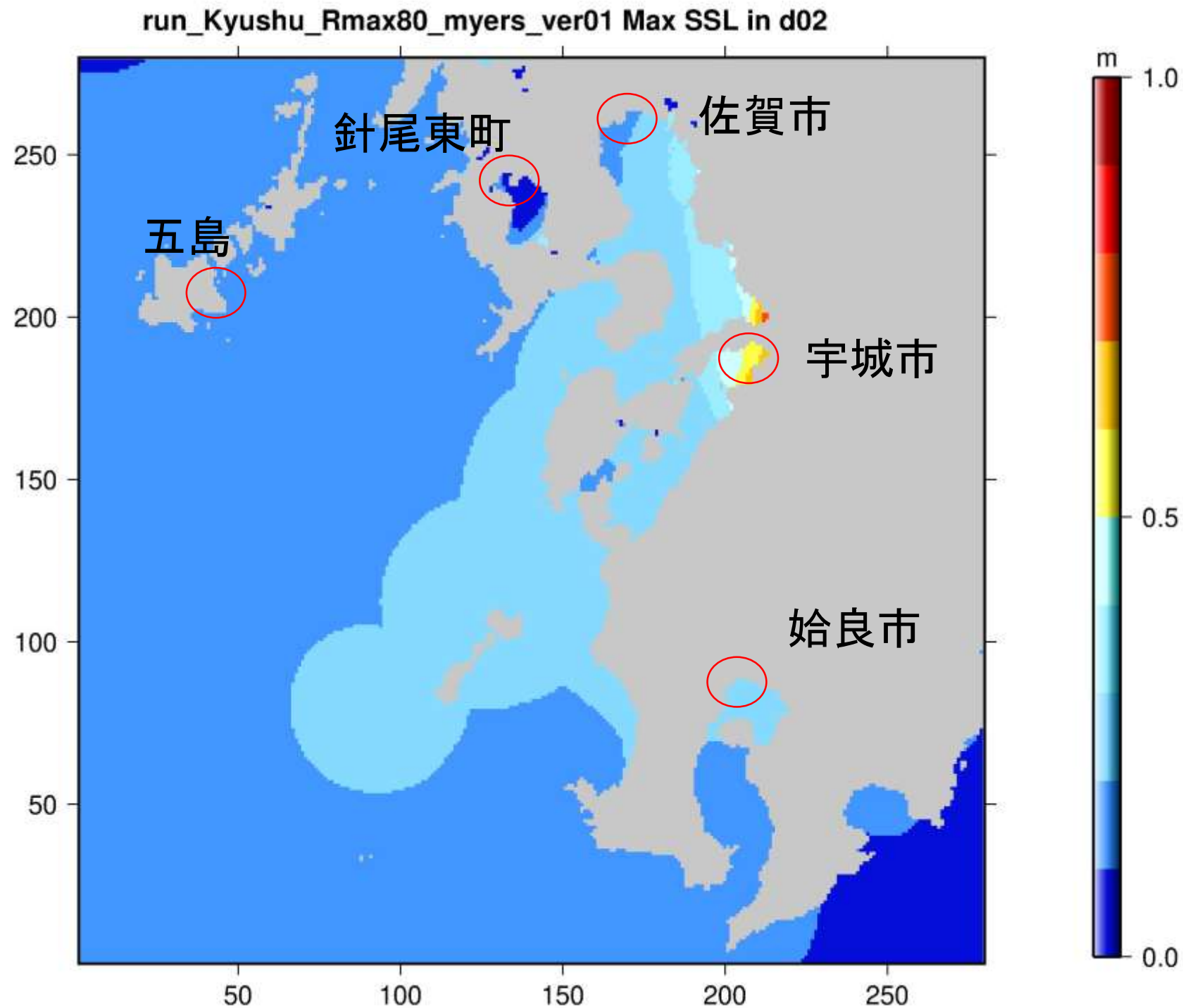
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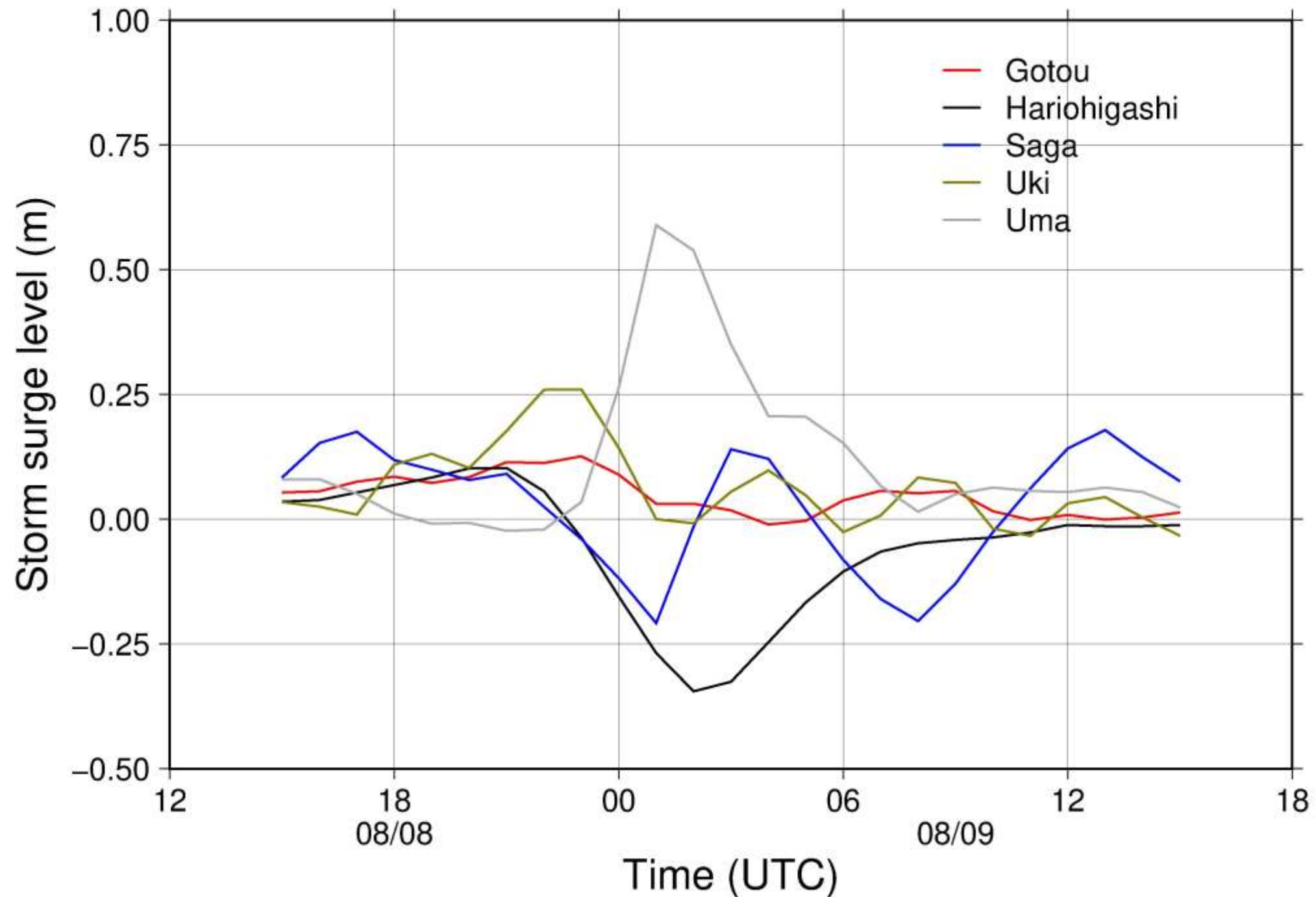
最大高潮偏差值分布, D1: Rmax=80 km, Myers (Myers式)



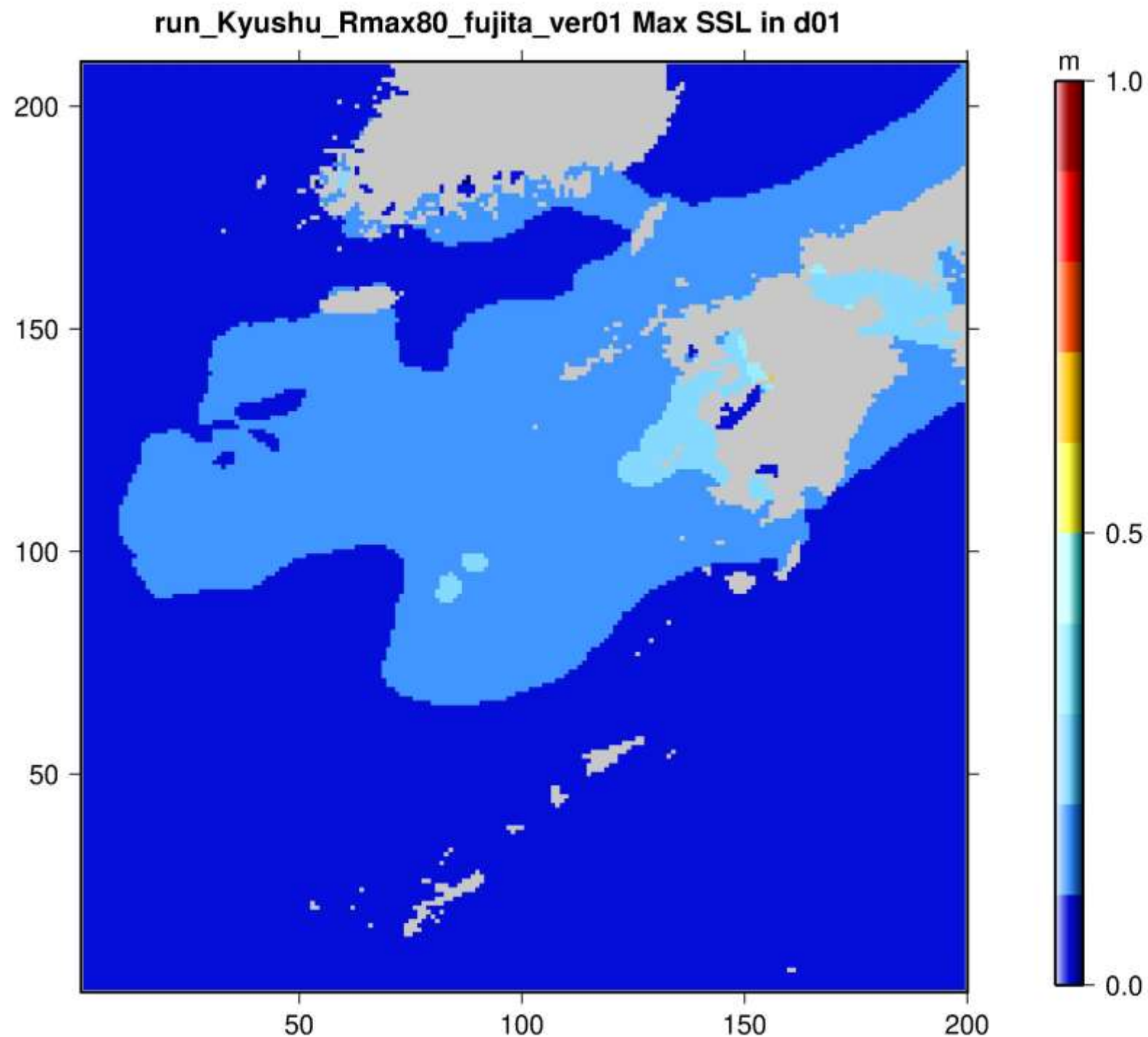
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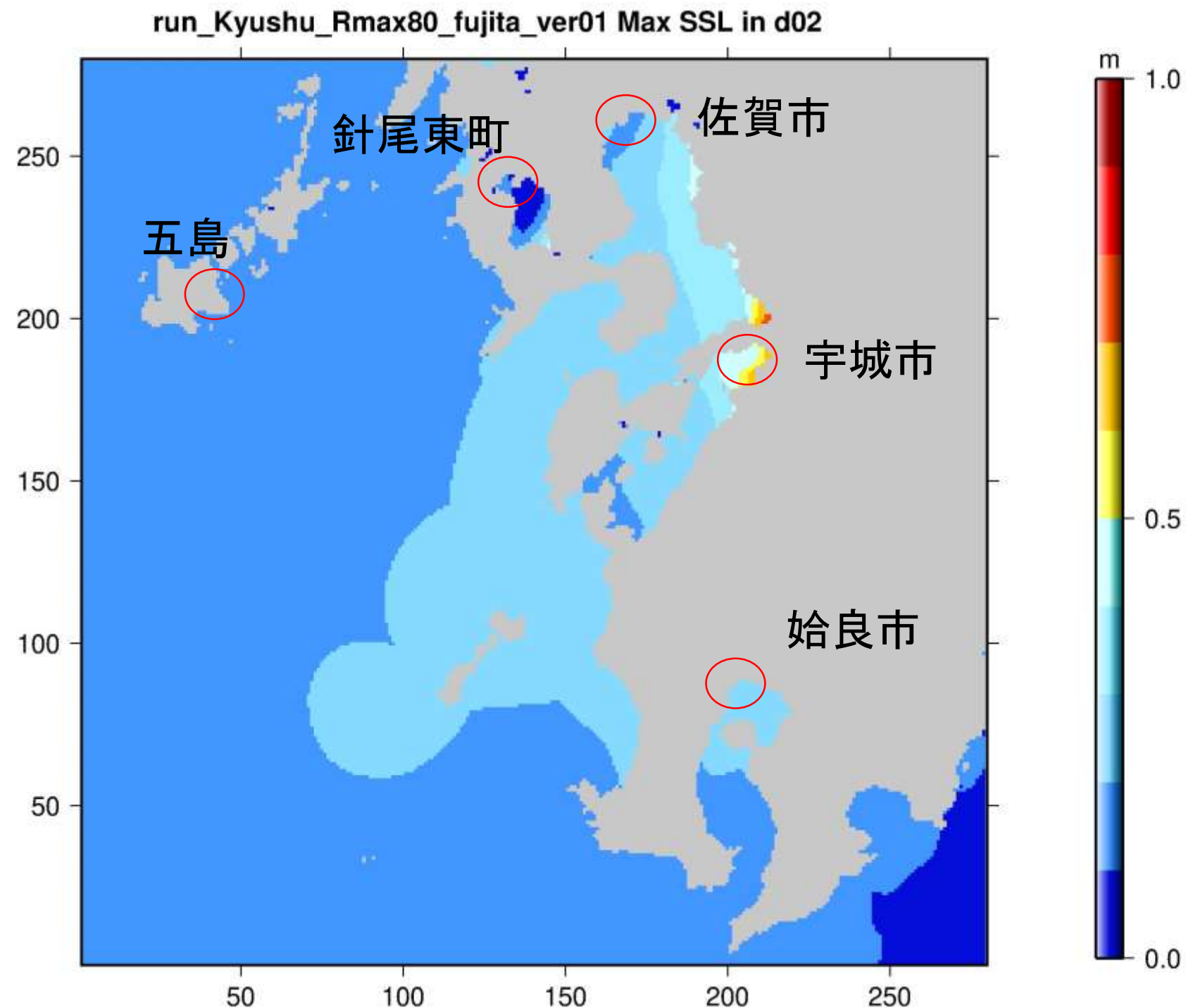
最大高潮偏差值分布, D2: $R_{max}=80$ km, Myers (Myers式)



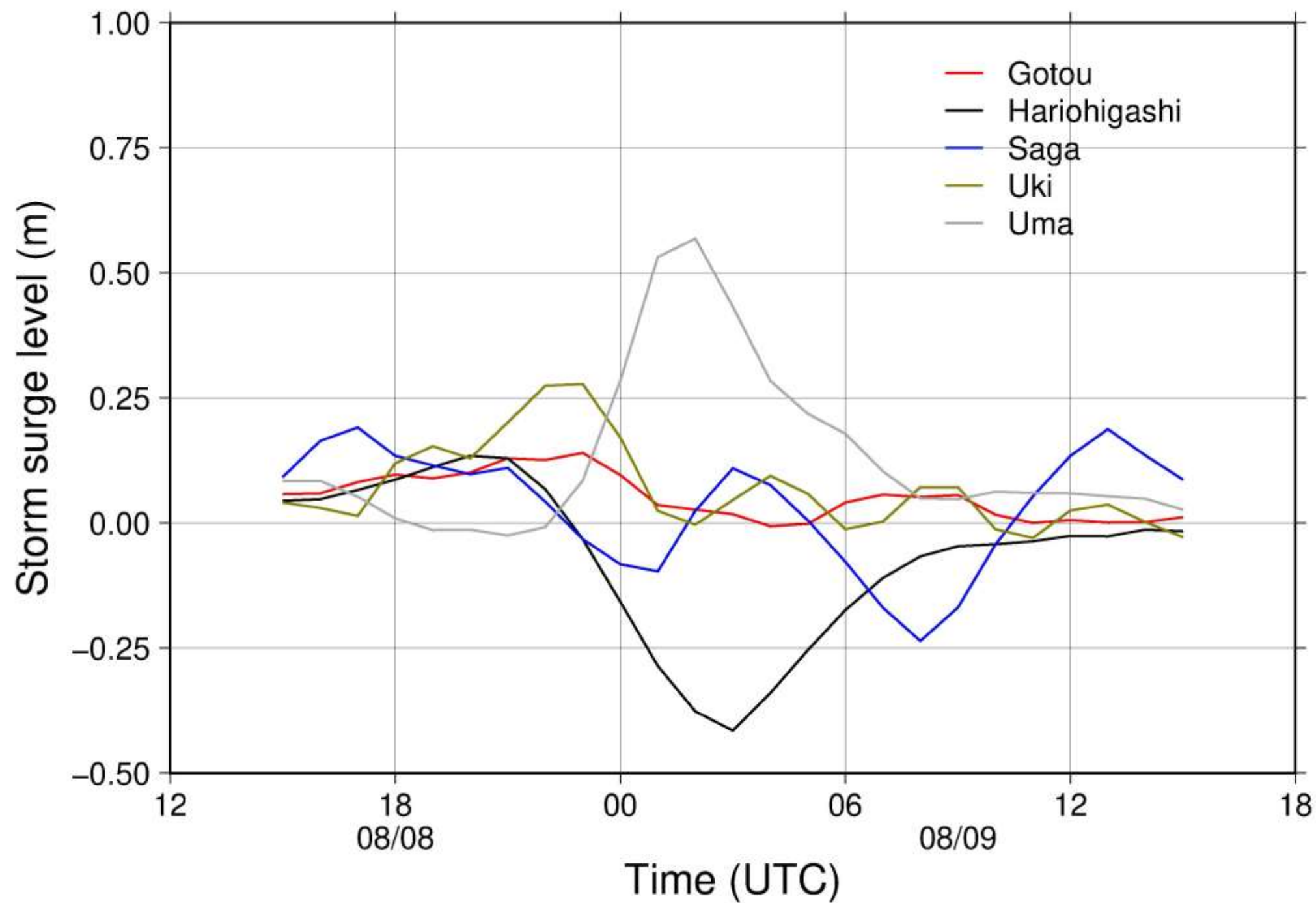
最大高潮偏差値分布, D1: $R_{max}=80$ km, 藤田 (1974)



最大高潮偏差値分布, D2: $R_{max}=80$ km, 藤田 (1974)



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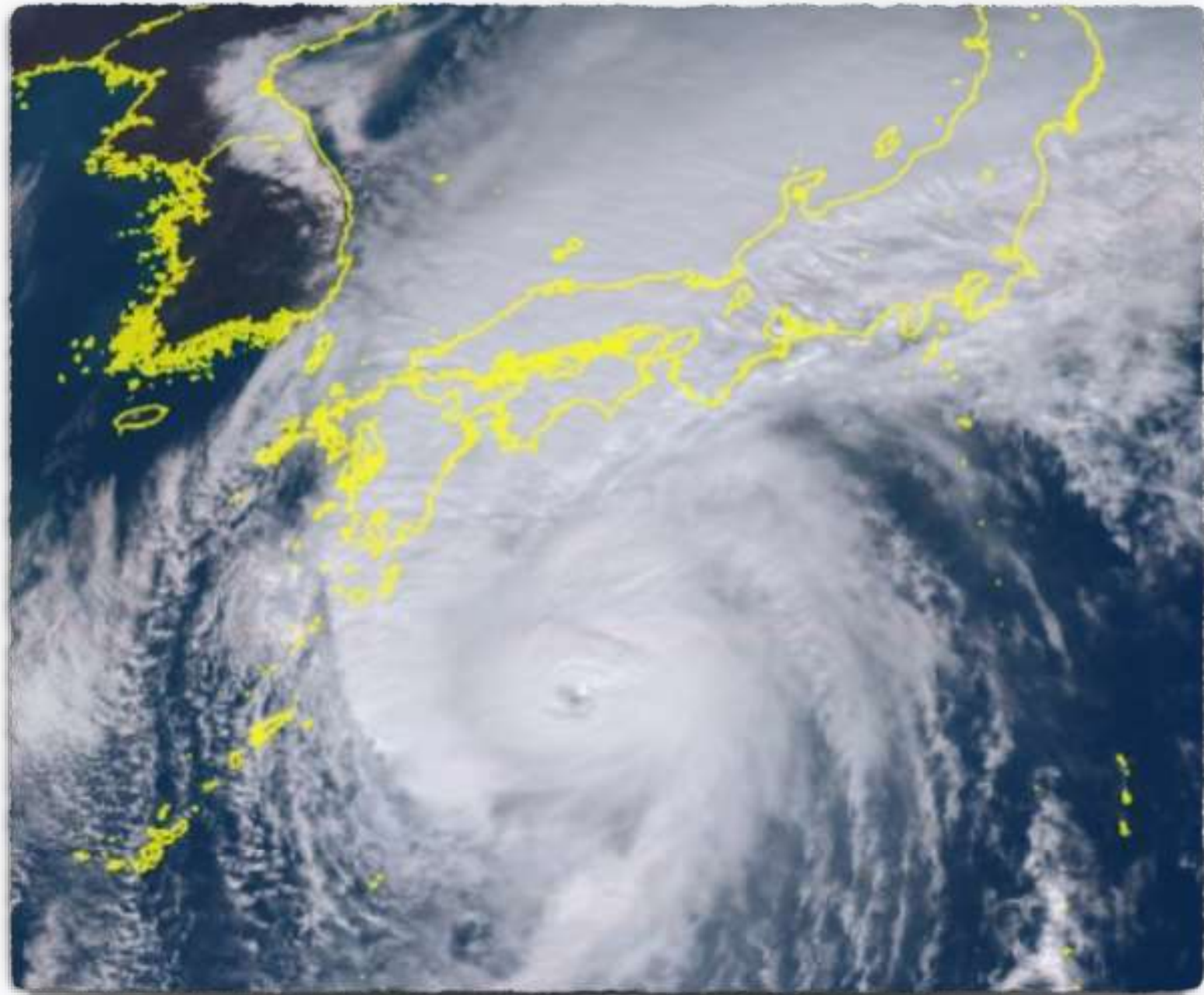


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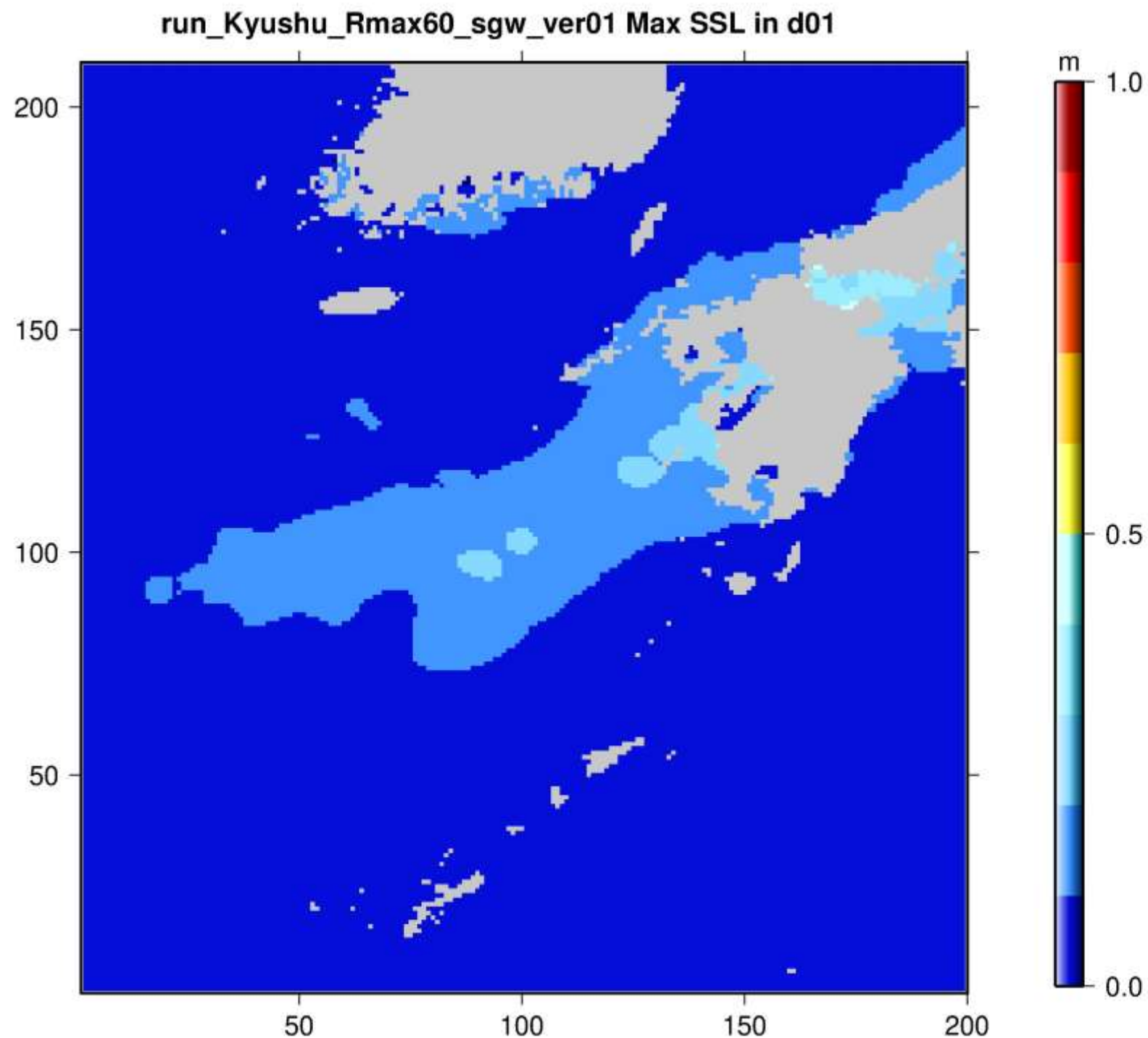
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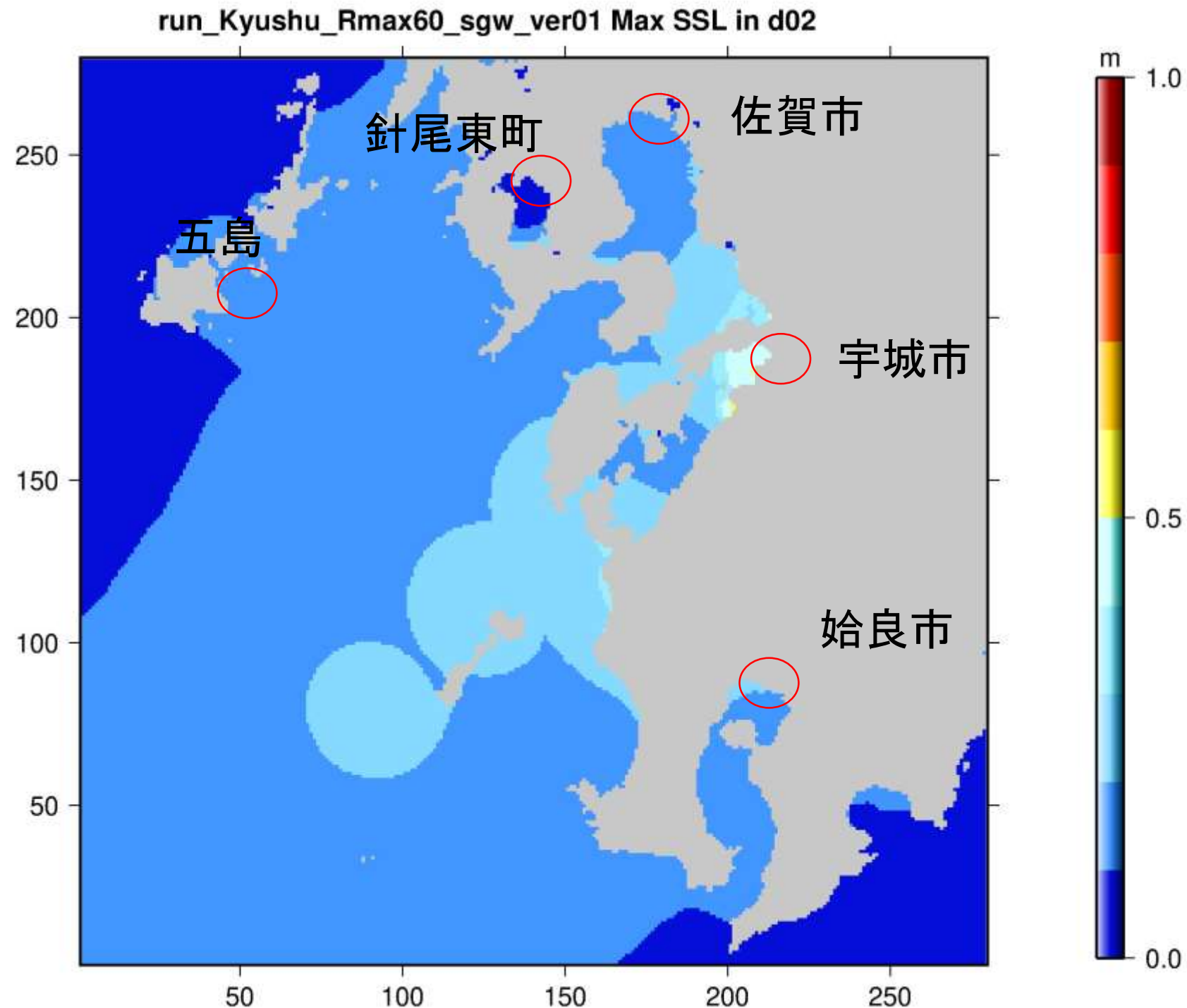
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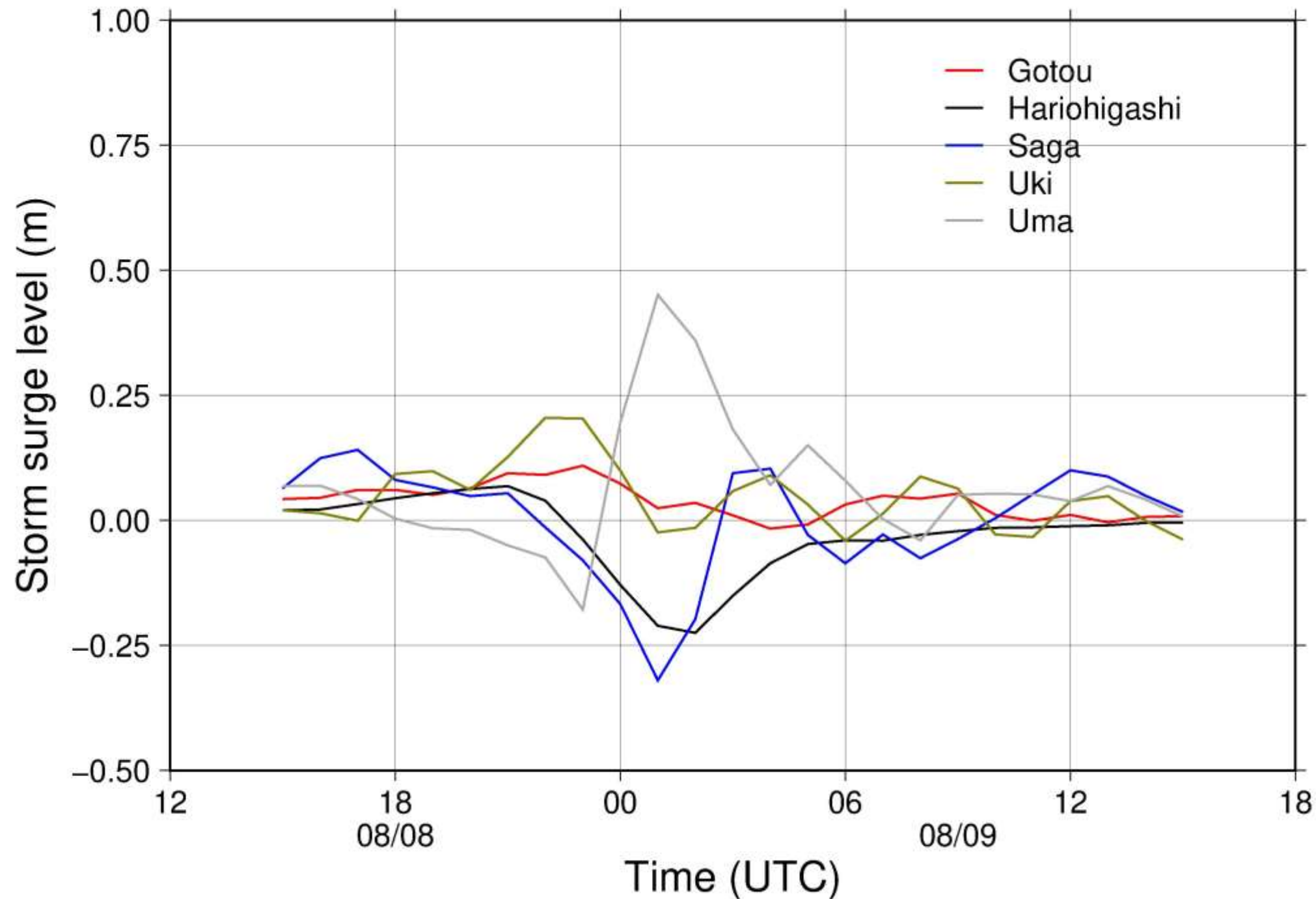
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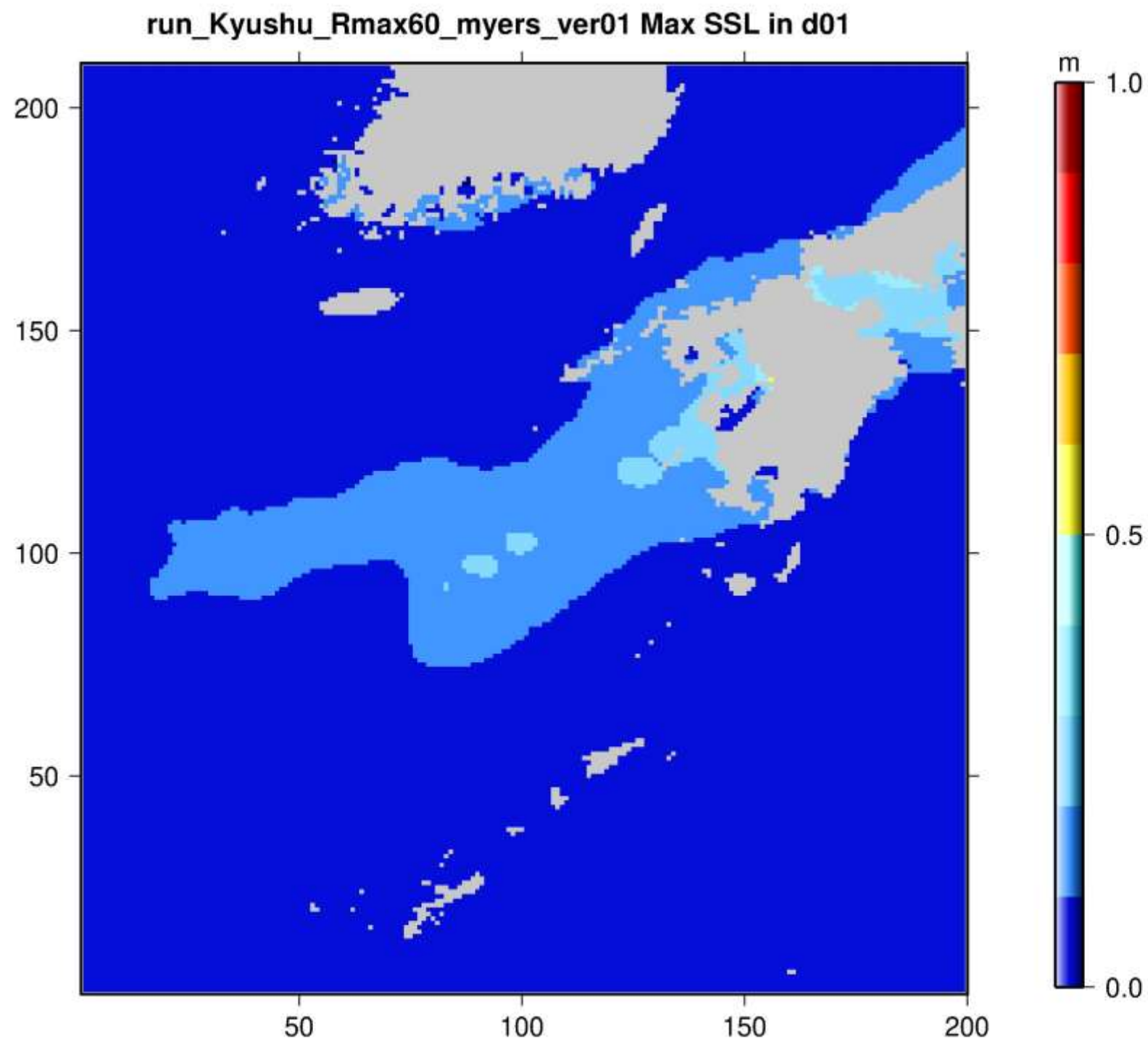
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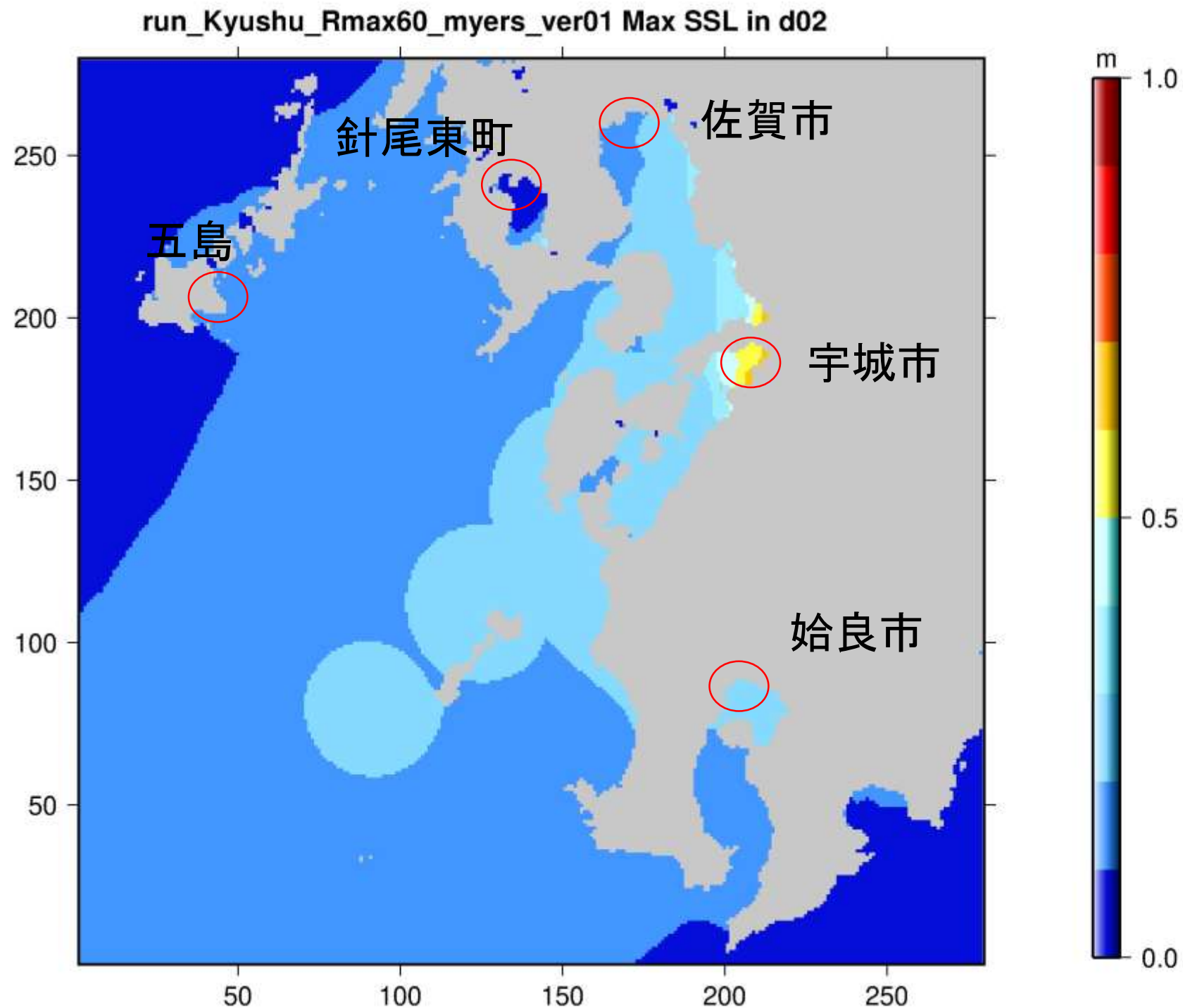
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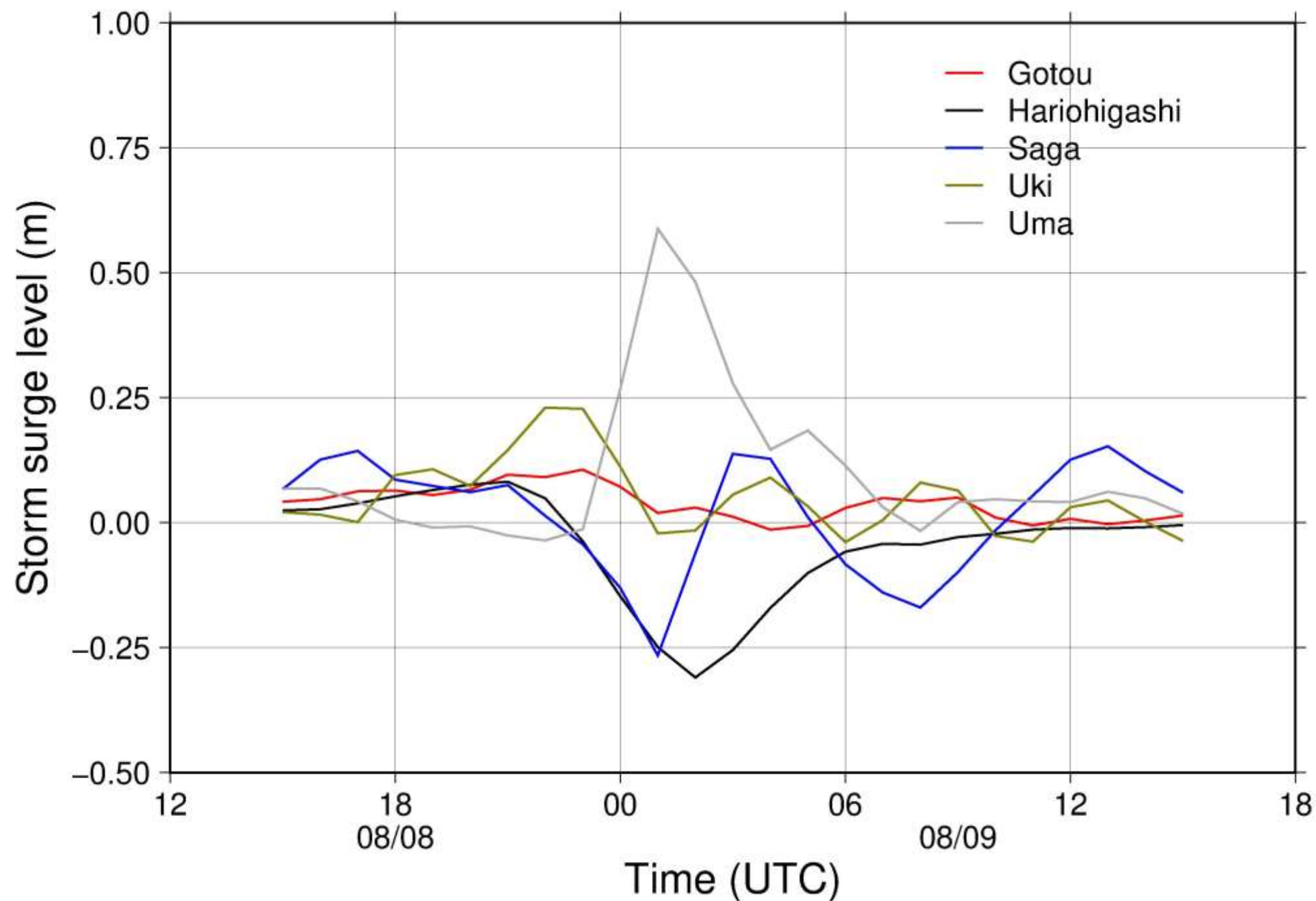
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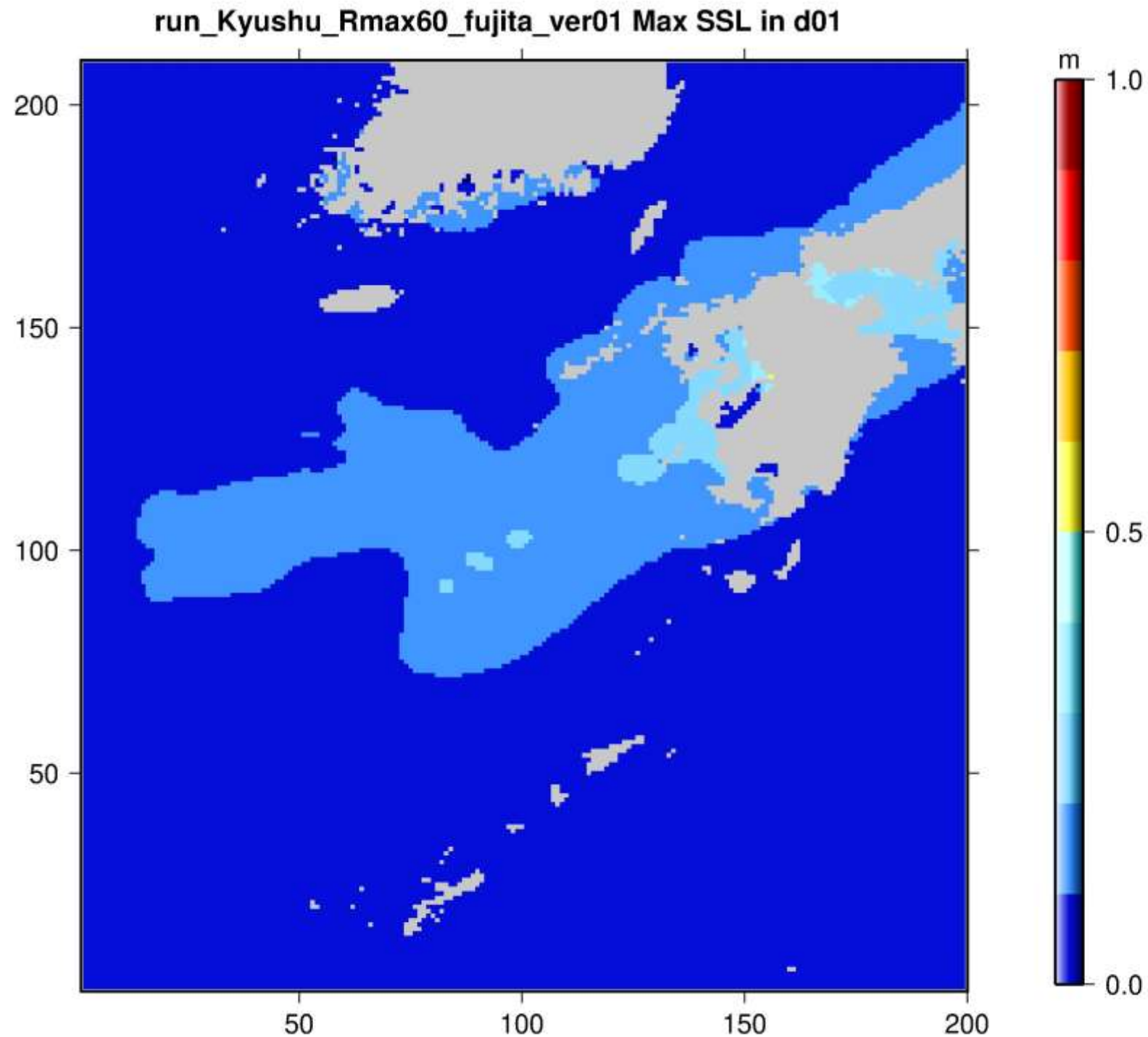
最大高潮偏差値分布, D2: $R_{max}=60$ km, Myers (Myers式)



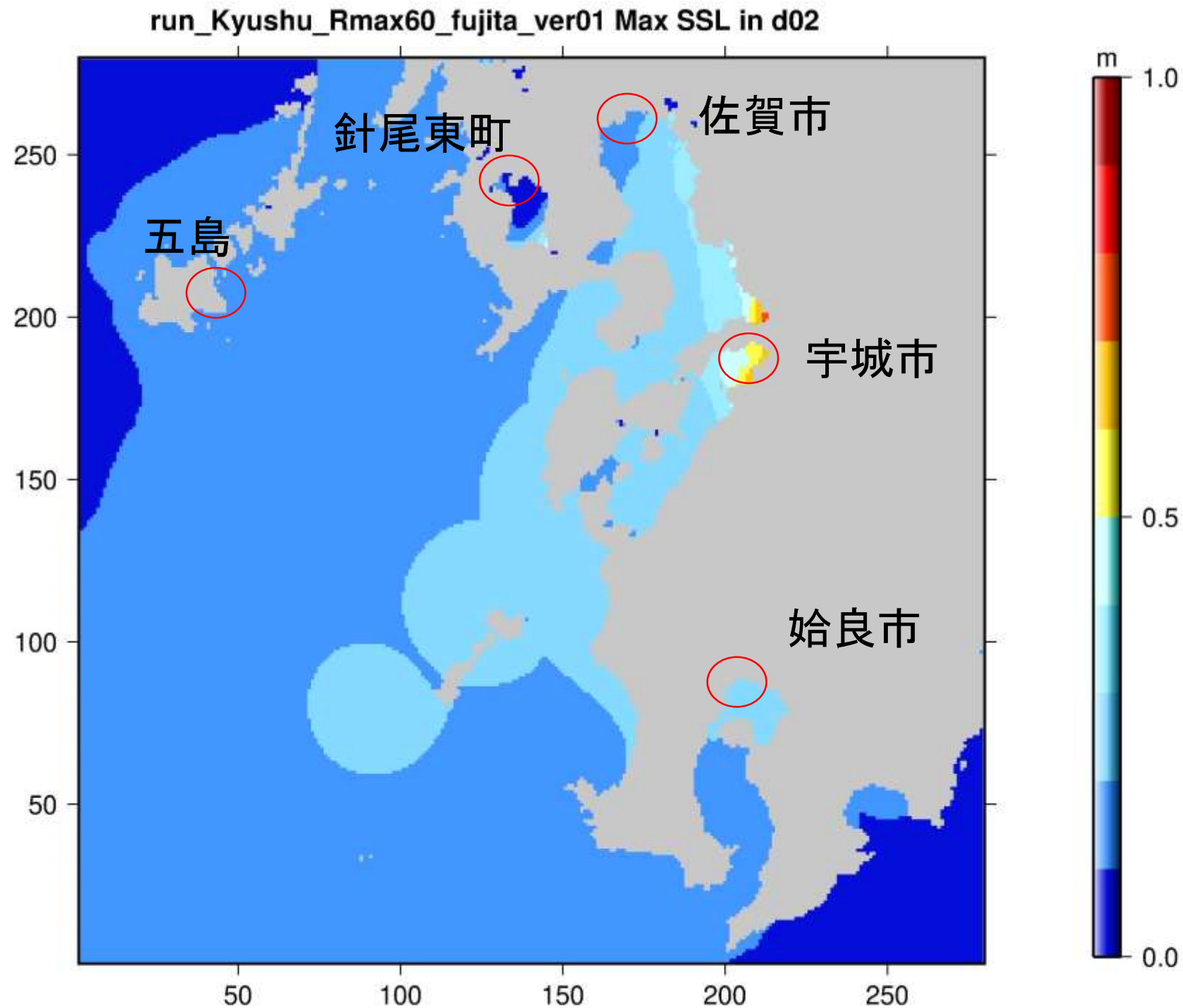
最大高潮偏差值分布, D2: $R_{max}=60$ km, Myers (Myers式)



最大高潮偏差値分布, D1: Rmax=60 km, 藤田 (1974)



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