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Supplemental Material

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Seasonal Forecasts of Tropical Cyclones Using GFDL SPEAR and HiFLOR-S

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Supporting Information for
Seasonal Forecasts of Tropical Cyclones using GFDL SPEAR and HiFLOR-S

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Introduction

This supplementary information includes seven figures and two tables that support the findings of this study.

Supplementary Figure 1: As in Fig. 1, but for HiFLOR-S and HiFLOR.

Supplementary Figure 2: As in Fig. 2, but for landfalling TC frequency. (a) U.S. coast (USA), (b) Caribbean Islands (CAR), and (c) Hawaii (HI).

Supplementary Figure 3: As in Figs. 3a, b, but focusing exclusively on landfalling variables for the US, CAR, and HI.

Supplementary Figure 4: As in Fig. 6, but for HiFLOR-S and HiFLOR.

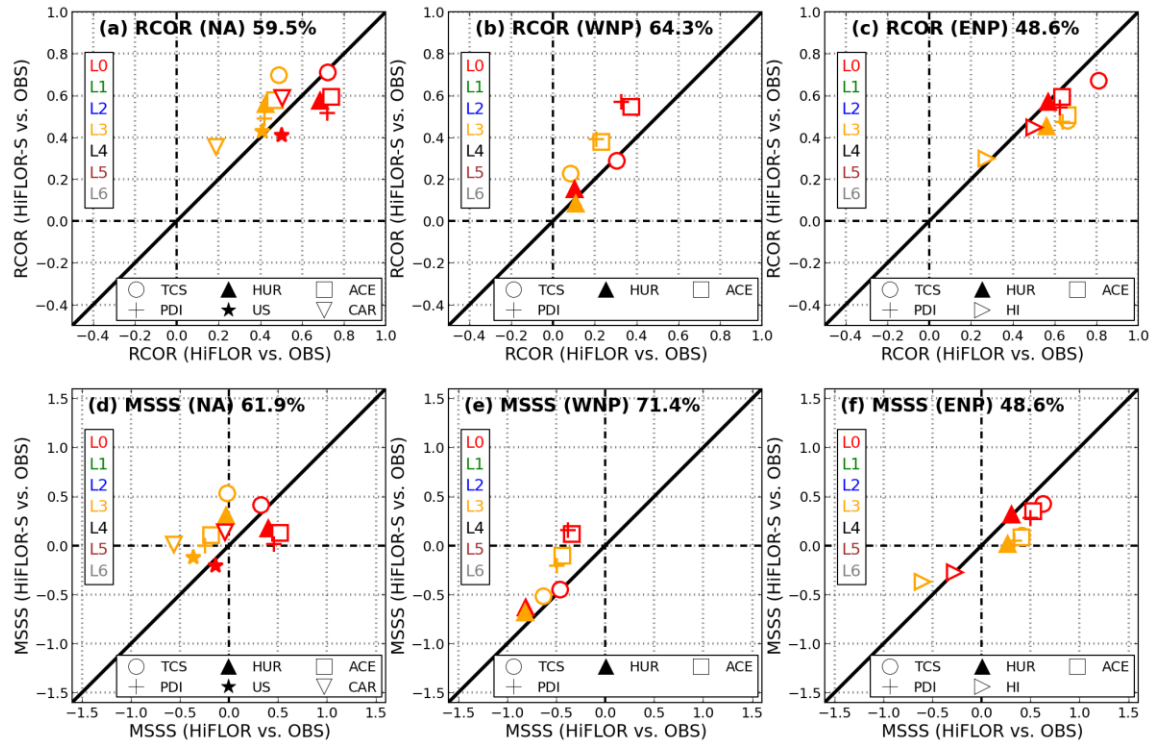
Supplementary Figure 5: As in Fig. 3, but for HiFLOR-S and SPEAR.

Supplementary Figure 6: As in Fig. 6, but for HiFLOR-S and SPEAR.

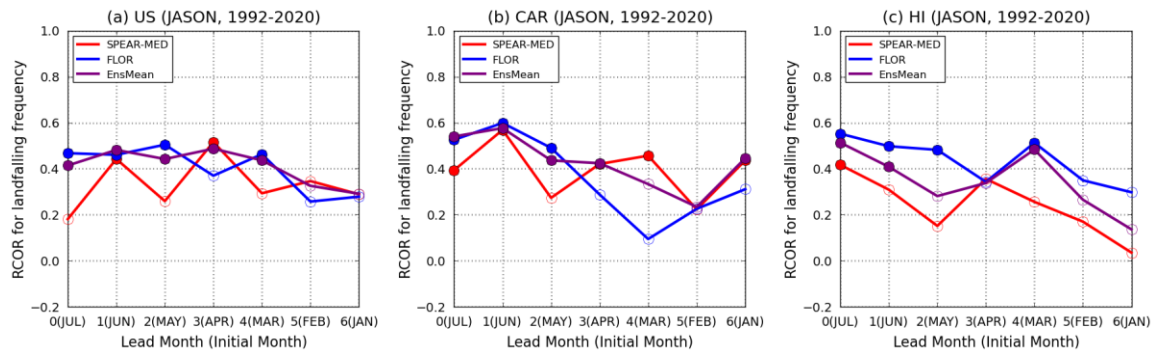
Supplementary Figure 7 As in Fig. 7, but for SPEAR and HiFLOR-S at lead-month 3 predictions.

Supplementary Table 1 As in Table 2, but for SPEAR and HiFLOR-S at lead-month 3 predictions.

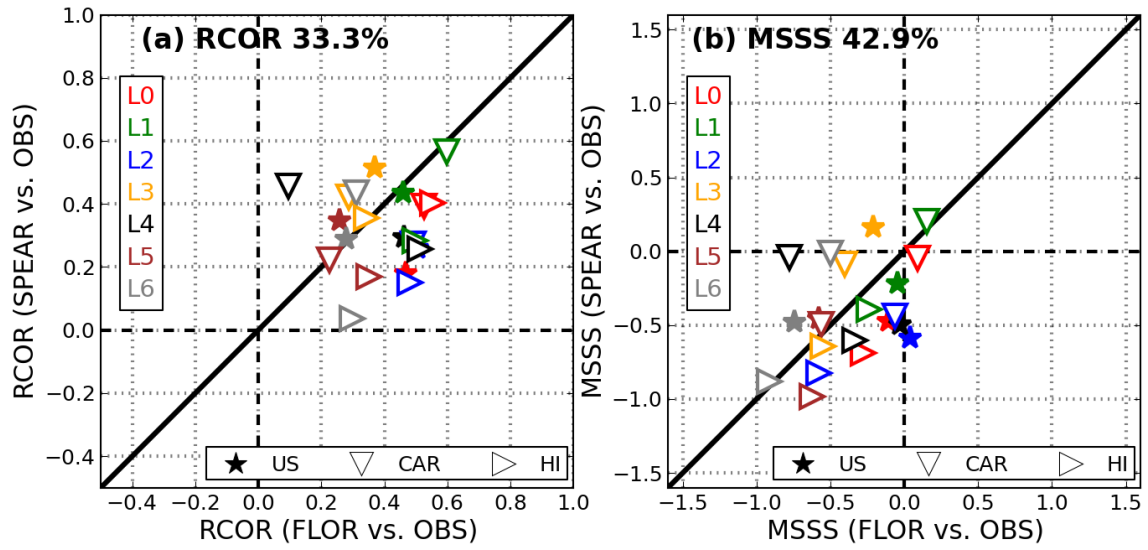
Supplementary Table 2: As in Table 3, but for SPEAR and HiFLOR-S at lead-month 3 predictions.



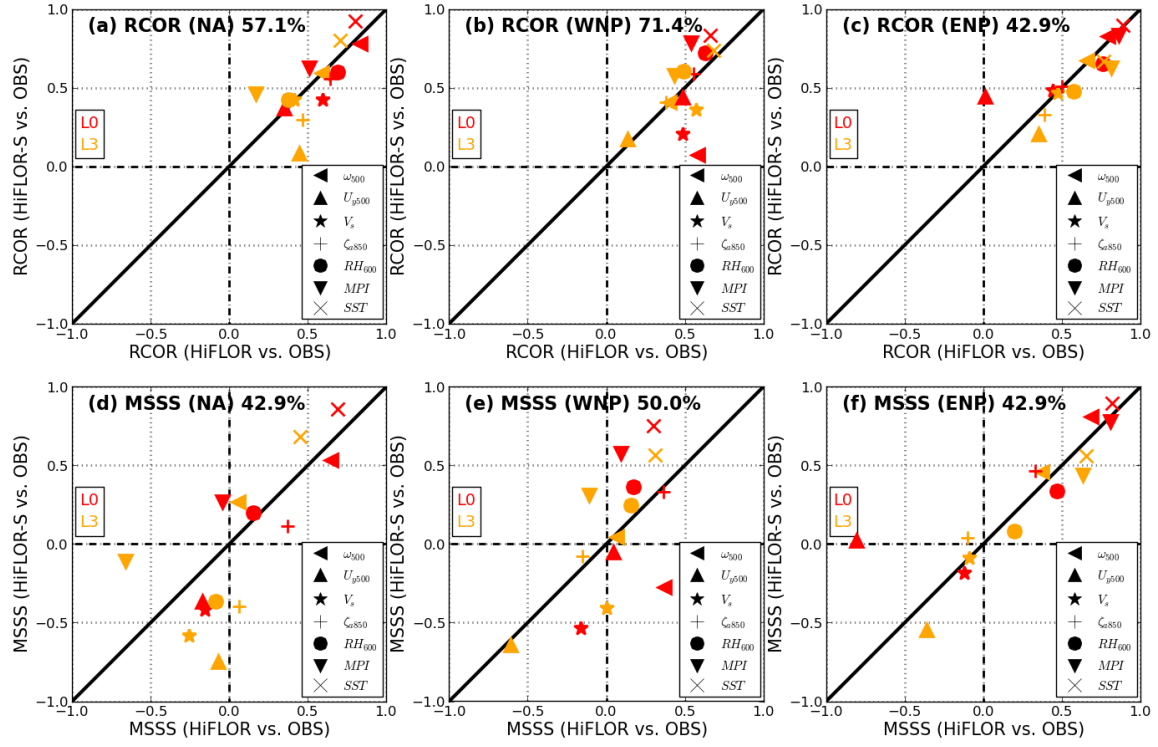
Supplementary Fig. 1 As in Fig. 3, but for HiFLOR-S and HiFLOR.



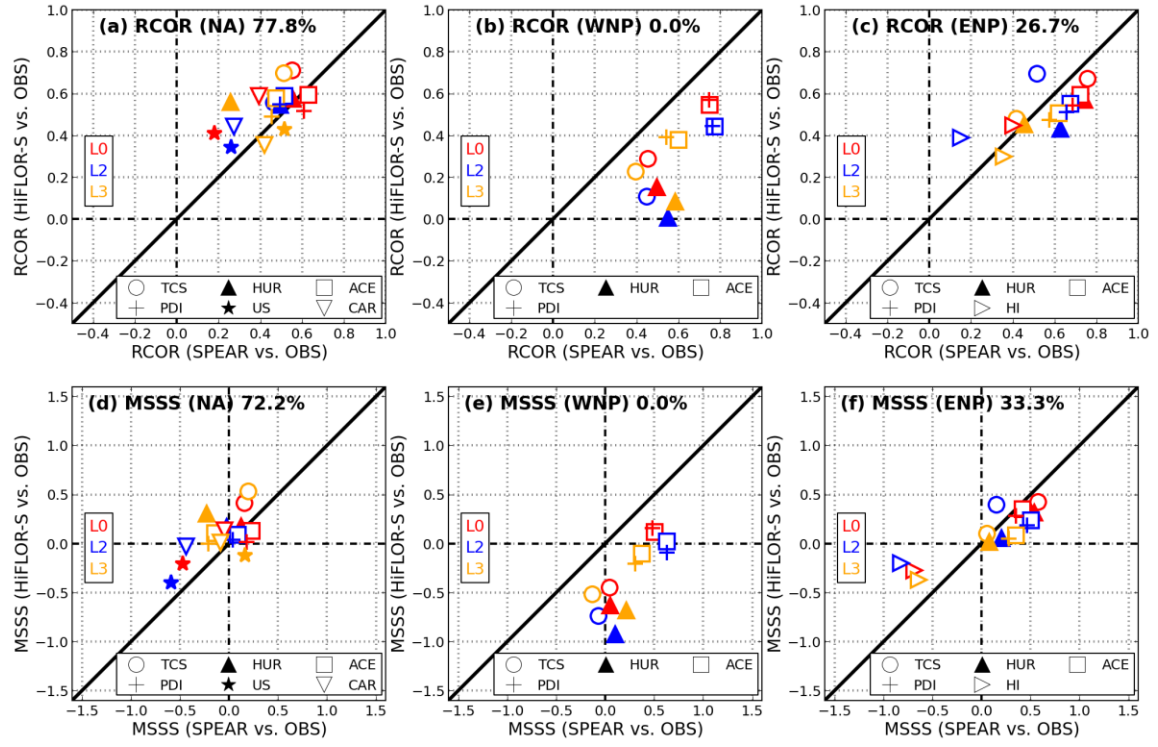
Supplementary Fig. 2 As in Fig. 2, but for landfalling TC frequency. (a) U.S. coast (USA), (b) Caribbean Islands (CAR), and (c) Hawaii (HI).



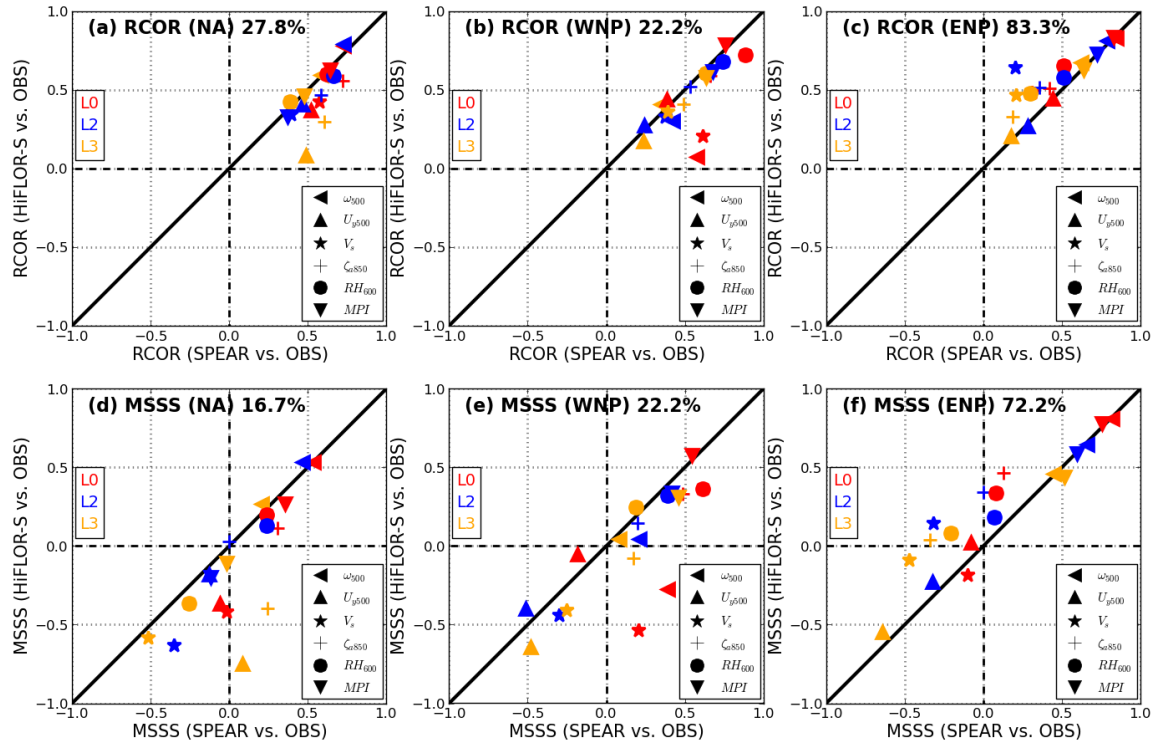
Supplementary Fig. 3 As in Figs. 3a, b, but focusing exclusively on landfalling variables for the US, CAR, and HI.



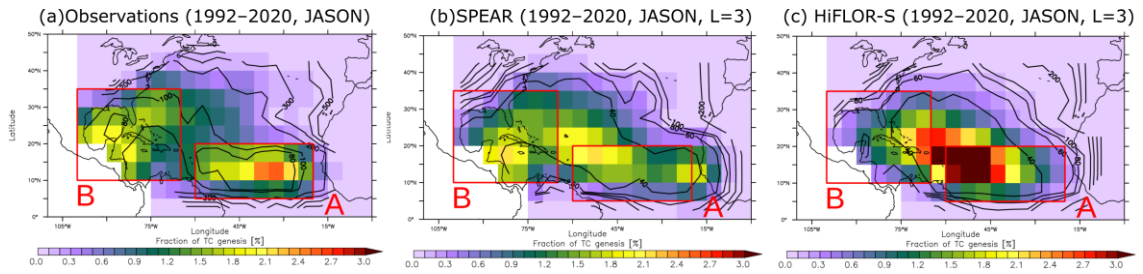
Supplementary Fig. 4 As in Fig. 6, but for HiFLOR-S and HiFLOR.



Supplementary Fig. 5 As in Fig. 3, but for HiFLOR-S and SPEAR.



Supplementary Fig. 6 As in Fig. 6, but for HiFLOR-S and SPEAR.



Supplementary Fig. 7 As in Fig. 7, but for SPEAR and HiFLOR-S at lead-month 3 predictions.

Supplementary Table 1 As in Table 2, but for SPEAR and HiFLOR-S at lead-month 3 predictions.

	Fraction of climatological mean TC genesis frequency over a domain relative to the basin-total TC genesis frequency [%]		Fraction of standard deviation of interannual variation of TC genesis frequency relative to the climatological mean TC genesis frequency [%]	
	Domain A	Domain B	Domain A	Domain B
Observations	34.2%	38.6%	81.3%	104.7%
SPEAR	28.7%	34.6%	39.0%	41.3%
HiFLOR	42.1%	28.5%	35.4%	49.3%

Supplementary Table 2 As in Table 3, but for SPEAR and HiFLOR-S at lead-month 3 predictions.

	V_s	ζ_{a850}	RH_{600}	MPI	SST
Domain A					
Observations	−0.24	+0.39	<u>+0.56</u>	+0.35	<u>+0.42</u>
SPEAR	−0.57	<u>+0.64</u>	+0.61	<u>+0.77</u>	+0.20
HiFLOR-S	−0.48	+0.35	<u>+0.84</u>	<u>+0.79</u>	+0.36
Domain B					
Observations	<u>−0.43</u>	<u>+0.54</u>	−0.11	−0.22	+0.00
SPEAR	−0.54	<u>+0.88</u>	<u>+0.60</u>	−0.48	+0.01
HiFLOR-S	<u>−0.42</u>	<u>+0.75</u>	−0.24	−0.22	+0.22