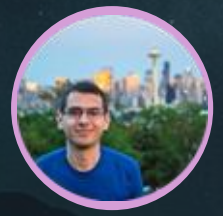
MicroEnsemble

StillLearning, Huracan, MicroDuet



Jonathan Weyn

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Hannah Guan

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University of Toronto



Paulo Orenstein

Instituto de Matemática Pura e Aplicada



Judah Cohen

MIT



Lester Mackey

Microsoft Research



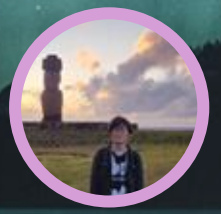
Alex Lu

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Genevieve Flaspohler

Rhiza Research



Zekun Ni

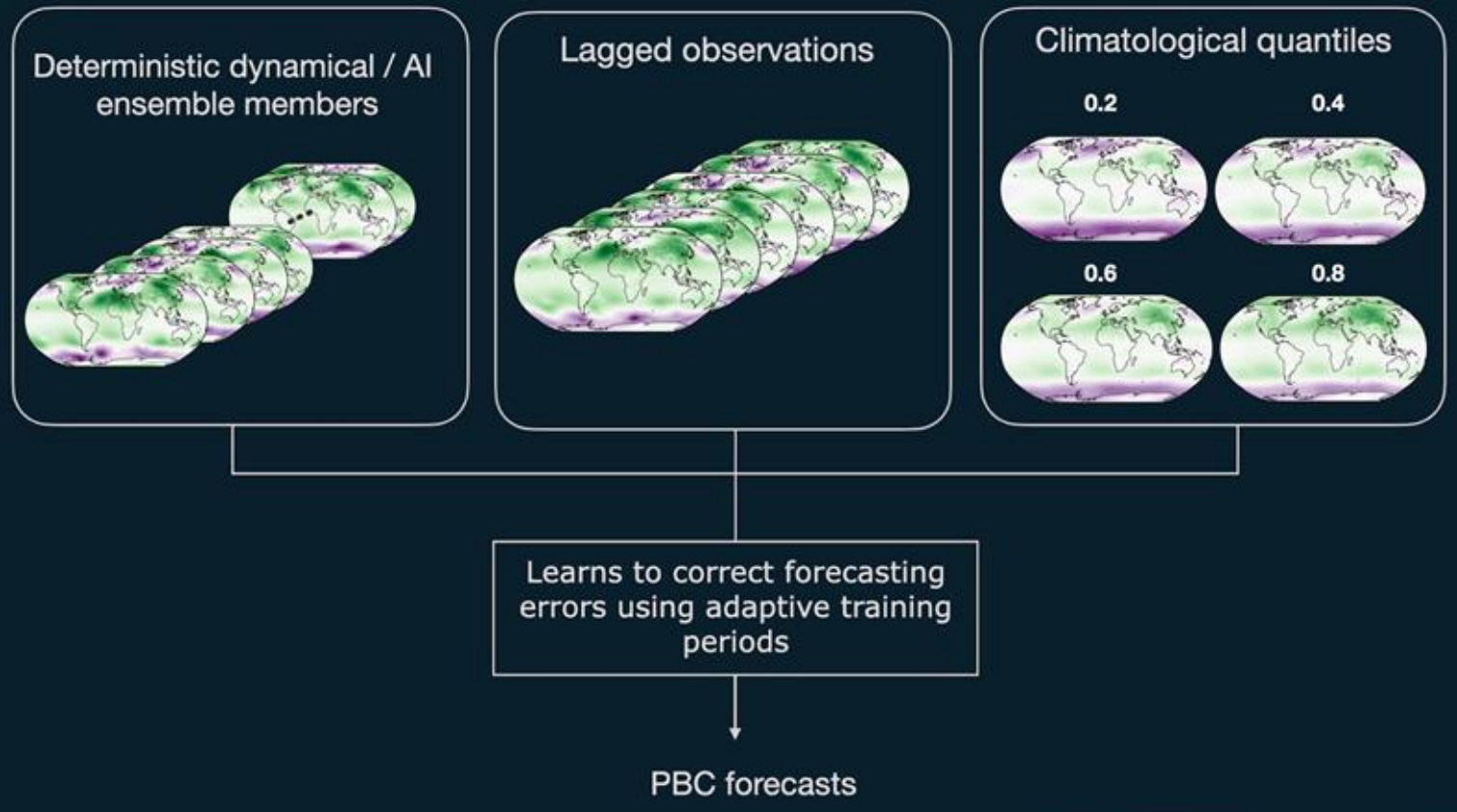
Microsoft



Haiyu Dong

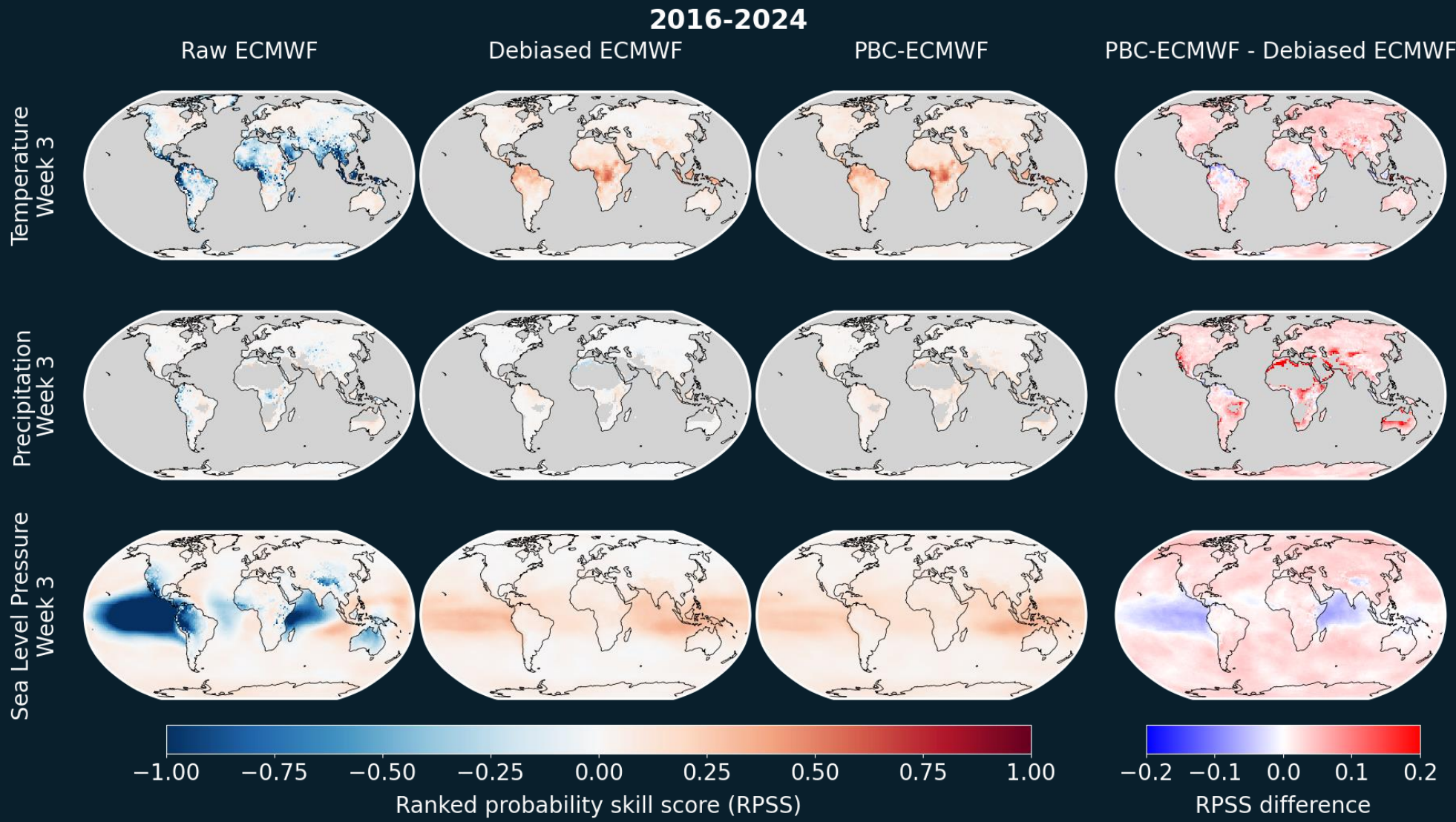
Microsoft

StillLearning = Probabilistic bias correction (PBC)

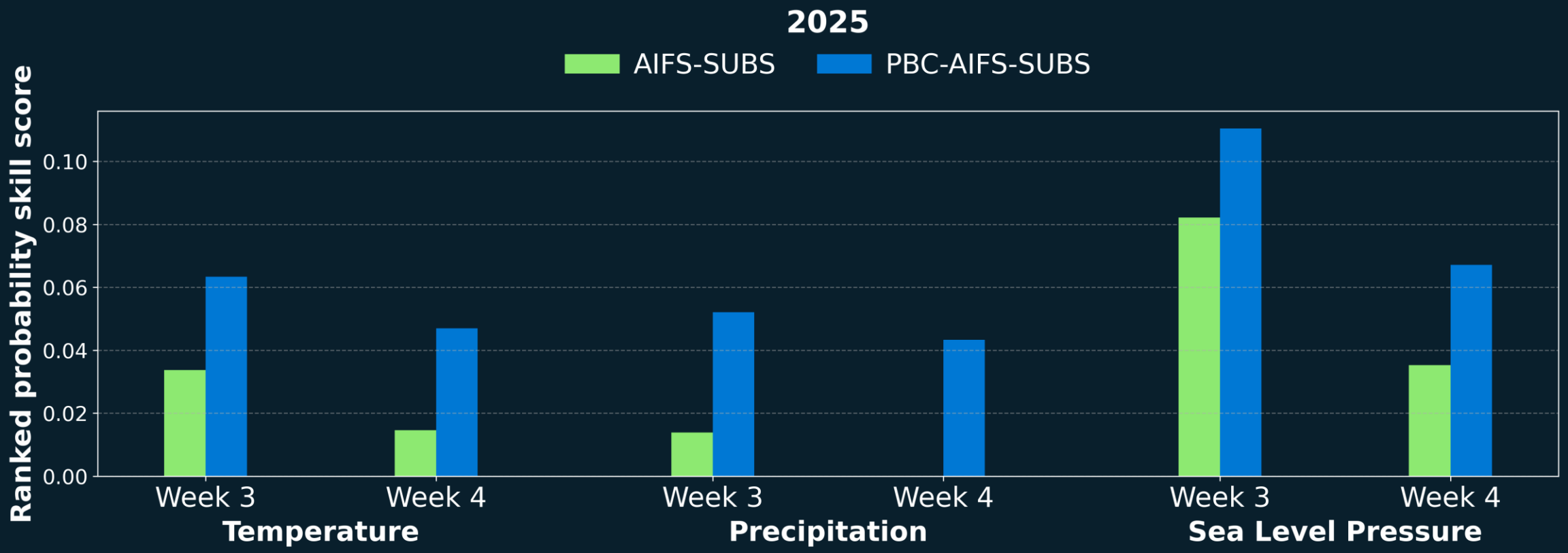


Paper: Advancing Subseasonal Forecasting with Machine Learning (Guan et al., arXiv, 2026)
Code: github.com/mouatadid/pbc

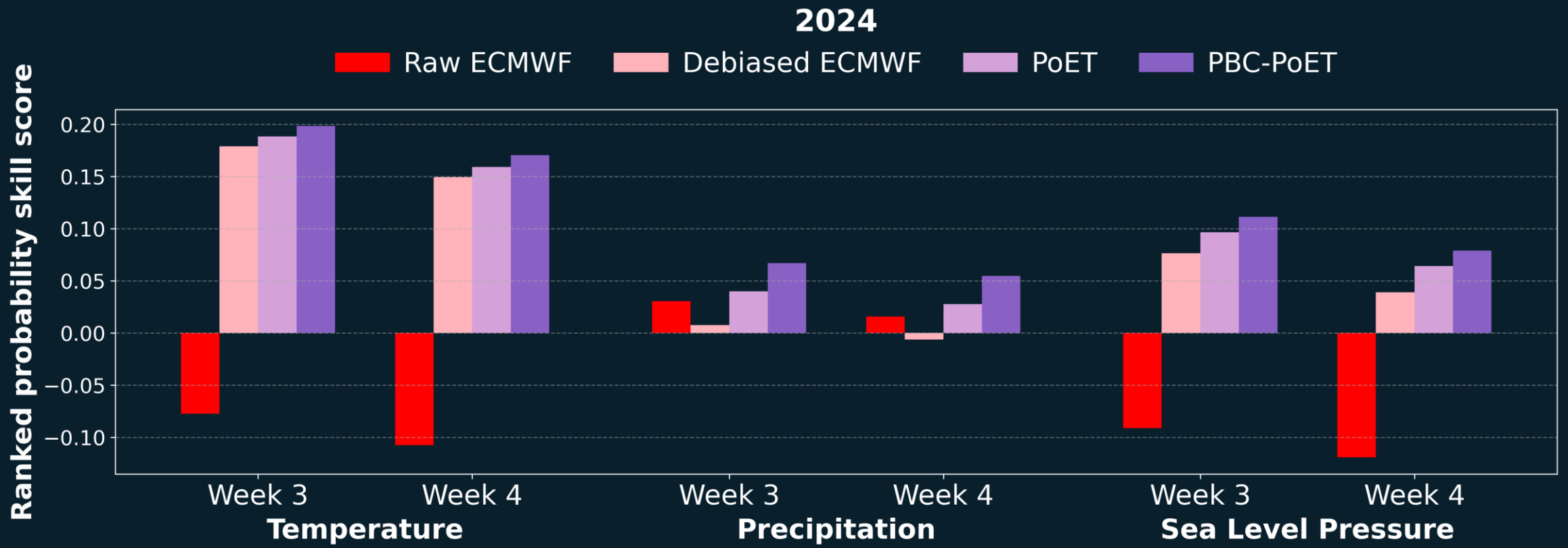
PBC broadly boosts the skill of raw ECMWF forecasts more effectively than operational debiasing



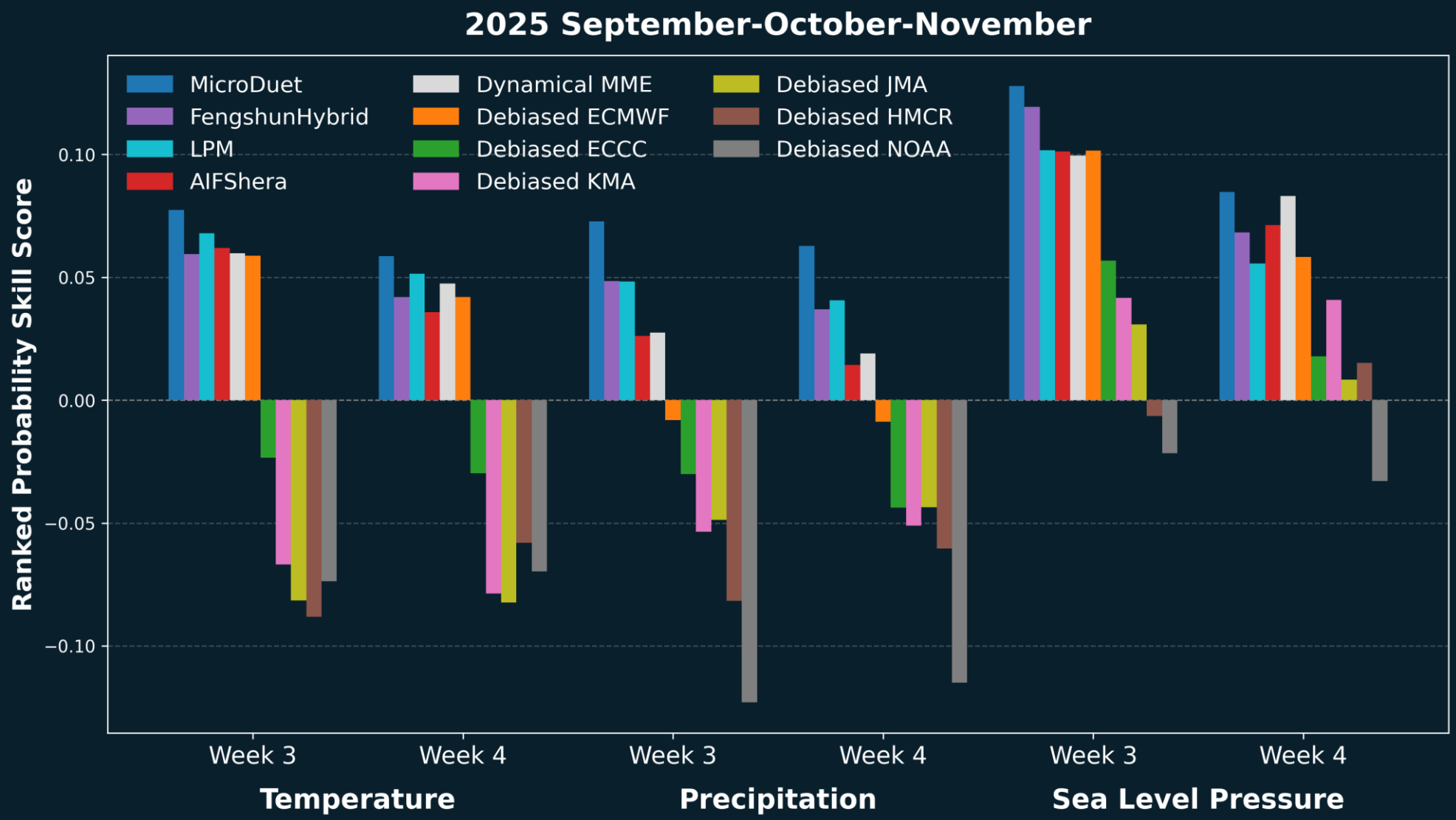
PBC enhances the subseasonal skill of ECMWF's AI Forecasting System (AIFS-SUBS)



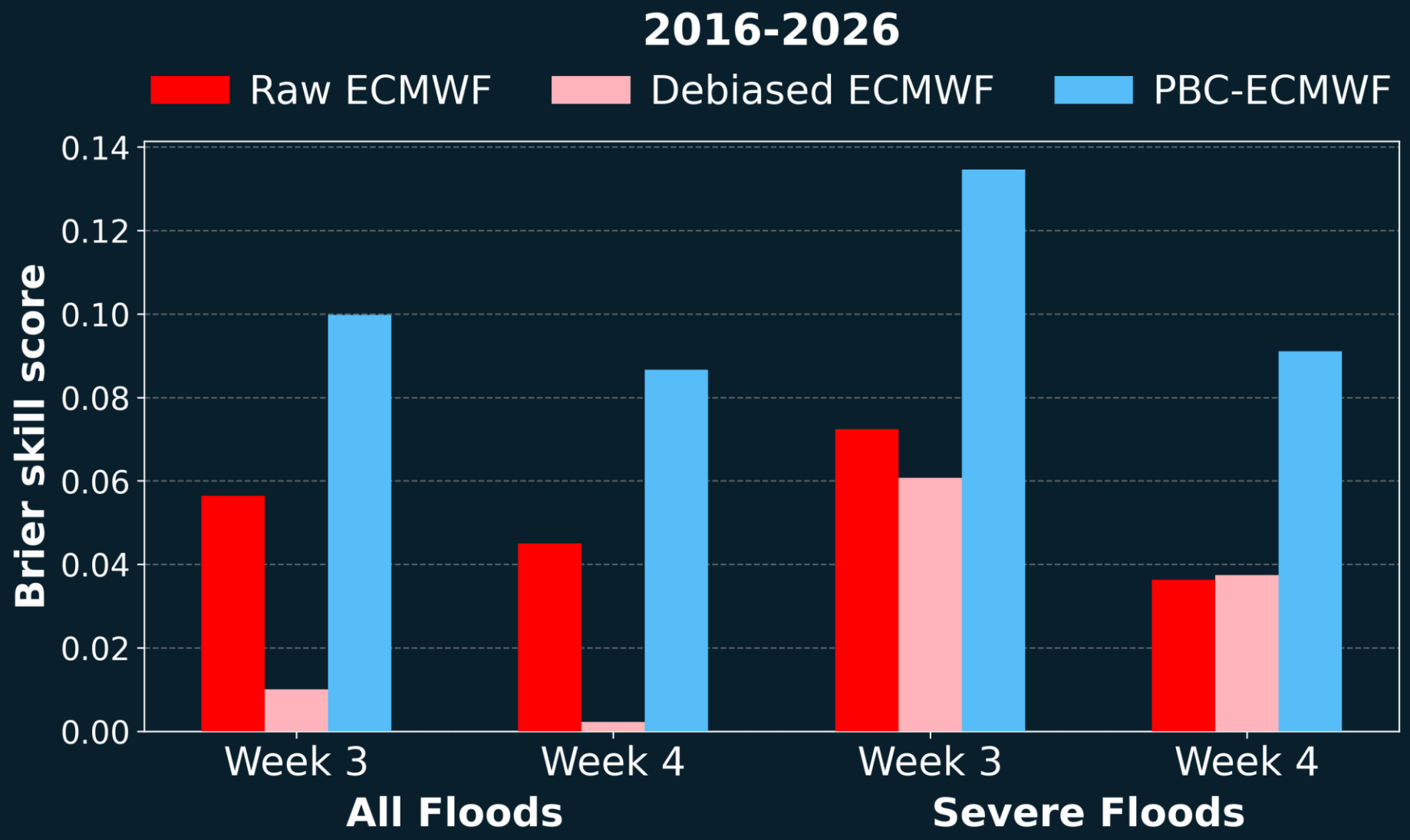
PBC further improves PoET (Huracan), a state-of-the-art AI post-processor



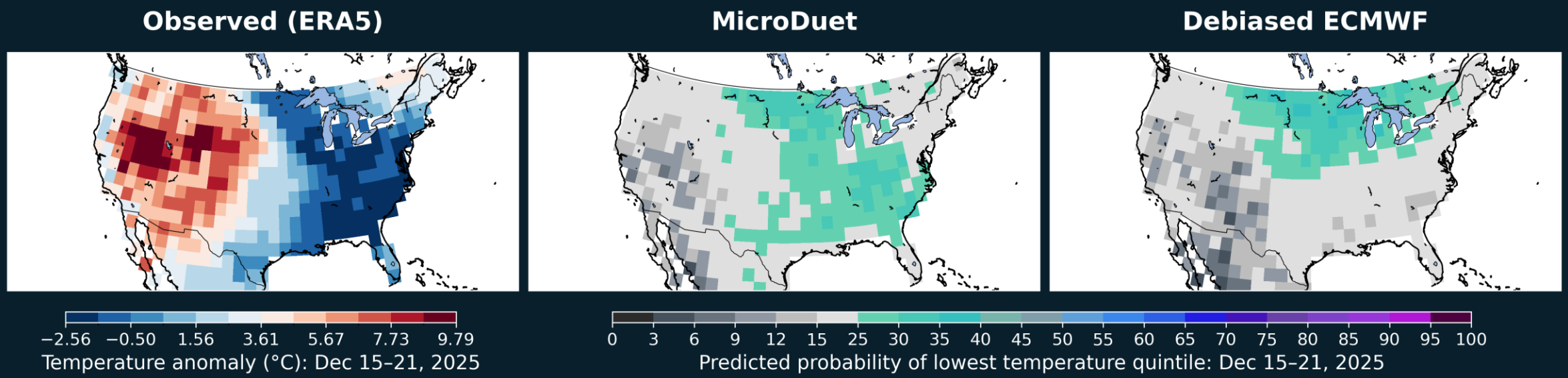
MicroDuet = PBC-ECMWF + PBC-Poet



PBC displays higher skill in predicting floods



MicroDuet anticipated an extreme cold event missed by debiased ECMWF



PBC models can offer agricultural support in African El Niño response

Following strong local benchmarking performance, the **Kenya Meteorological Services Authority** and the Climate Hazards Center (CHC) will pilot the PBC model during the record-breaking 2026 El Niño rainy season. Skillful subseasonal rainfall forecasts can drive decision-support for to farmers in taking critical actions, including planting, fertilizing, and harvesting.



July 22nd 2026 field assessment photos from Western Kenya show the difference planting timing can make in maize maturation in two neighboring plots that planted at different times. Photos taken by Chris Shitote, CHC, just north of Kitale, in northern Trans Nzoia County.