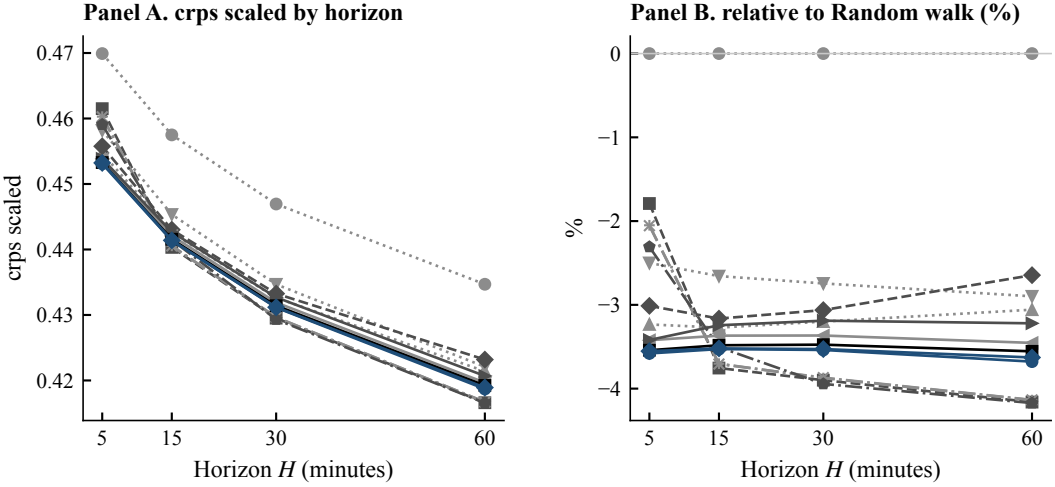

Panel A. crps scaled by horizon
crps scaled
0.47
0.46
0.45
0.44
0.43
0.42
5
15
30
60
Horizon H (minutes)
Panel B. relative to Random walk (%)
%
0
−1
−2
−3
−4
5
15
30
60
Horizon H (minutes)
Random walk
Seasonal vol.
EWMA-t
HAR-RV
GARCH(1,1)-t
Ridge
Elastic net
LightGBM
MLP (1m)
TCN (1m)
MRPT-S 1m only
MRPT-S multi-res.
MRPT-B multi-res.