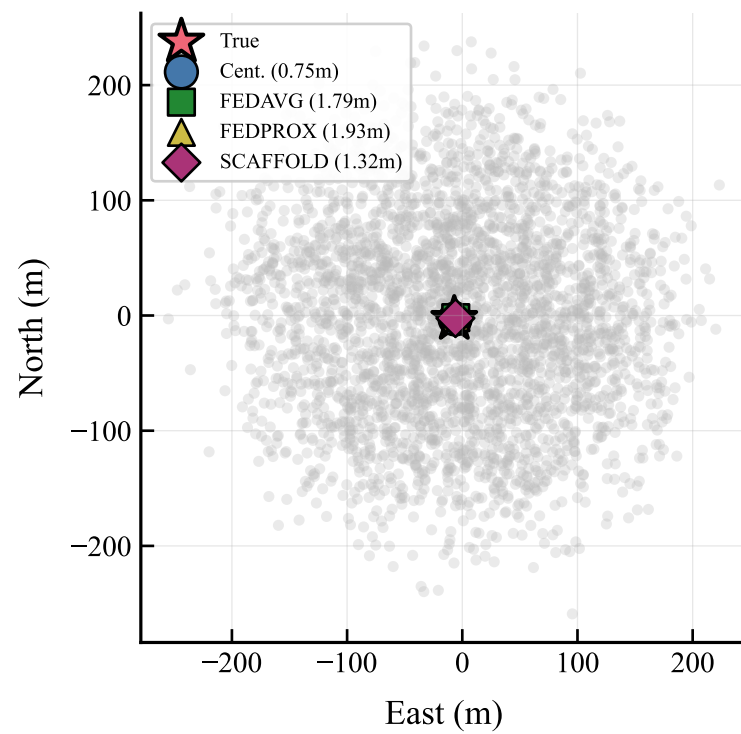


## Stage 2: Localization Summary — Urban

**(a) Localization Results**



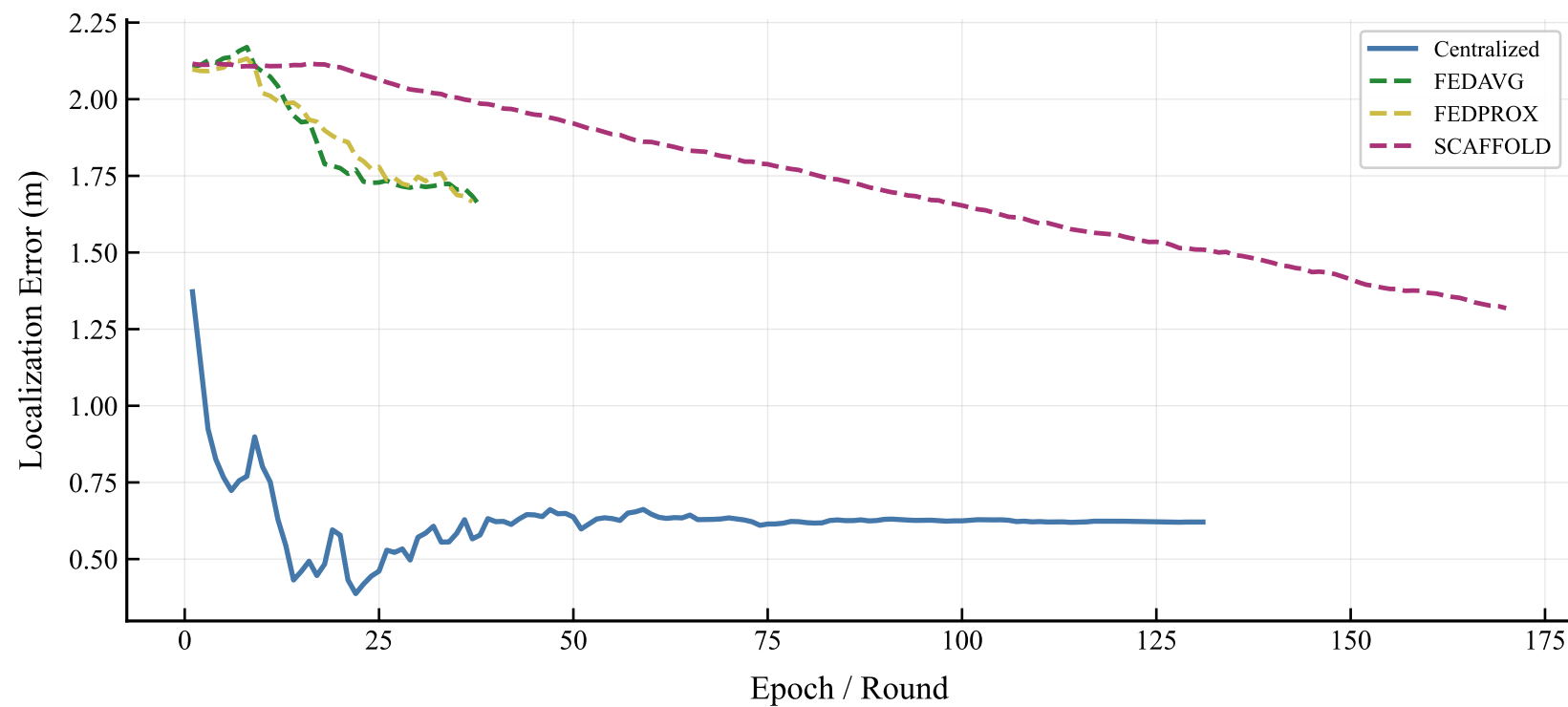
### STAGE 2 METRICS

Centralized:  
Error: 0.75 m

Federated:  
FEDAVG: 1.79 m  
FEDPROX: 1.93 m  
SCAFFOLD: 1.32 m

Dataset: 3,232 samples  
Environment: Urban

**(b) Convergence Comparison**



**(c) Final Errors**

