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Trillion-Parameter Foundation Models as Discovery Accelerators: Toward a Scientific Discovery Platform

Thursday 25 September 2025 08:30 (30 minutes)

Trillion-parameter, science-tuned foundation models can speed discovery, but only inside an AI-native Scientific Discovery Platform (SDP) that connects models to tools, data, HPC, and robotics. I argue for community co-development of the SDP, via open interfaces, shared schedulers, knowledge substrates, provenance, and evaluation, alongside shared models. Early results suggest that such a co-designed stack can boost throughput and reliability in materials and bio workflows, enabling human–AI teams to turn knowledge into experiments and experiments into insight.

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Footnotes

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