

2026: AI 1-year Roadmap

Major Goal	Epics	Start Date	Due Date
v3 low-res emulators	v3 LR atmosphere-only model emulator is available	—	—
	help finish Ai2's training of single-trajectory coupled v3 LR piControl	Jan 2026	Apr 2026
	start training single-trajectory coupled v3 LR near-historical run (near-present-day)	Apr 2026	Jul 2026
	retrain atmosphere-only and coupled v3 LR historical from an ensemble of near-present-day v3 LR data	Mar 2026	Jul 2026
	rigorously evaluate/falsify predictive ability of atmosphere-only and coupled v3 LR historical emulators <ul style="list-style-type: none"> comparative analysis of skill across dimensionality (period setting, reference coupling, reference data) aggregate modes of variability what can we learn from v3 LR to help v3 HR (borrow strengths, transfer learning, etc.) 	Jan 2026	Jul 2026
v4 comp emulators	transition to ne256pg2 (finer resolution)	Jul 2026	Dec 2026
	target OMEGA outputs	Jul 2026	Dec 2026
	expand to other comps as needed	Dec 2026	Dec 2026
v4 coupled emulators	fine-tune aforementioned emulators	Oct 2026	Dec 2026
Multi-goal activities	FTorch	Jan 2026	Apr 2026
	C++ emulators for CIME integration	Jan 2026	Jul 2026
	integrating into e3sm toolchain (e3sm_diags, etc.)	Jan 2026	Dec 2026
	exploring different neural architectures, expanding current neural architectures, and other misc. "neural R&D"	Jan 2026	Dec 2026