

confirmed scientific states and immutable evidence packets

Verified quality
diversity archive
deep scientific
state cells

Record
improvement
allocator
state option
harness arm

State isolated three agent ecology

Scout
new option
families

Mechanist
targeted
interventions

Challenger
counterfactual
probes

Independent
verifier stack
admission
robustness and
blinded audit

Harness portfolio
archive view
context routing
depth and audit
schedule

Permanent randomized
audit channel

Option fork
fixed cost
and horizon

Null fork
matched
frozen branch

Known propensities and no cross branch updates

Causal option
registry
matched horizon
uplift and
uncertainty

Bounded refinement
nursery

Minimal counterfactual
one to three attempts
hard cost and depth caps

Hard quotas preserve audit support
under tested cells and stepping stones

Homogeneous Top M at K learning
OrderGrad or MaxPO on verified branches
separate role updates
with no gradient merging