## DroneBasedReforestation Train & Test Metrics: Difficulty: 10, Task: 1 Entropy Out of Energy Count Tree Drop Count Recharge Energy Count Save Location Count Cumulative Distance Until Tree Drop 0.05 -0.05 0.05 -0.05 source source source source source source training training training training training --- training Value 0.00 0.00 0.00 0.00 test test test test test test 1.3 -0.05-0.05-0.050.50 0.75 1.00 1.25 0.75 1.00 1.25 0.75 0.25 0.75 1.00 0.25 0.50 0.50 1.00 0.00 0.25 0.50 1.00 0.25 0.75 1.00 1.25 0.25 0.00 0.50 0.00 0.00 0.25 0.75 1.25 0.00 0.50 1e6 1e6 1e6 Step Step 1e6 Step Step 1e6 Step 1e6 Step Cumulative Tree Drop Reward **Cumulative Distance Reward** Cumulative Normalized Distance Until Tree Drop Cumulative Distance to Existing Trees Episode Length **Curiosity Value Estimate** 0.05 -0.05 0.05 source source source source source training training training training training Value 200 source 0.00 0.00 0.00 test test test - test test training test -0.05-0.05-0.050.75 1.00 1.25 0.50 0.75 1.00 0.00 0.25 0.50 0.75 1.00 0.25 0.50 0.75 1.00 0.00 0.25 0.50 1.00 0.25 0.50 0.75 1.00 0.00 0.25 0.50 1e6 1e6 1e6 Step 1e6 Step 1e6 Step 1e6 Step Step Step Extrinsic Value Estimate Cumulative Reward **Curiosity Reward Extrinsic Reward** Policy Loss Value Loss 100 source source 2000 training training Value 05 Value 20 source source source 50 test <u>®</u> 1000 training training training test test test 0.00 0.25 0.50 0.00 0.25 0.50 0.75 1.00 1.00 0.25 0.50 0.75 1.00 1.25 0.75 1.00 1.25 0.00 0.25 0.50 0.75 1.25 0.25 0.50 0.75 1.00 0.00 0.25 0.50 0.75 1.00 1.25 Step 1e6 Step 1e6 Step 1e6 Step 1e6 Step 1e6 Step **Epsilon Curiosity Forward Loss** Learning Rate Beta Curiosity Inverse Loss 0.20 source source source source source 0.004 စ္ 0.0002 training training training training training 9 0.15 Value <u>s</u> 0.002 test test test test 0.0000 0.000 0.00 0.50 0.50 0.00 0.25 0.50 0.75 0.25 0.50 0.75 1.00 0.25 1.00 0.25 0.25 1.00 0.50 1e6 1e6 1e6 1e6 Step 1e6