Comparison of Wolff and Swendsen-Wang Cluster Algorithms (a) Cluster Size Distribution at T=T_c (b) Number of Clusters vs Temperature -+- SW, L=32 WOLFF, L=8 Т с --- WOLFF, L=48 → WOLFF, L=8 --- SW, L=48 ── WOLFF, L=48 - SW, L=8 WOLFF, L=16 WOLFF, L=64 -+- SW, L=8 -+- SW, L=48 → WOLFF, L=64 --- SW. L=64 → WOLFF, L=16 -- SW, L=16 -+- SW, L=16 — WOLFF, L=32 -+- SW, L=64 --- SW, L=32 → WOLFF, L=32 Average Number of Clusters 10⁰ 10² 10³ 10¹ 10⁴ Temperature T/J Cluster Size s (c) Percolation Strength (d) Algorithm Efficiency Fraction of Spins Flipped per Update 0.8 Largest Cluster Size / N -+- SW, L=32 -+- SW, L=32 T_c → WOLFF, L=8 ── WOLFF, L=48 → WOLFF, L=8 ── WOLFF, L=48 -+- SW, L=8 -+- SW, L=48 -+- SW, L=8 -+- SW, L=48 → WOLFF, L=64 → WOLFF, L=64 → WOLFF, L=16 → WOLFF, L=16 -+- SW, L=16 -+- SW, L=64 -+- SW, L=16 -+- SW, L=64 → WOLFF, L=32 → WOLFF, L=32 2.3 2.4 2.5 2.0 2.3 2.0 2.1 Temperature T/J Temperature T/J