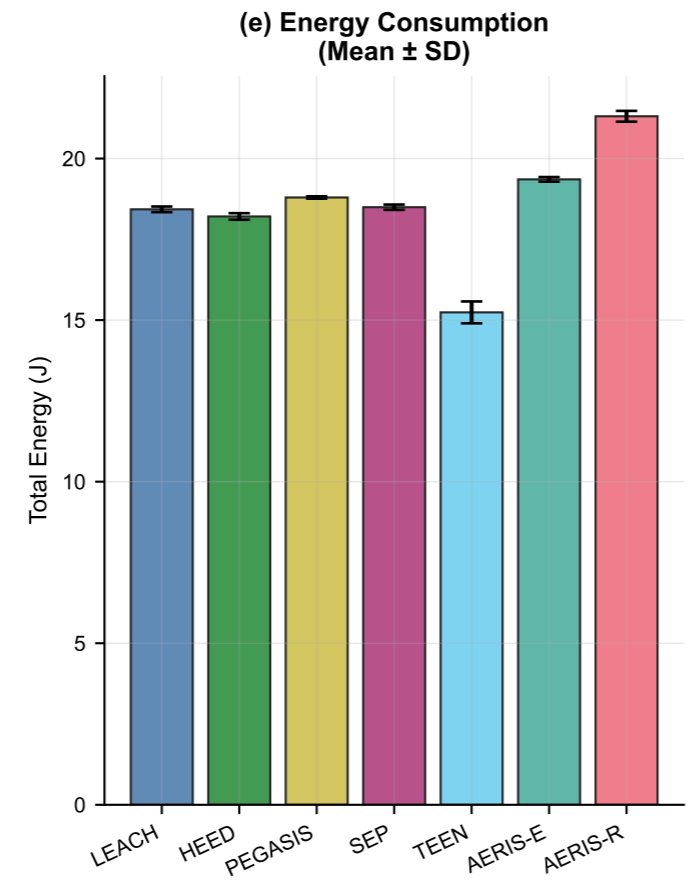
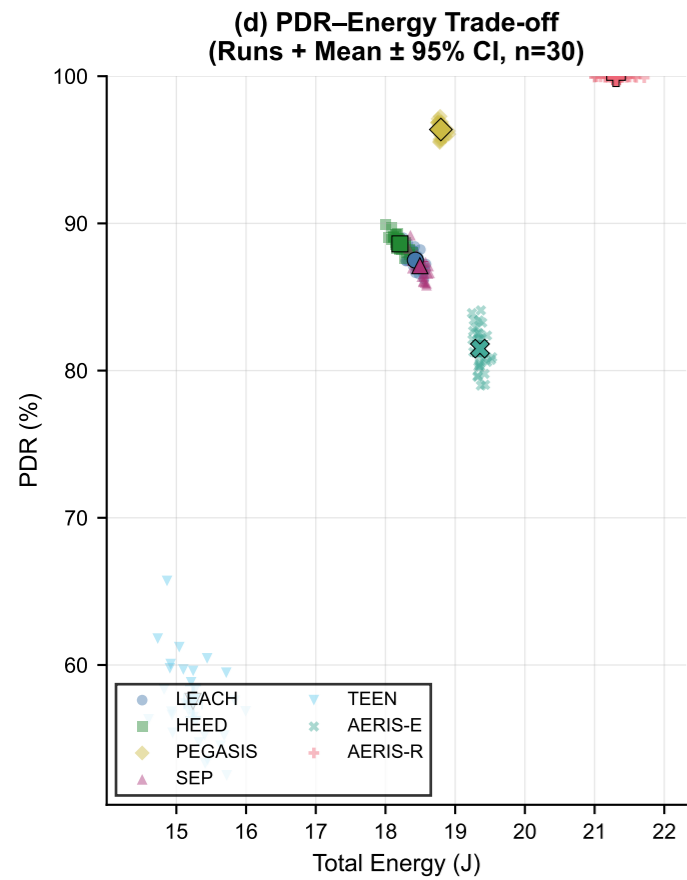
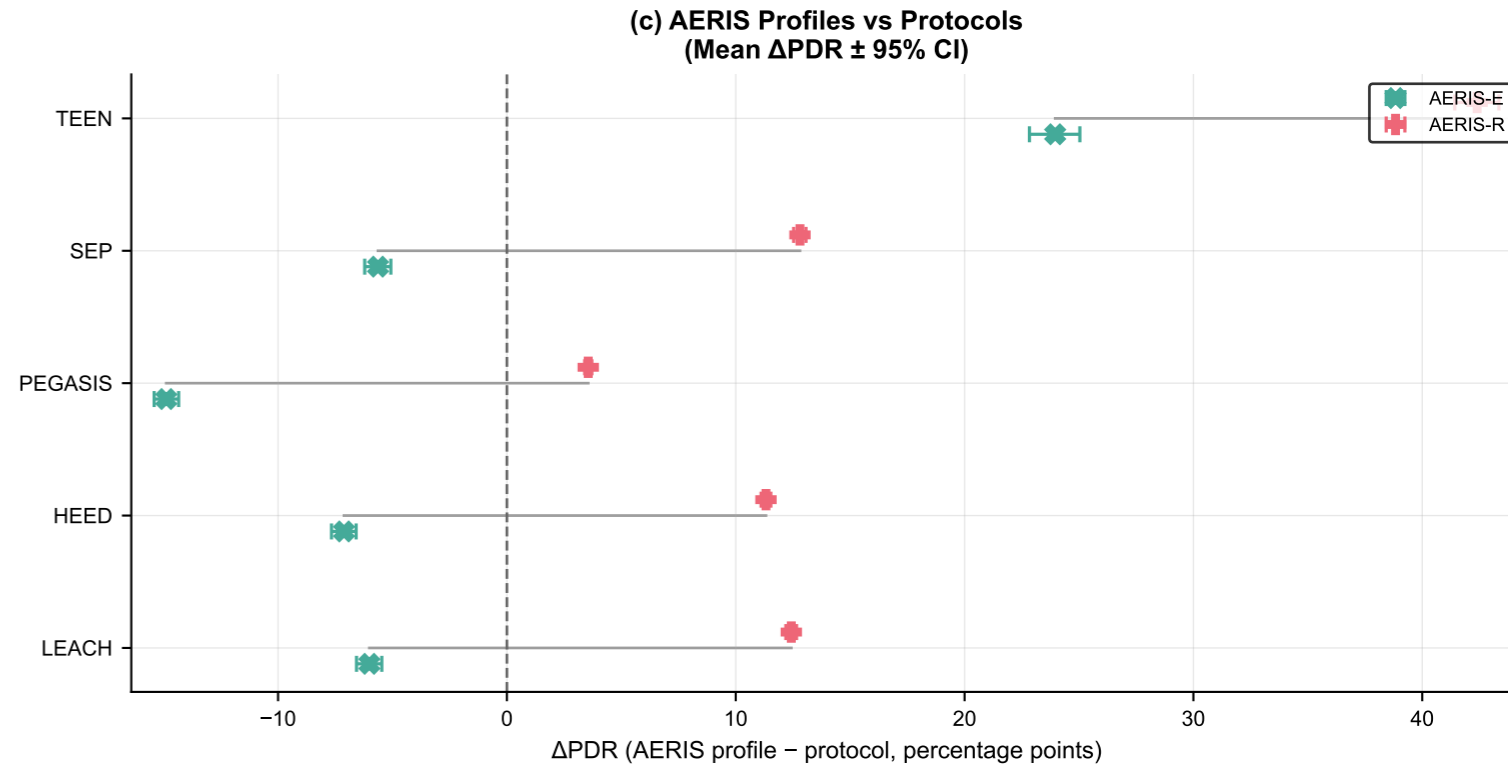
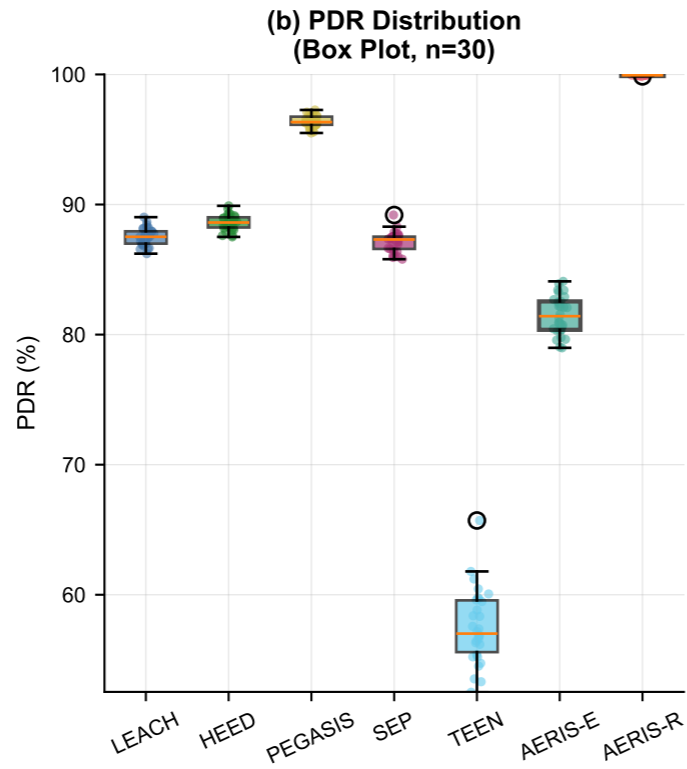
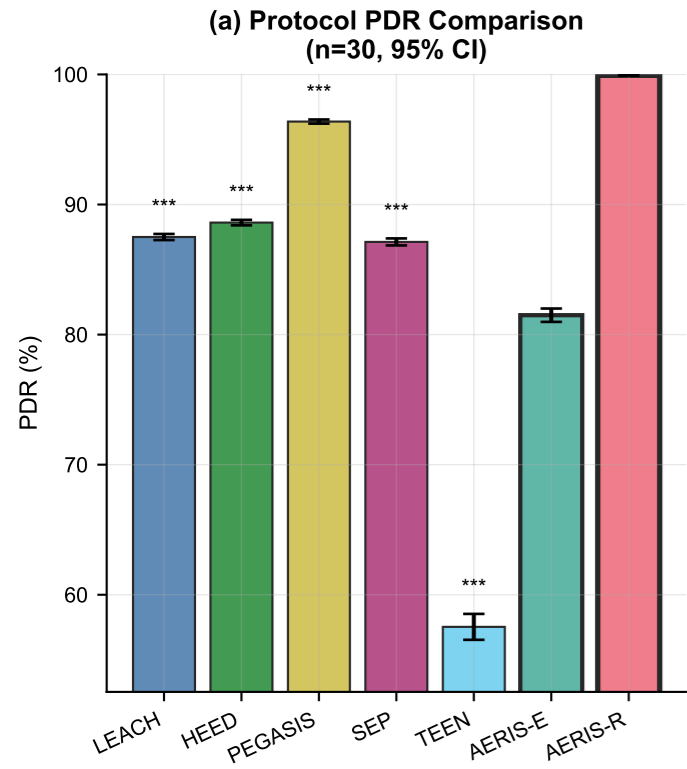


AERIS: SOTA Protocol Comparison with Rigorous Statistical Testing
(Same geometry/energy model; AERIS profiles include full reliability stack, n=30 runs each)



(f) Statistical Validation Summary
(Shapiro–Wilk \rightarrow Levene \rightarrow t-test)

Protocol	Δ PDR-E (pp)	p_E	Δ PDR-R (pp)	p_R
LEACH	-6.01	4.6e-23	+12.43	1.0e-38
HEED	-7.12	3.1e-25	+11.32	6.2e-39
PEGASIS	-14.89	9.2e-35	+3.55	5.6e-28
SEP	-5.63	1.5e-22	+12.81	2.5e-37
TEEN	+23.96	2.1e-36	+42.40	6.9e-36