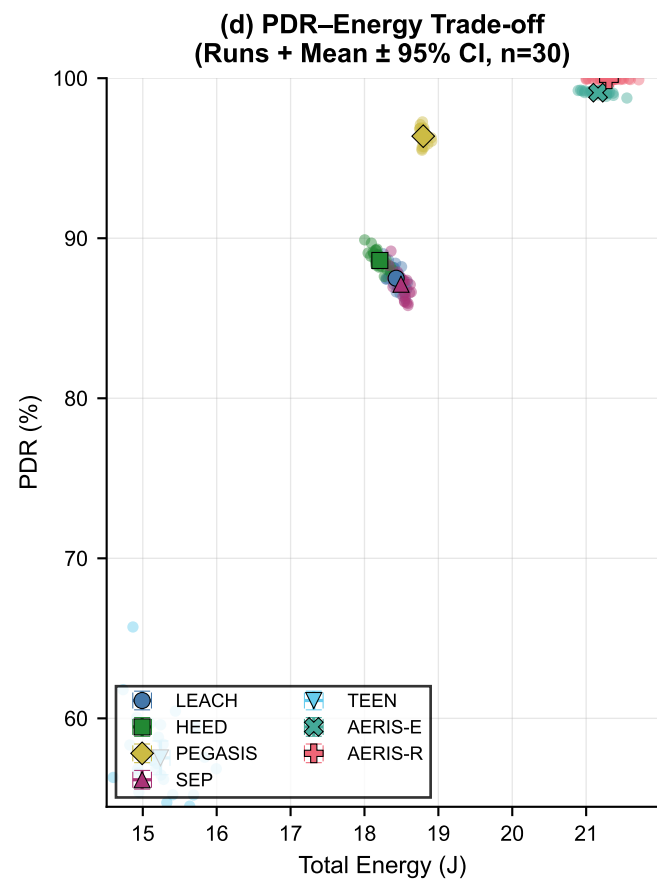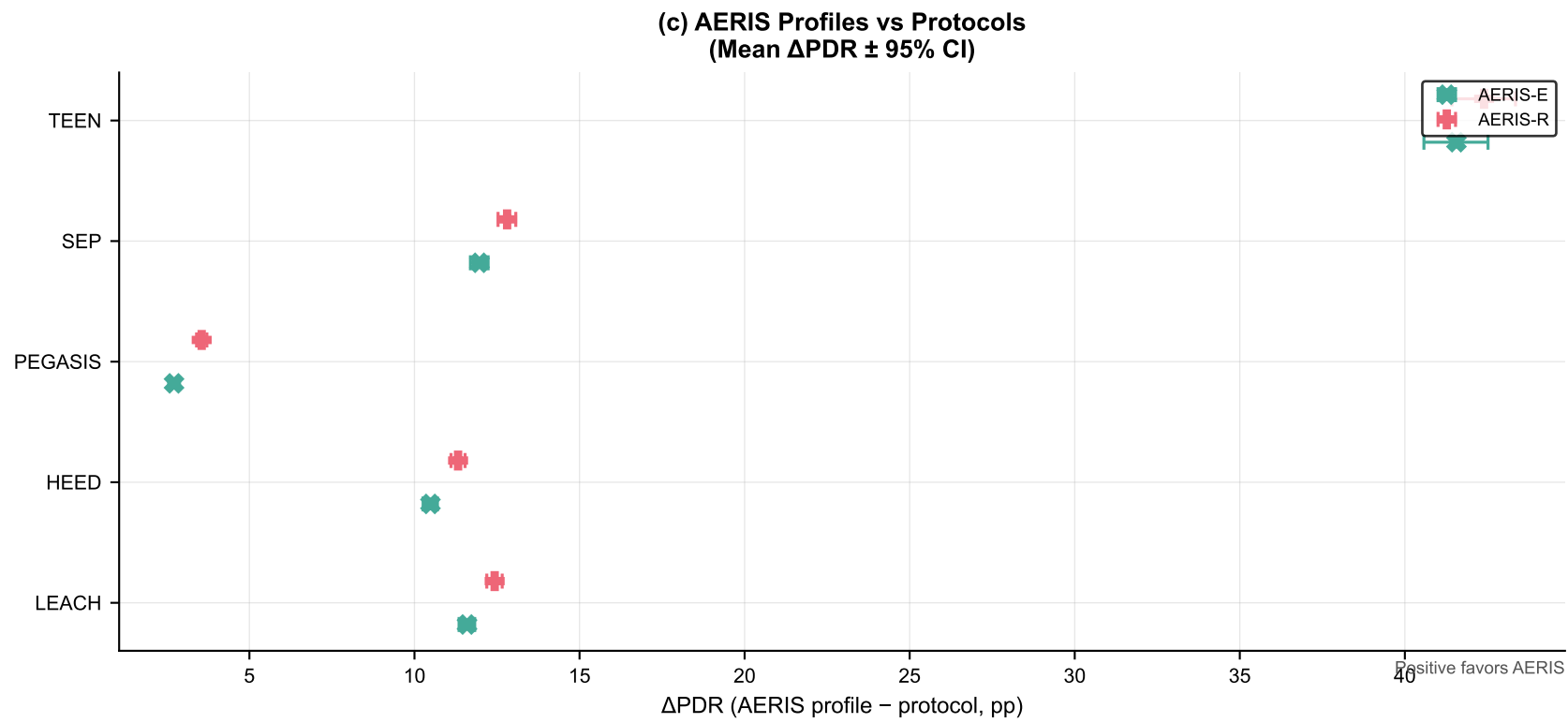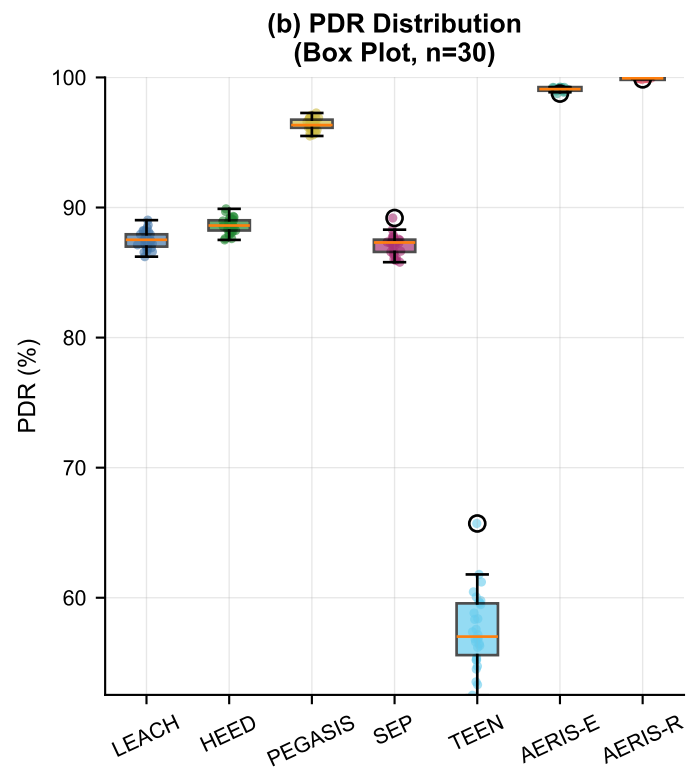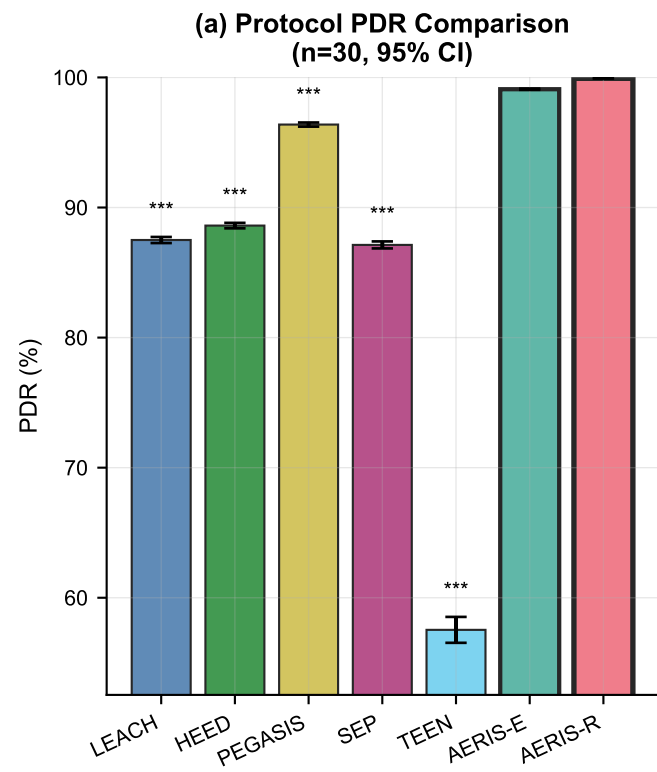**AERIS: SOTA Protocol Comparison with Rigorous Statistical Testing**
(Same geometry/energy model; AERIS profiles include full reliability stack, n=30 runs each)

(a) Protocol PDR Comparison
(n=30, 95% CI)

(b) PDR Distribution
(Box Plot, n=30)

(c) AERIS Profiles vs Protocols
(Mean ΔPDR ± 95% CI)

(d) PDR–Energy Trade-off
(Runs + Mean ± 95% CI, n=30)

(e) Energy Consumption
(Mean ± SD)

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

Protocol	ΔPDR-E (pp)	p_E	ΔPDR-R (pp)	p_R
LEACH	+11.59	3.0e-11	+12.43	1.0e-38
HEED	+10.48	3.0e-11	+11.32	6.2e-39
PEGASIS	+2.72	3.0e-11	+3.55	5.6e-28
SEP	+11.97	3.0e-11	+12.81	2.5e-37
TEEN	+41.56	3.0e-11	+42.40	6.9e-36