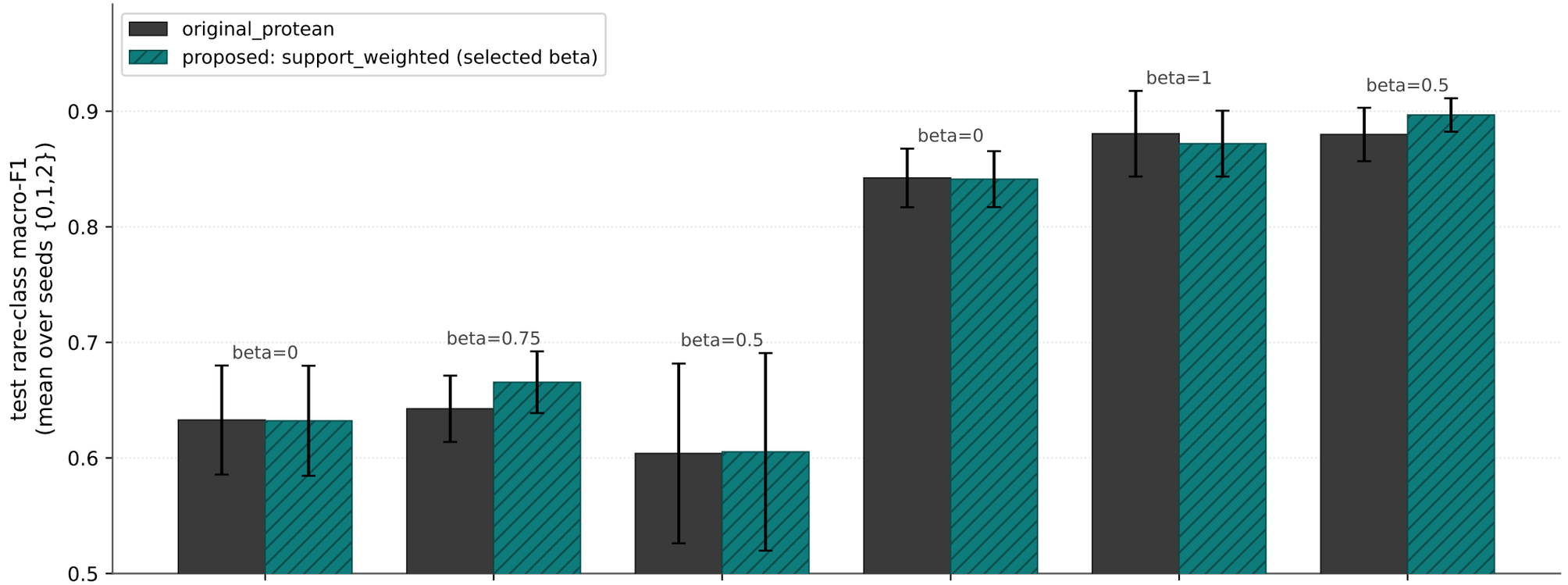
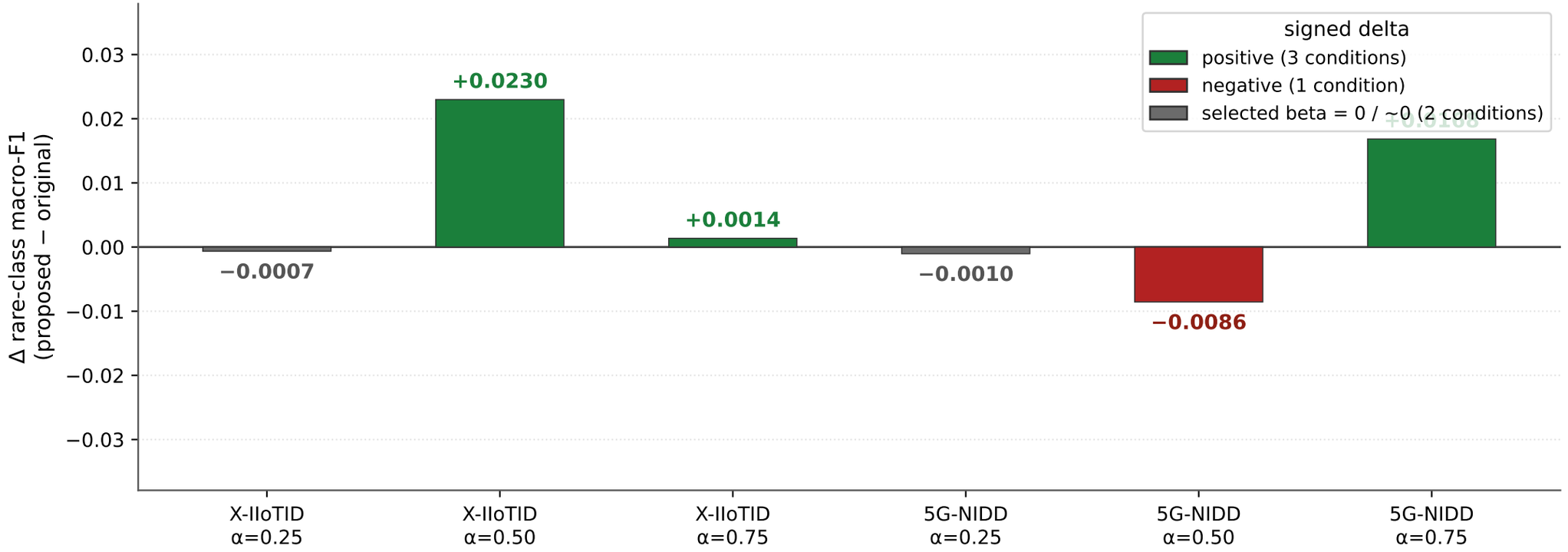
Original PROTEAN vs proposed selected-beta: test rare-class macro-F1

A. Absolute test rare-class macro-F1



B. Signed difference (proposed − original)



Panel A: bar height = mean test rare-class macro-F1 over seeds {0,1,2}; error bars = ±1 sample std across seeds (the levels are close by design, so panel B is the informative view).
Panel B: delta = proposed − original; the exact value is printed at each bar. Green = positive (X-IIoTID a0.50, X-IIoTID a0.75, 5G-NIDD a0.75); red = negative (5G-NIDD a0.50); grey = selected beta 0 (both a0.25, floating-point ~0).
No statistical significance test is applied (3 seeds). A positive mean delta does not establish significance; the proposed weighting does NOT consistently outperform original PROTEAN.