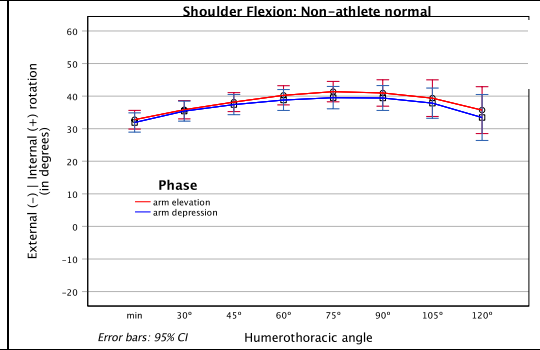
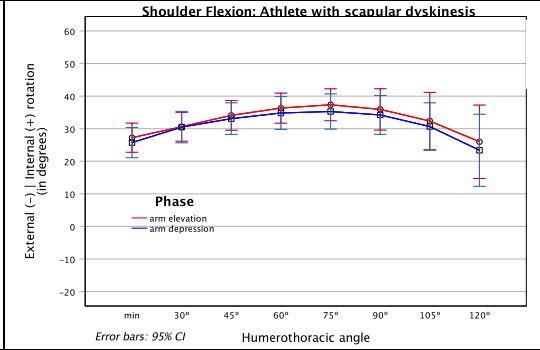
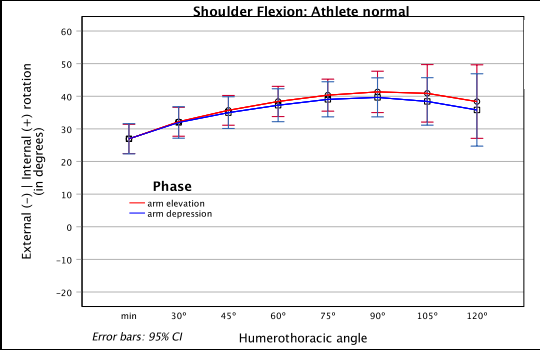
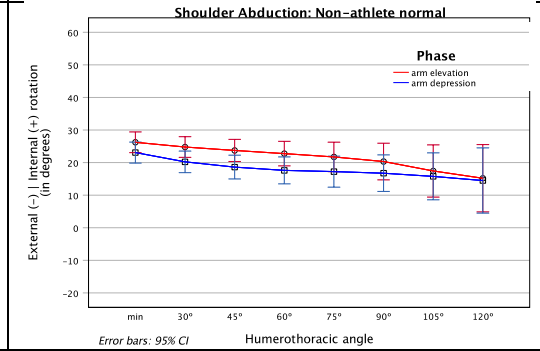
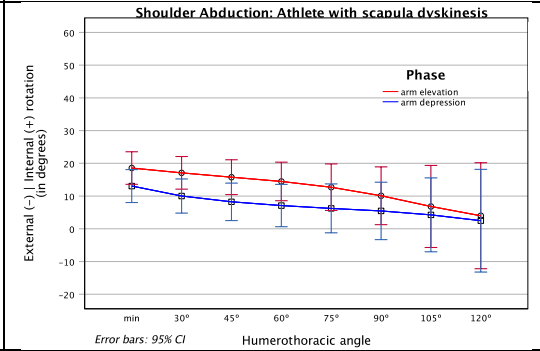
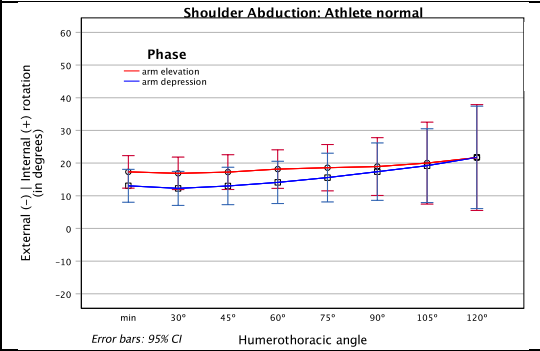
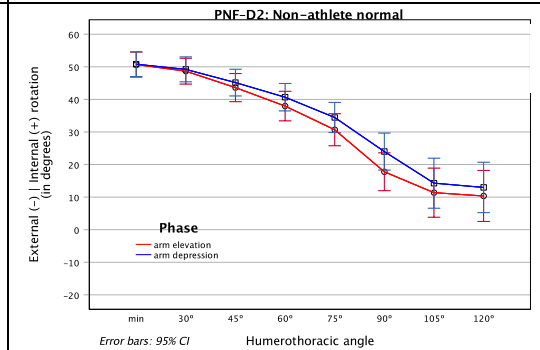
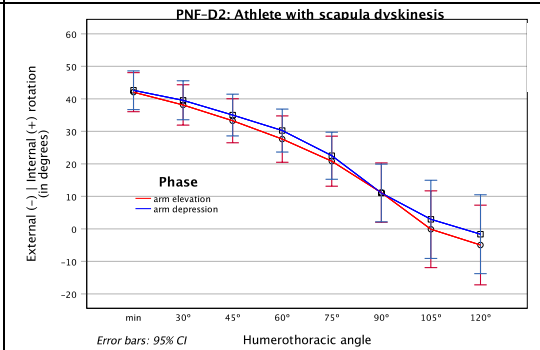
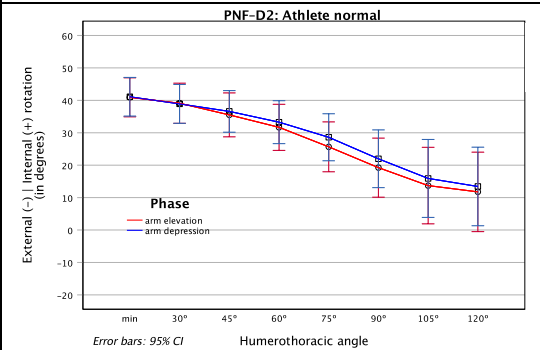


SY



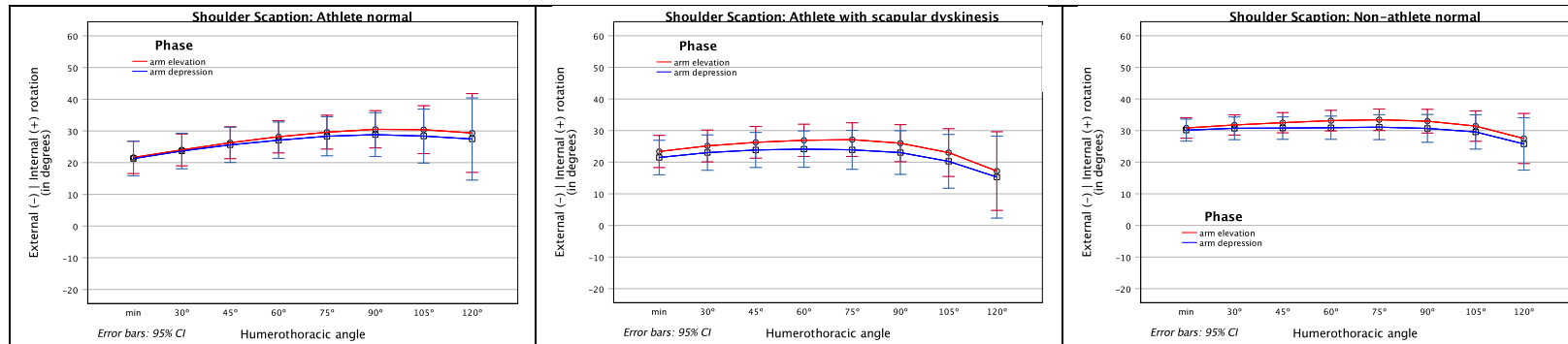
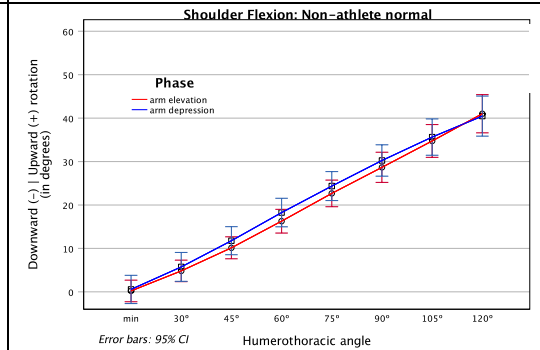
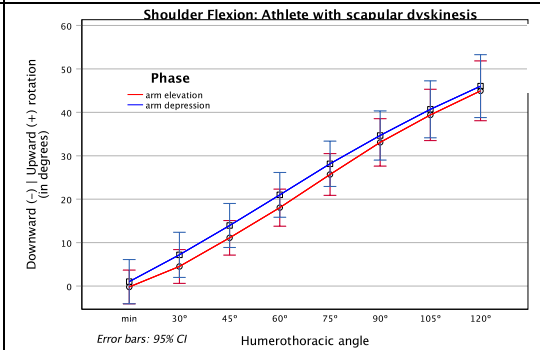
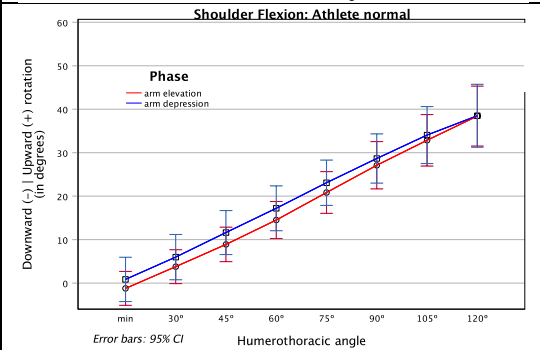
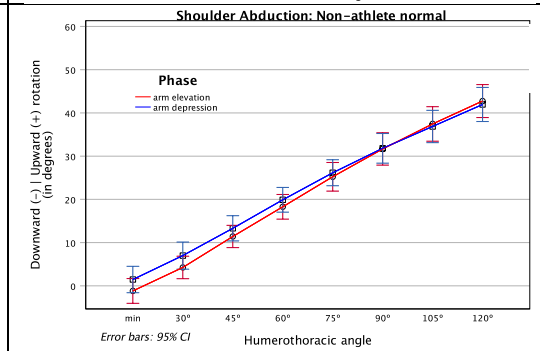
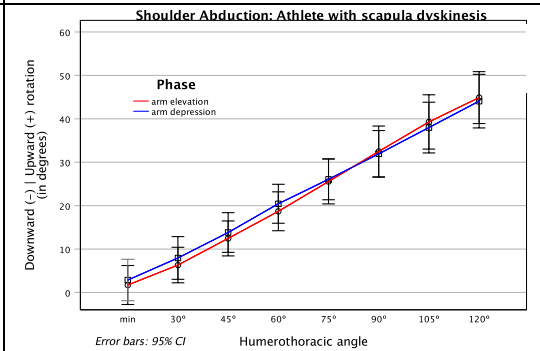
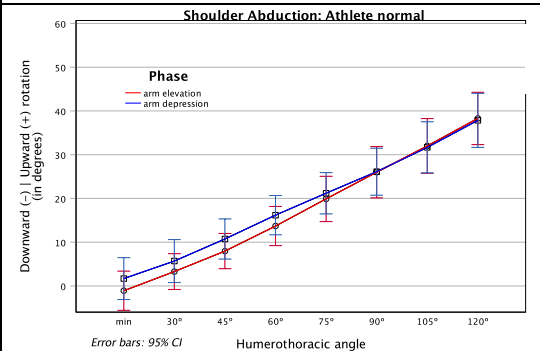
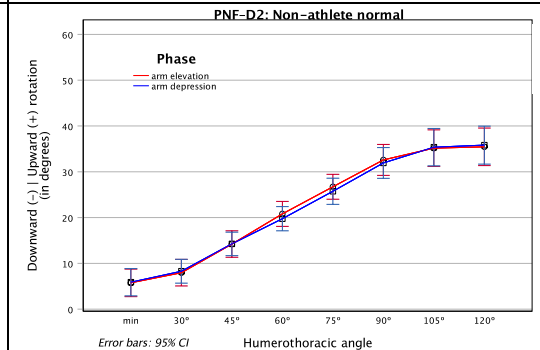
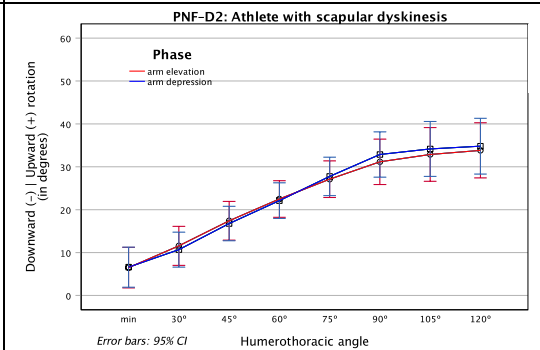
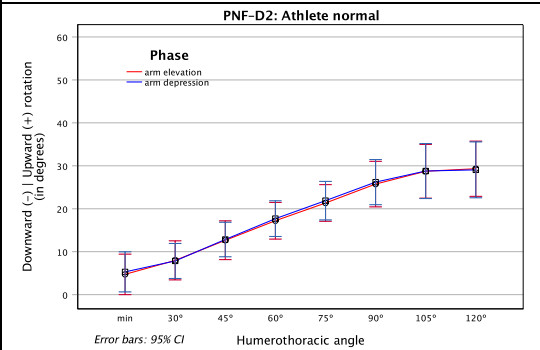


Figure S1. Scapular external (negative)/internal (positive) rotation throughout humerothoracic arm elevation and depression on each study group during: (1st row) Diagonal 2 of proprioceptive neuromuscular facilitation (PNF-D2), (2nd row) Shoulder abduction, (3rd row), Shoulder flexion, and (4th row) Shoulder scaption. A main effect of phase ($F_{1,46} = 33.552, p < .001, \eta^2 = .422$) and an interaction effect of phase \times HT angle \times task ($F_{5.9,272.5} = 4.391, p < .001, \eta^2 = .187$) were found for scapular internal/external rotation. Post-hoc comparisons revealed statistical differences between ascending (arm elevation, red line) and descending (arm depression, blue line) phases in PNF-D2 (mean difference [95%CI] = -2.0° [$-2.9^\circ - -1.0^\circ$], $p < .001$), shoulder abduction (mean difference [95%CI] = 3.9° [$3.1^\circ - 4.7^\circ$], $p < .001$), shoulder flexion (mean difference [95%CI] = 1.4° [$0.5^\circ - 2.2^\circ$], $p = .002$), and shoulder scaption (mean difference [95%CI] = 1.8° [$0.9^\circ - 2.7^\circ$], $p < .001$). In PNF-D2, significant differences between phases were found at all HT angles ($p \leq .032$), except 45° ($p = .058$). In shoulder abduction, significant differences were observed at all HT angles ($p \leq .029$), except 120° ($p = .240$). In shoulder flexion, differences were significant ($p \leq .031$) at $60^\circ, 75^\circ, 90^\circ$ and 120° HT angles. In shoulder scaption, differences were significant ($p \leq .004$), at all HT angles.

SX



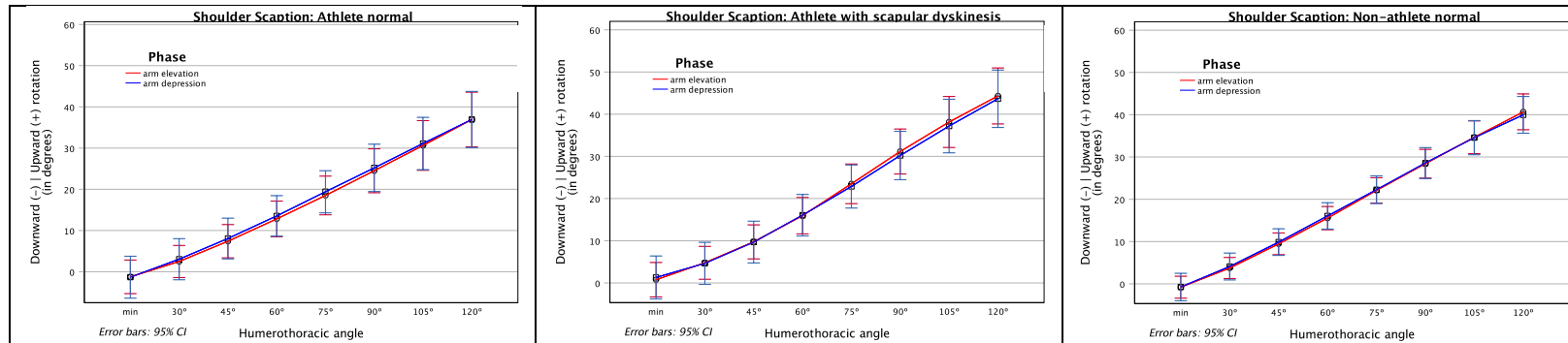
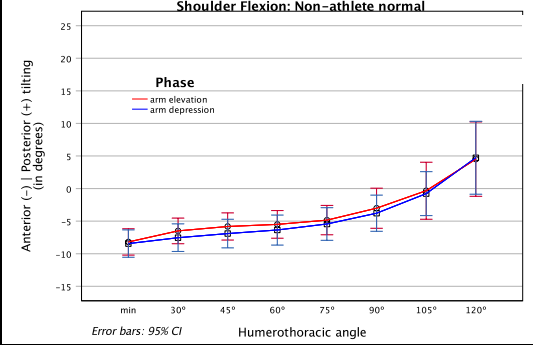
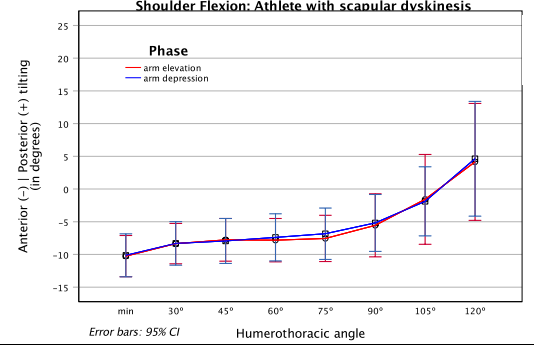
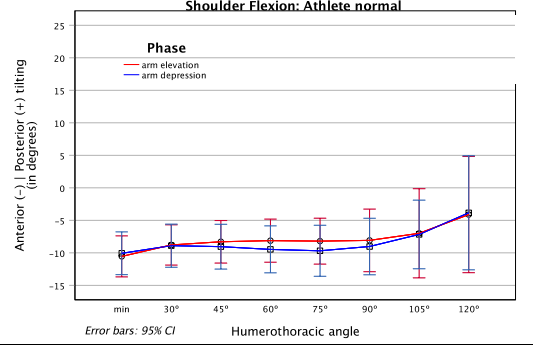
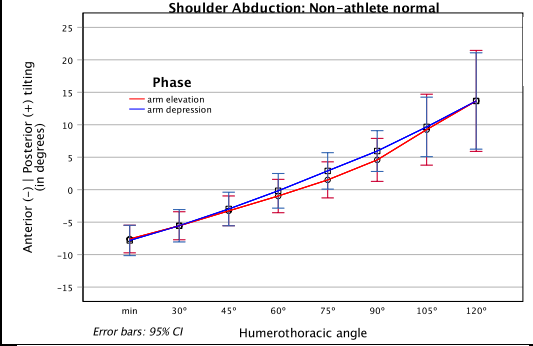
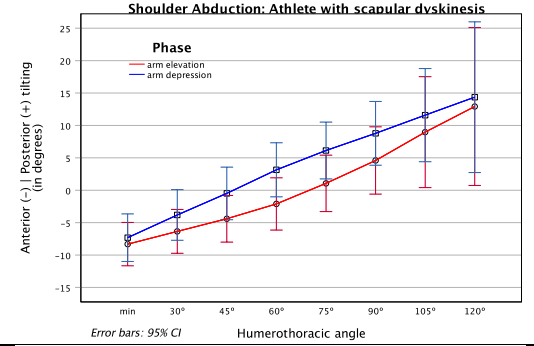
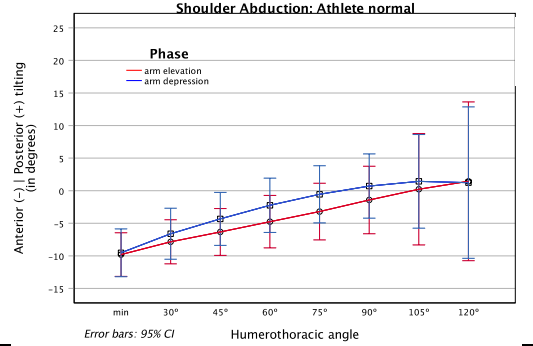
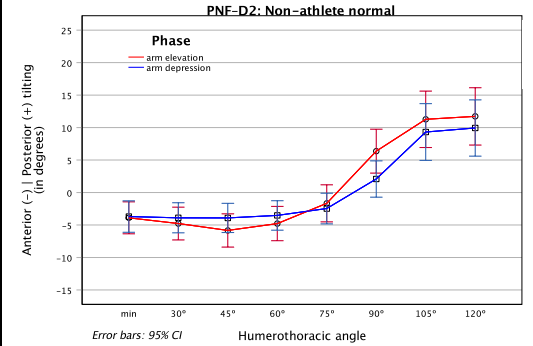
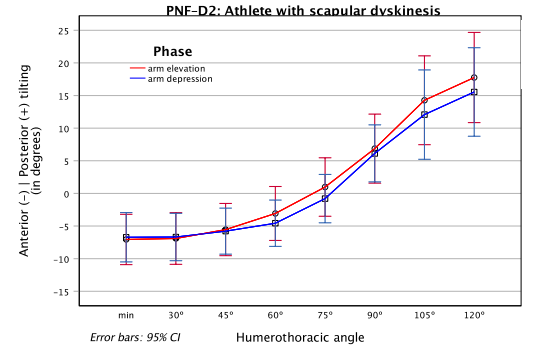
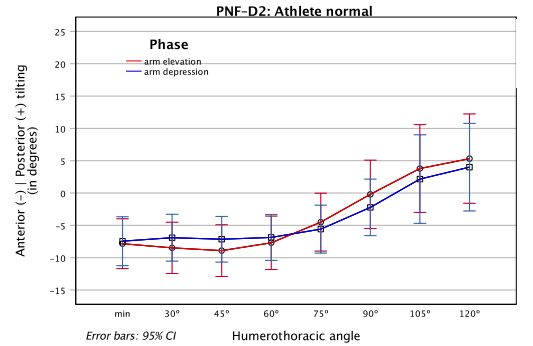


Figure S2. Scapular downward (negative)/upward (positive) rotation throughout humerothoracic arm elevation and depression on each study group during: (1st row) Diagonal 2 of proprioceptive neuromuscular facilitation (PNF-D2), (2nd row) Shoulder abduction, (3rd row), Shoulder flexion, and (4th row) Shoulder scaption. A main effect of phase ($F_{1,46} = 8.913$, $p = .005$, $\eta_p^2 = .162$) and an interaction effect of phase \times HT angle \times task, ($F_{6.5,299.0} = 4.391$, $p < .001$, $\eta_p^2 = .087$) were found. Post-hoc comparisons revealed statistical differences between ascending (arm elevation, red line) and descending (arm depression, blue line) phases only in shoulder abduction (mean difference [95%CI] = -1.0° [$-1.6^\circ - -0.3^\circ$], $p = .003$) and shoulder flexion (mean difference [95%CI] = -1.6° [$-2.7^\circ - -0.6^\circ$], $p = .003$). For PNF-D2, significant differences between phases were just observed at 30° of HT angle ($p = .029$). Significant differences were seen at all HT angles ($p \leq .035$), except 90° ($p = .793$), in shoulder abduction. In shoulder flexion, differences were significant at all HT angles ($p \leq .031$), but 105° ($p = .077$) and 120° ($p = .733$); and no differences were observed in shoulder scaption ($.285 \leq p \leq .942$).

SZ



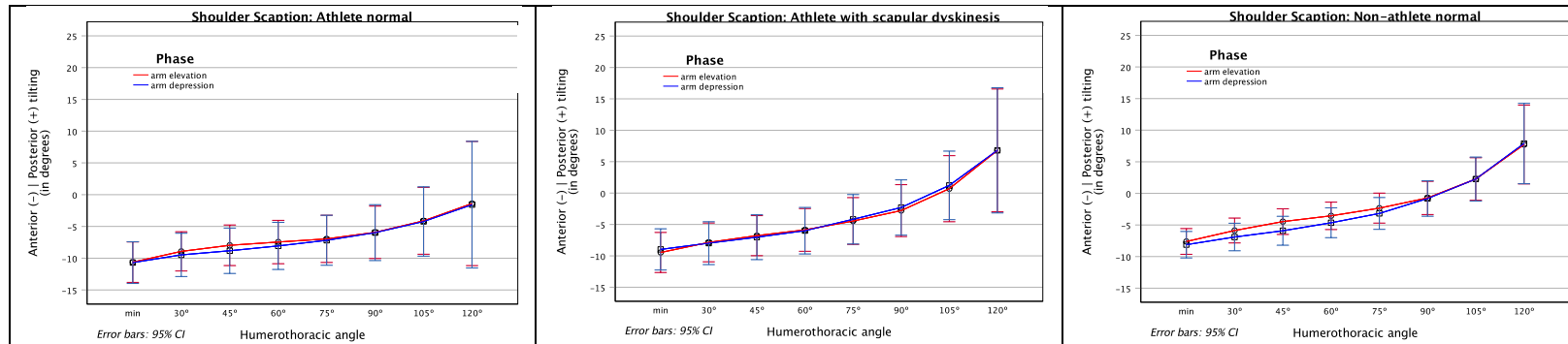


Figure S3. Scapular anterior (negative)/posterior (positive) tilting throughout humerothoracic arm elevation and depression on each study group during: (1st row) Diagonal 2 of proprioceptive neuromuscular facilitation (PNF-D2), (2nd row) Shoulder abduction, (3rd row), Shoulder flexion, and (4th row) Shoulder scaption. An interaction effect of phase \times HT angle \times task ($F_{5,8,266,8} = 8.437$, $p < .001$, $\eta_p^2 = .155$) was found. Post-hoc comparisons revealed statistical differences between ascending (arm elevation, red line) and descending (arm depression, blue line) phases in PNF-D2 at all HT angles ($p \leq .035$), but 60° ($p = .674$), and significant differences at all HT angles in shoulder abduction ($p \leq .032$), except minimum ($p = .321$) and 120° ($p = .417$). No differences were found in shoulder flexion ($.065 \leq p \leq .726$) and shoulder scaption ($.057 \leq p \leq .995$).