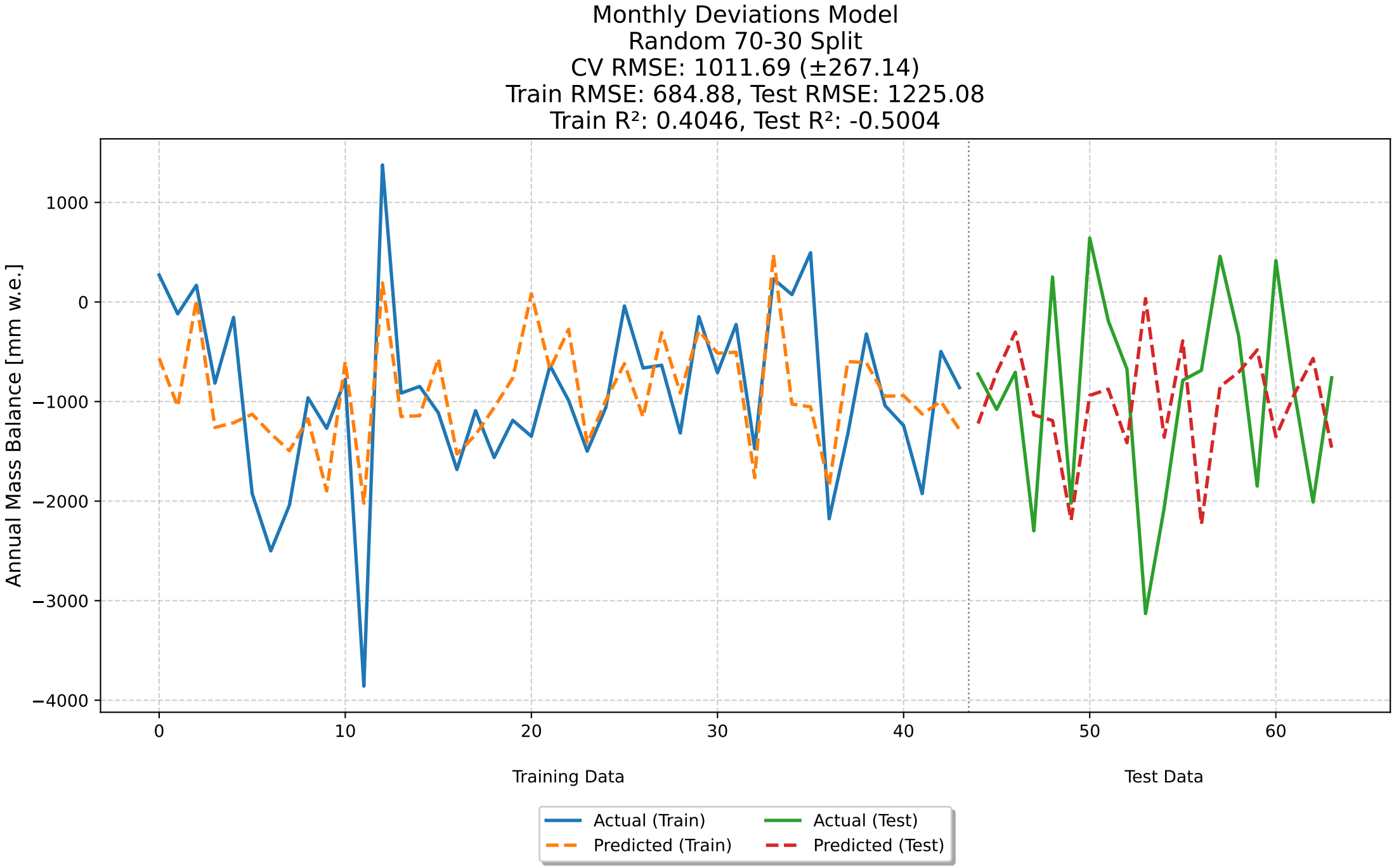
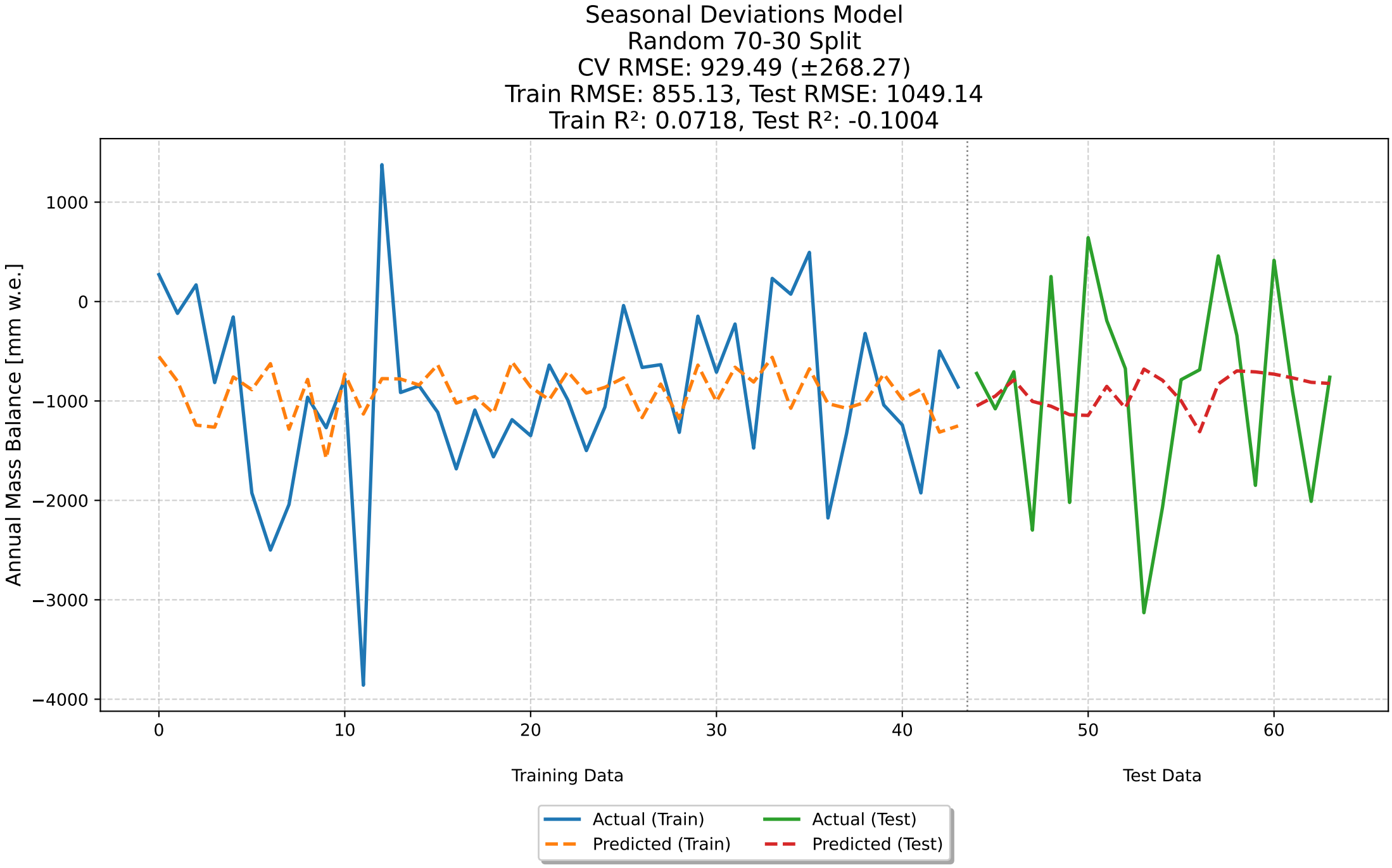
Glacier Mass Balance Model Results: Griesgletscher


Monthly Deviations Model
Random 70-30 Split
CV RMSE: 1011.69 (±267.14)
Train RMSE: 684.88, Test RMSE: 1225.08
Train R²: 0.4046, Test R²: -0.5004
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
−4000
0
10
20
30
40
50
60
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

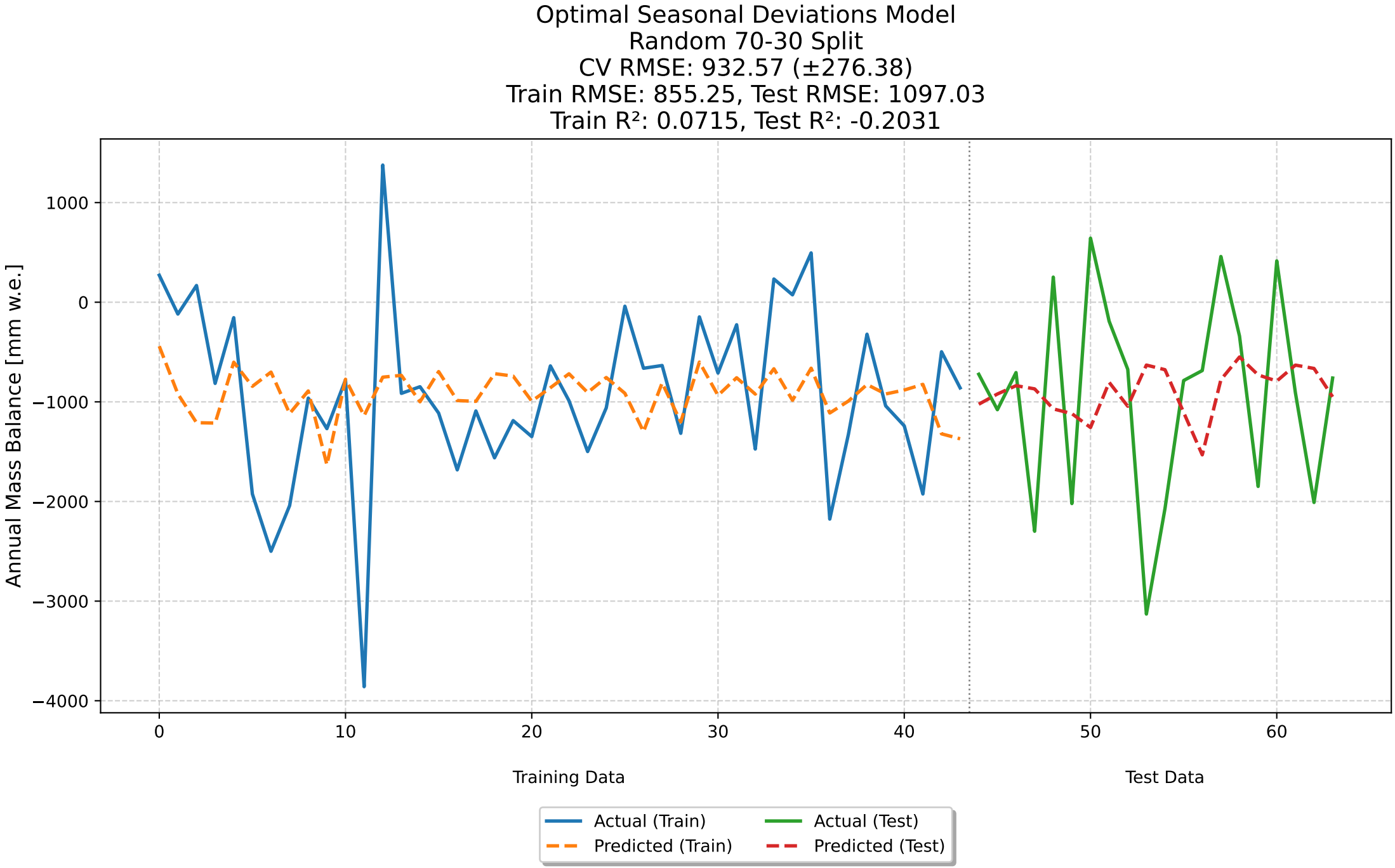
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	1011.69 (±267.14)
Training RMSE	684.88
Training R^2	0.4046
Test RMSE	1225.08
Test R^2	-0.5004
Feature	Coefficient
may_td	-8.3307
june_td	282.3149
july_td	-213.0575
august_td	156.0857
september_td	-263.6414
october_pd	-66.2401
november_pd	-243.2429
december_pd	126.7882
january_pd	-354.1329
february_pd	-193.2462
march_pd	-119.9319
april_pd	87.6910
Intercept	-916.8409


Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 929.49 (±268.27)
Train RMSE: 855.13, Test RMSE: 1049.14
Train R²: 0.0718, Test R²: -0.1004
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
−4000
0
10
20
30
40
50
60
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

Seasonal Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	929.49 (±268.27)
Training RMSE	855.13
Training R^2	0.0718
Test RMSE	1049.14
Test R^2	-0.1004
Feature	Coefficient
summer_temp_dev	-94.5540
winter_precip_dev	-219.6563
Intercept	-916.8409


Optimal Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 932.57 (±276.38)
Train RMSE: 855.25, Test RMSE: 1097.03
Train R²: 0.0715, Test R²: -0.2031
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
−4000
0
10
20
30
40
50
60
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

Optimal Seasonal Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	932.57 (±276.38)
Training RMSE	855.25
Training R^2	0.0715
Test RMSE	1097.03
Test R^2	-0.2031
Feature	Coefficient
optimal_summer_temp_dev	-12.2648
optimal_winter_precip_dev	-233.0862
Intercept	-916.8409