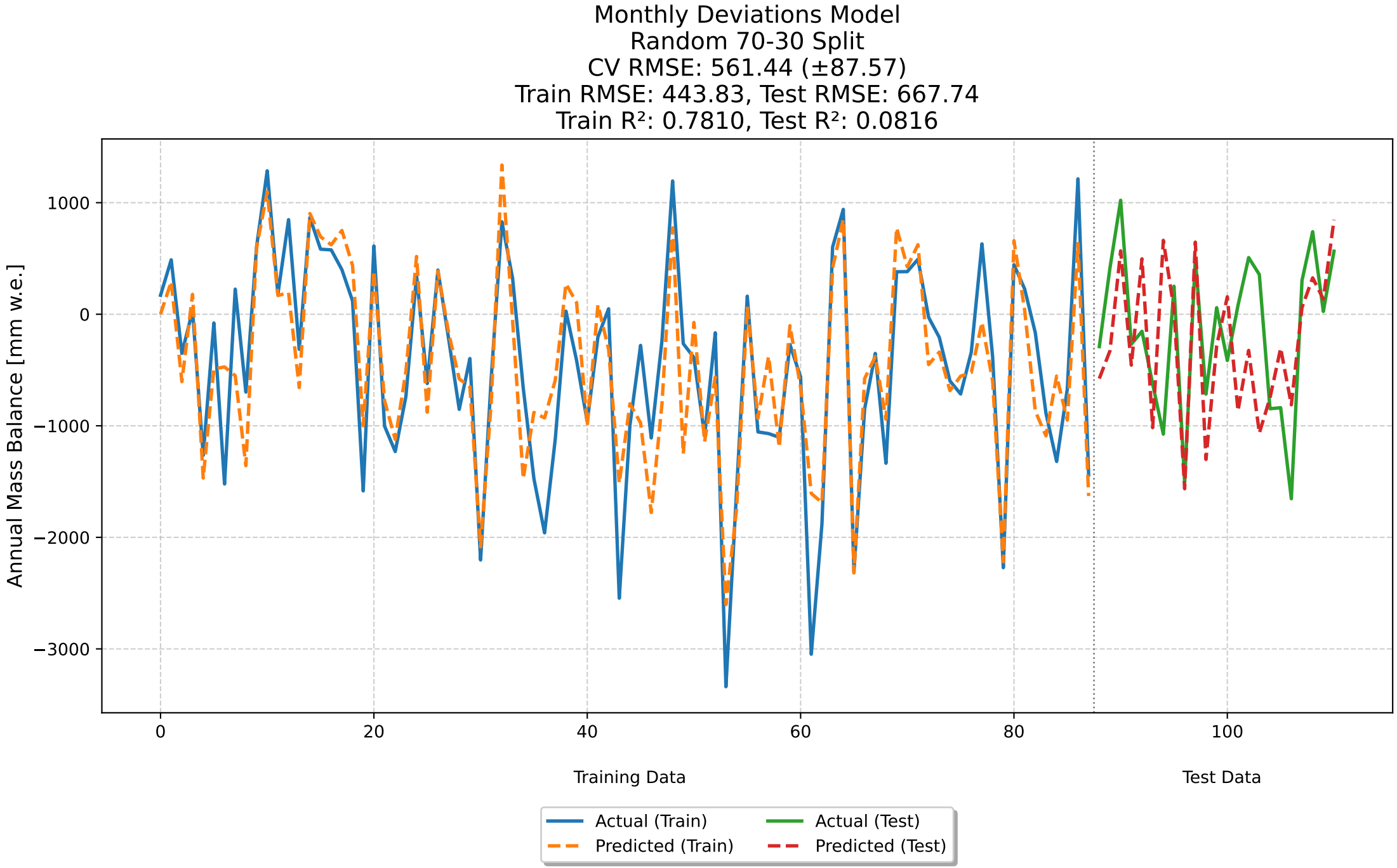
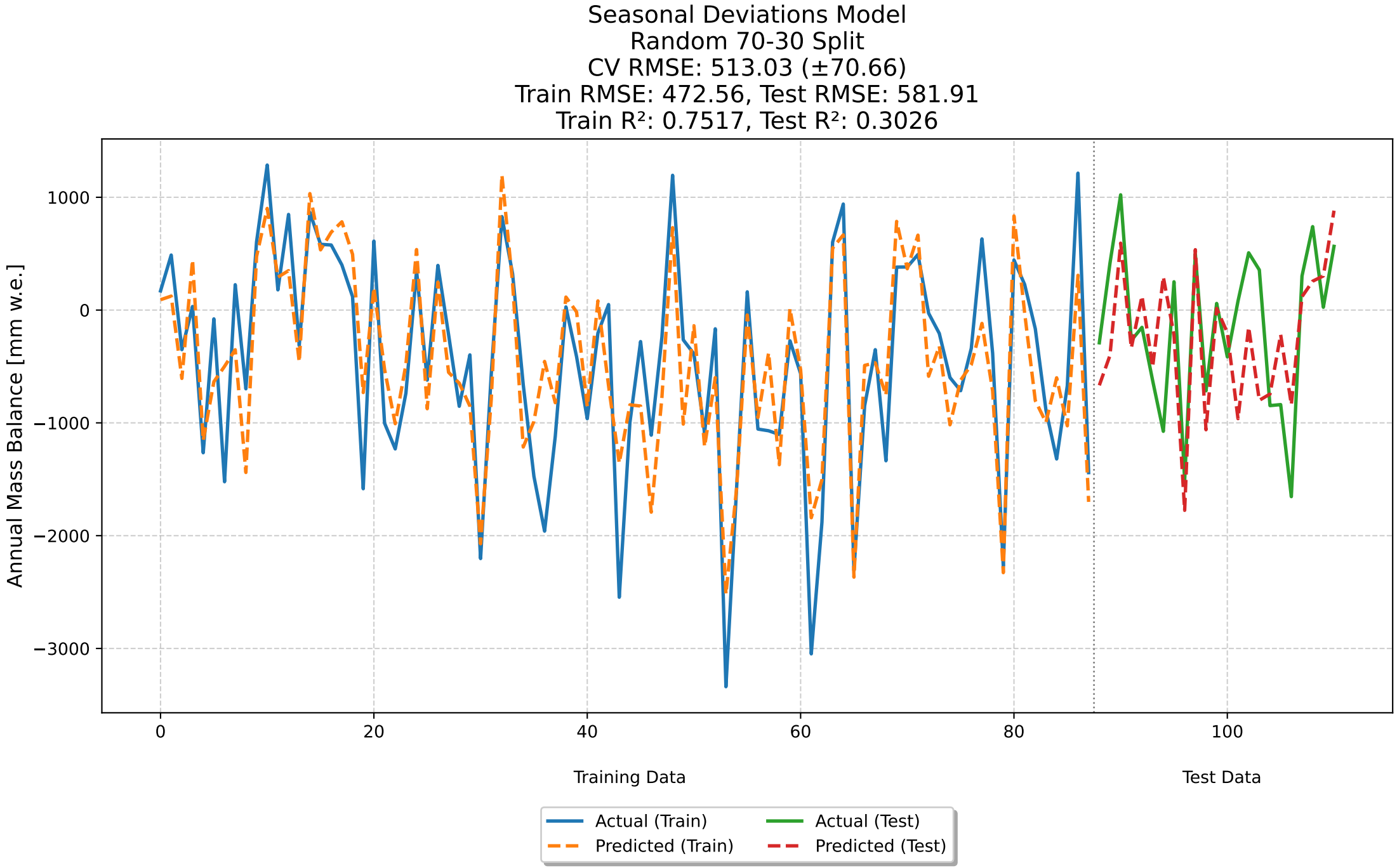
Glacier Mass Balance Model Results: Silvrettagletscher


Monthly Deviations Model
Random 70-30 Split
CV RMSE: 561.44 (±87.57)
Train RMSE: 443.83, Test RMSE: 667.74
Train R²: 0.7810, Test R²: 0.0816
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
0
20
40
60
80
100
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

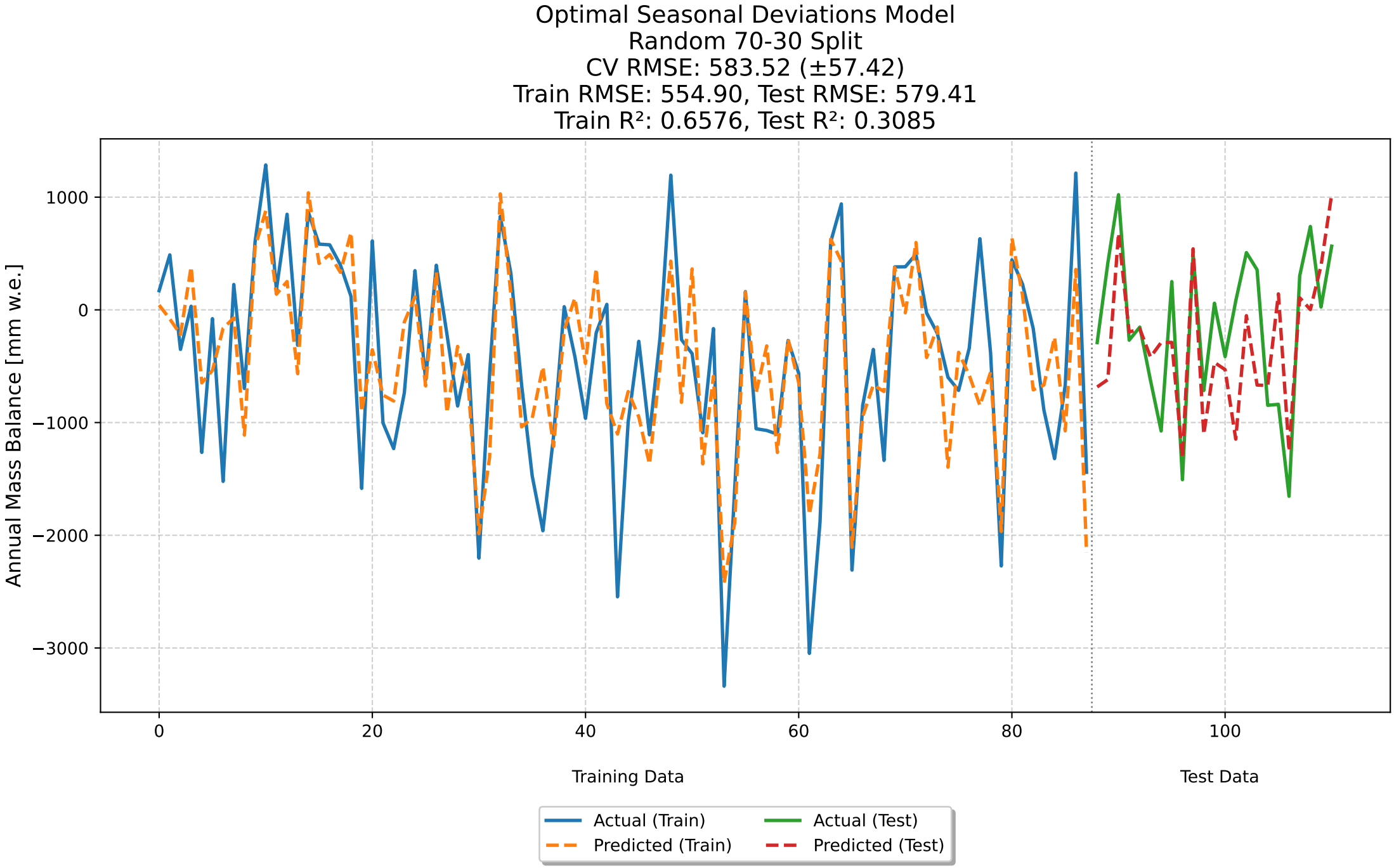
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	561.44 (±87.57)
Training RMSE	443.83
Training R^2	0.7810
Test RMSE	667.74
Test R^2	0.0816
Feature	Coefficient
may_td	-115.4126
june_td	-204.0137
july_td	-289.2876
august_td	-273.5714
september_td	-195.7248
october_pd	172.4287
november_pd	161.8316
december_pd	181.2628
january_pd	126.0745
february_pd	174.4954
march_pd	219.2764
april_pd	35.9568
Intercept	-450.7727


Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 513.03 (±70.66)
Train RMSE: 472.56, Test RMSE: 581.91
Train R²: 0.7517, Test R²: 0.3026
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
0
20
40
60
80
100
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

Seasonal Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	513.03 (±70.66)
Training RMSE	472.56
Training R^2	0.7517
Test RMSE	581.91
Test R^2	0.3026
Feature	Coefficient
summer_temp_dev	-720.1762
winter_precip_dev	379.7558
Intercept	-450.7727


Optimal Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 583.52 (±57.42)
Train RMSE: 554.90, Test RMSE: 579.41
Train R²: 0.6576, Test R²: 0.3085
Annual Mass Balance [mm w.e.]
1000
0
−1000
−2000
−3000
0
20
40
60
80
100
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	583.52 (±57.42)
Training RMSE	554.90
Training R^2	0.6576
Test RMSE	579.41
Test R^2	0.3085
Feature	Coefficient
optimal_summer_temp_dev	-684.6862
optimal_winter_precip_dev	328.7698
Intercept	-450.7727