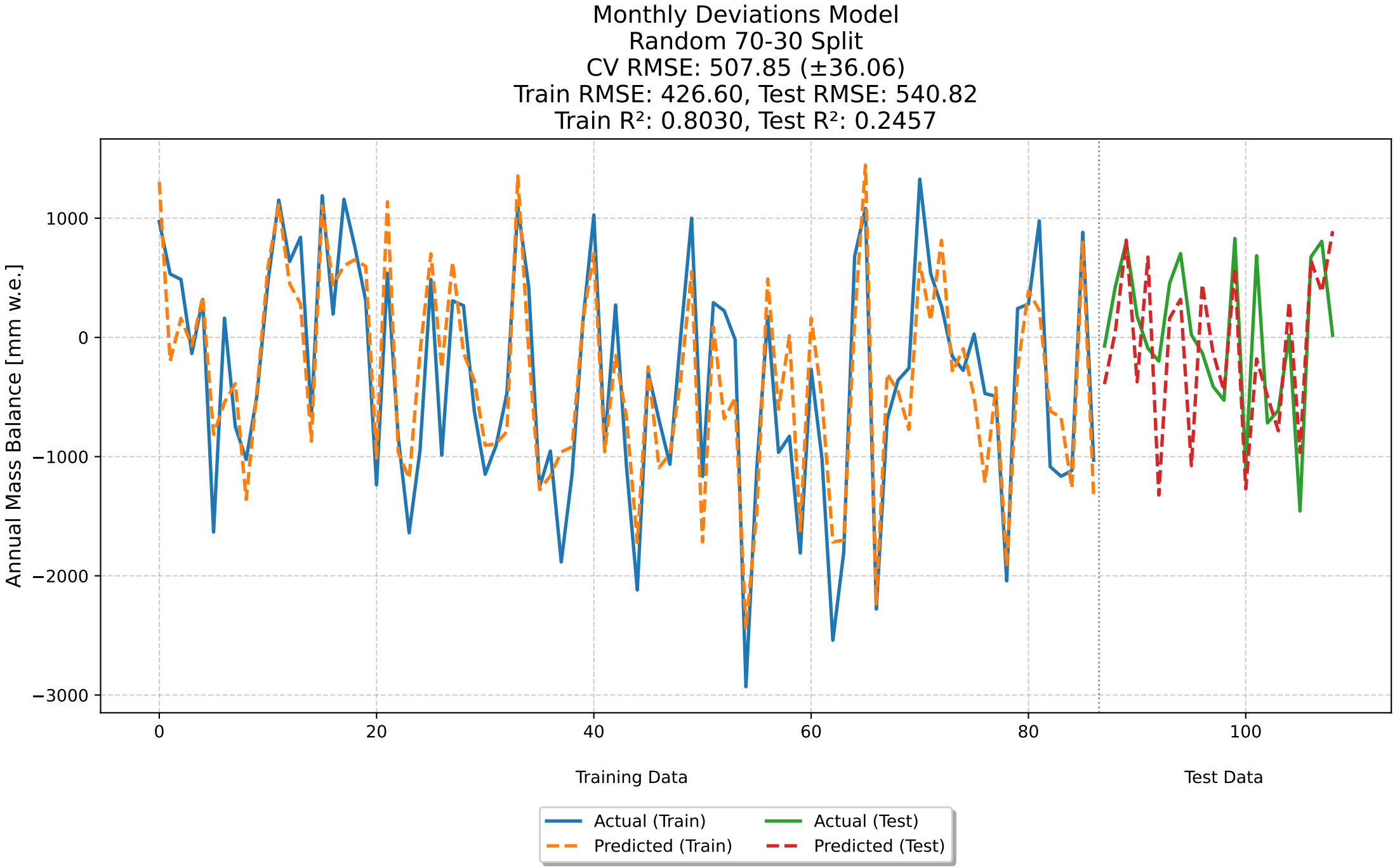
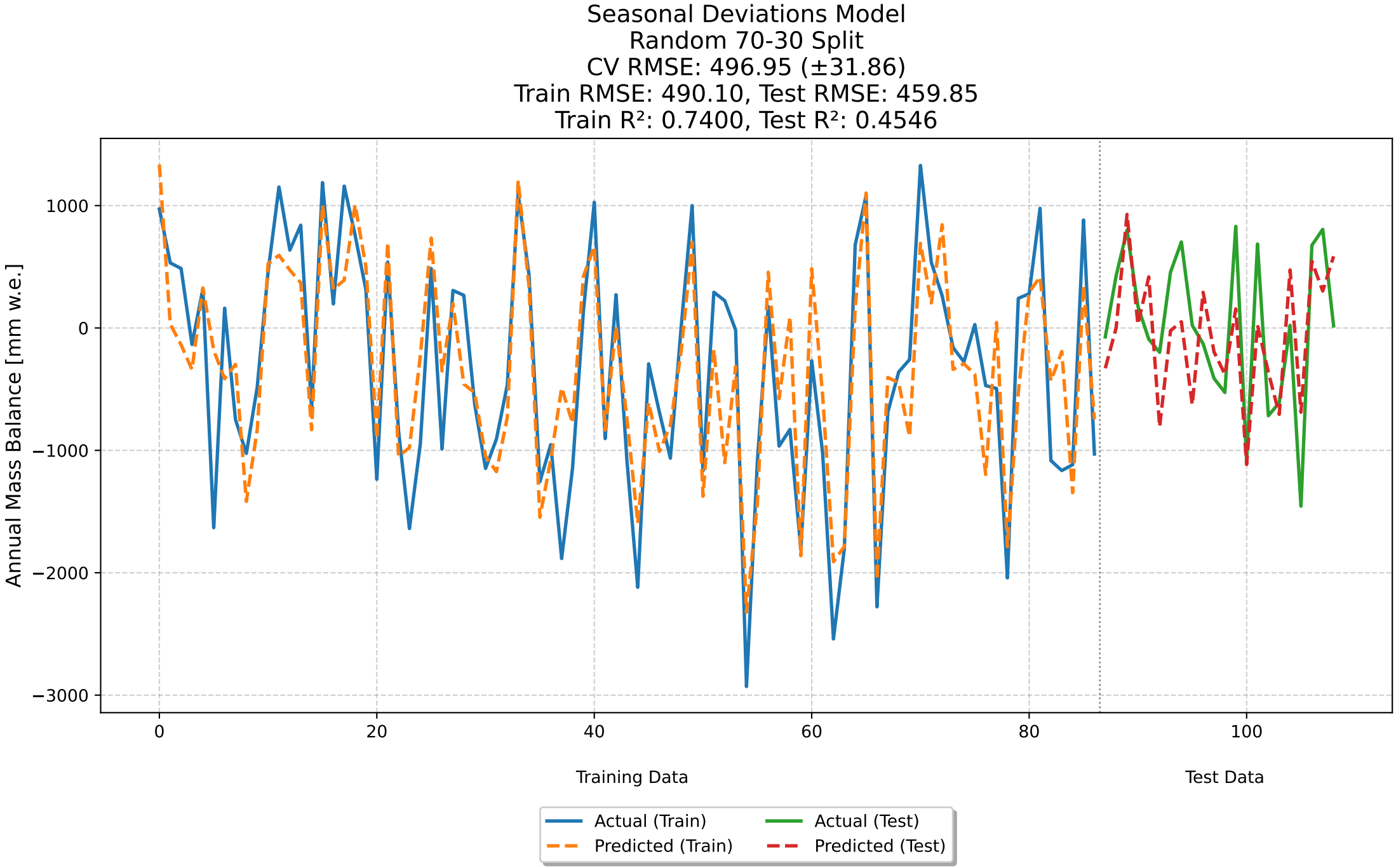
Glacier Mass Balance Model Results: Claridenfirn


Monthly Deviations Model
Random 70-30 Split
CV RMSE: 507.85 (±36.06)
Train RMSE: 426.60, Test RMSE: 540.82
Train R²: 0.8030, Test R²: 0.2457
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)

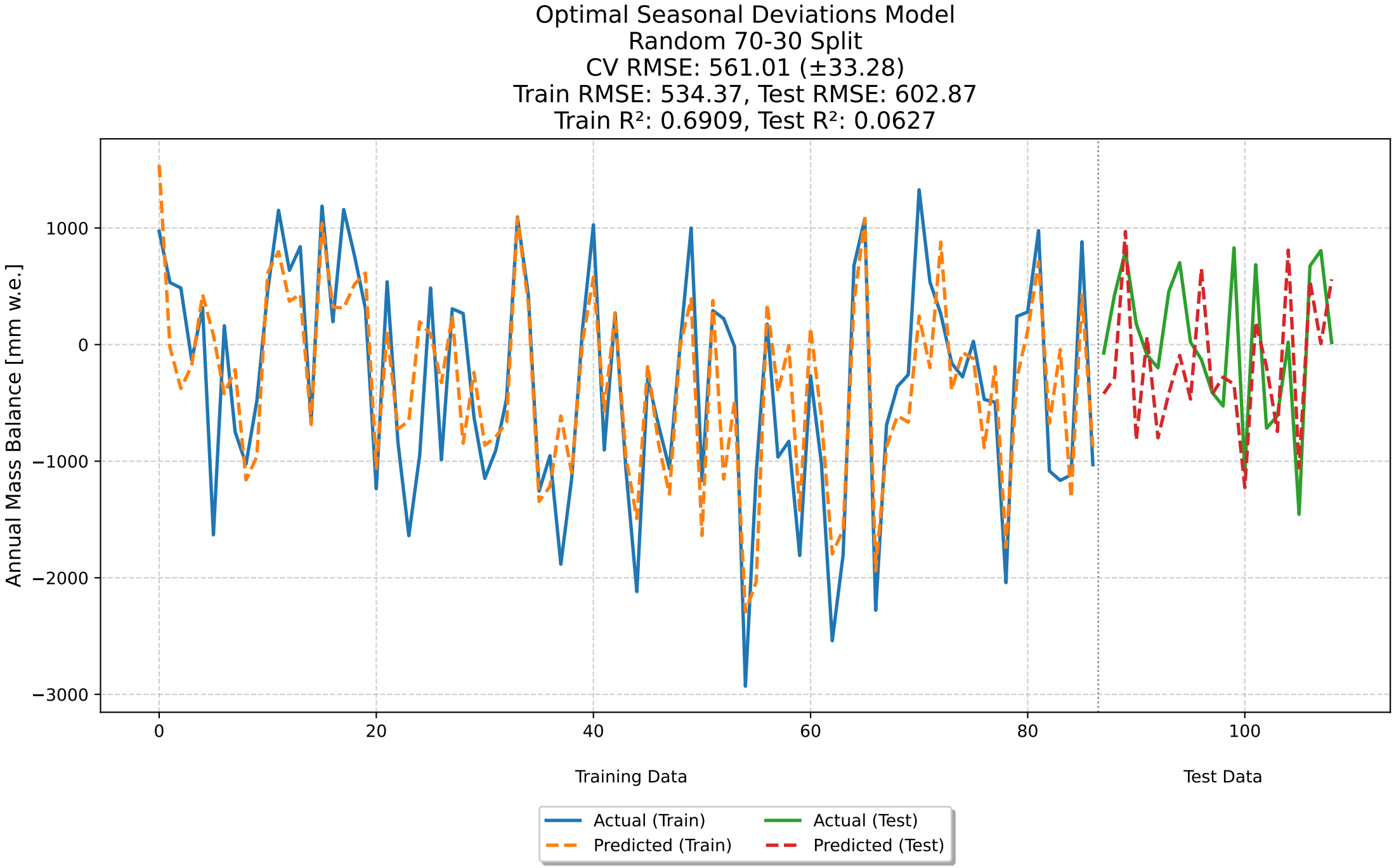
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	507.85 (±36.06)
Training RMSE	426.60
Training R^2	0.8030
Test RMSE	540.82
Test R^2	0.2457
Feature	Coefficient
may_td	-130.4565
june_td	-161.1228
july_td	-328.9606
august_td	-330.6050
september_td	-142.4204
october_pd	144.9416
november_pd	158.7284
december_pd	110.0431
january_pd	150.1671
february_pd	209.3263
march_pd	156.7675
april_pd	-53.4673
Intercept	-333.3793


Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 496.95 (±31.86)
Train RMSE: 490.10, Test RMSE: 459.85
Train R²: 0.7400, Test R²: 0.4546
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	496.95 (±31.86)
Training RMSE	490.10
Training R^2	0.7400
Test RMSE	459.85
Test R^2	0.4546
Feature	Coefficient
summer_temp_dev	-723.0172
winter_precip_dev	320.5434
Intercept	-333.3793


Optimal Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 561.01 (±33.28)
Train RMSE: 534.37, Test RMSE: 602.87
Train R²: 0.6909, Test R²: 0.0627
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	561.01 (±33.28)
Training RMSE	534.37
Training R^2	0.6909
Test RMSE	602.87
Test R^2	0.0627
Feature	Coefficient
optimal_summer_temp_dev	-701.9585
optimal_winter_precip_dev	315.3445
Intercept	-333.3793