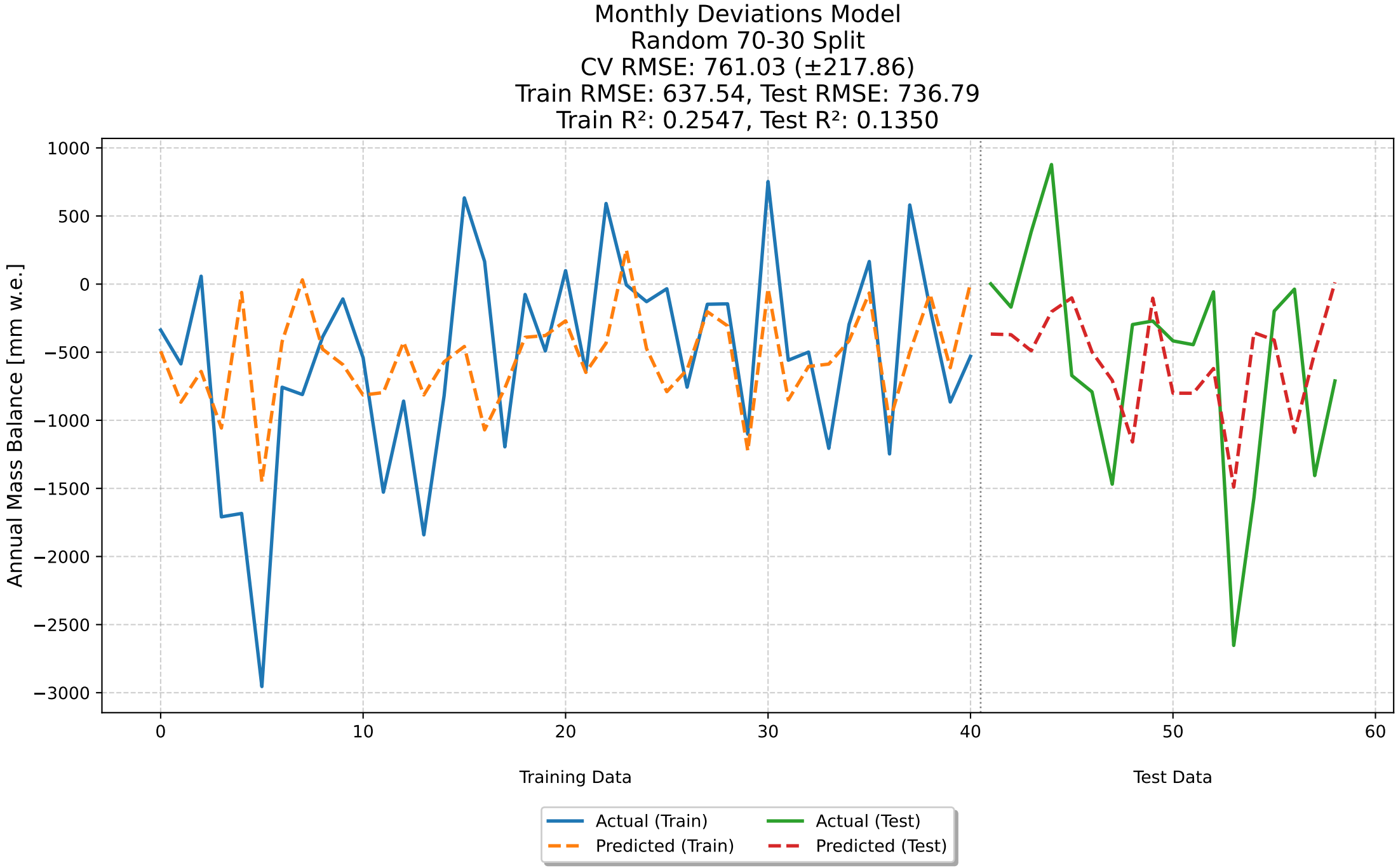
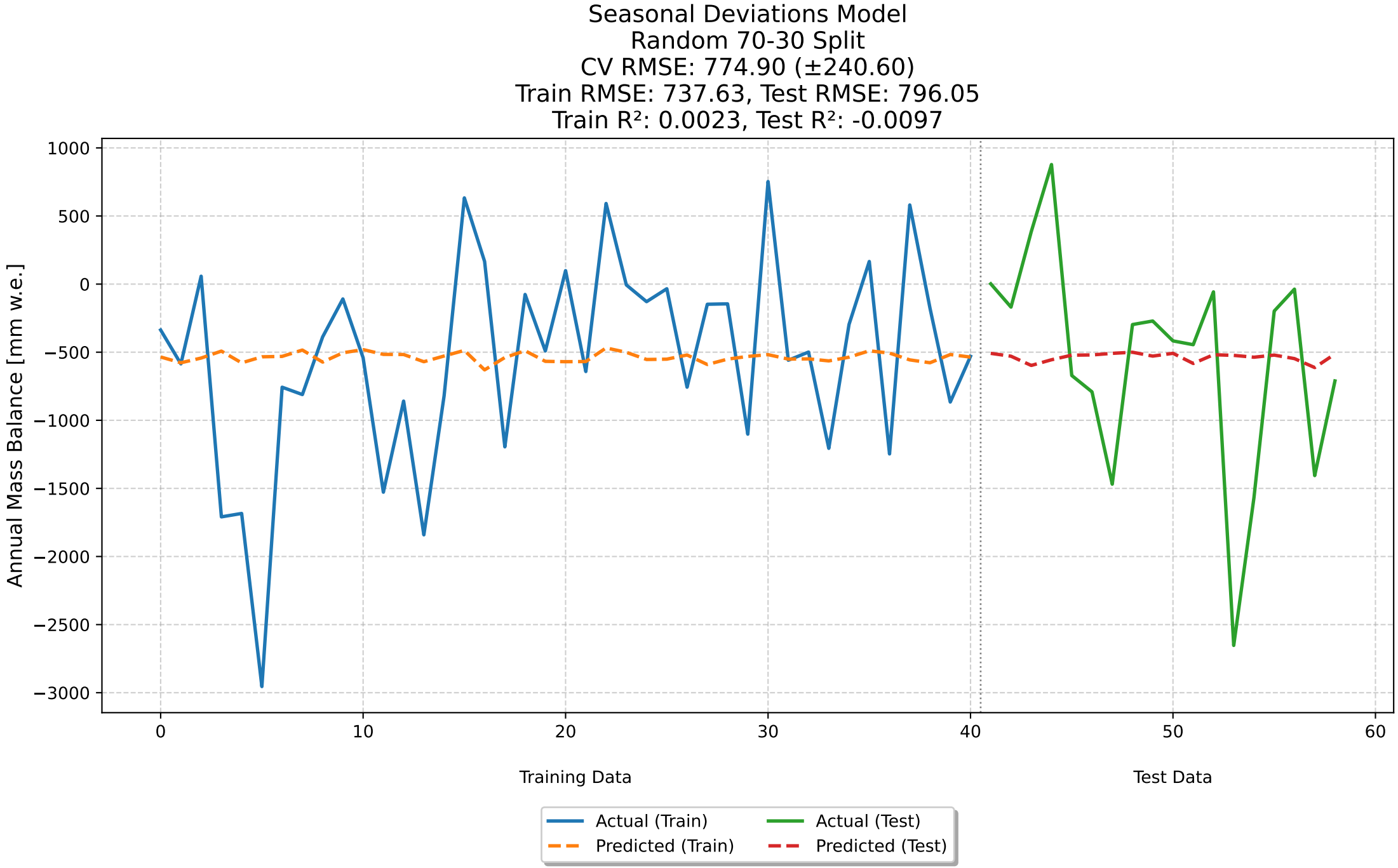
Glacier Mass Balance Model Results: Glacier du Giétro


Monthly Deviations Model
Random 70-30 Split
CV RMSE: 761.03 (±217.86)
Train RMSE: 637.54, Test RMSE: 736.79
Train R²: 0.2547, Test R²: 0.1350
Annual Mass Balance [mm w.e.]
1000
500
0
−500
−1000
−1500
−2000
−2500
−3000
0
10
20
30
40
50
60
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

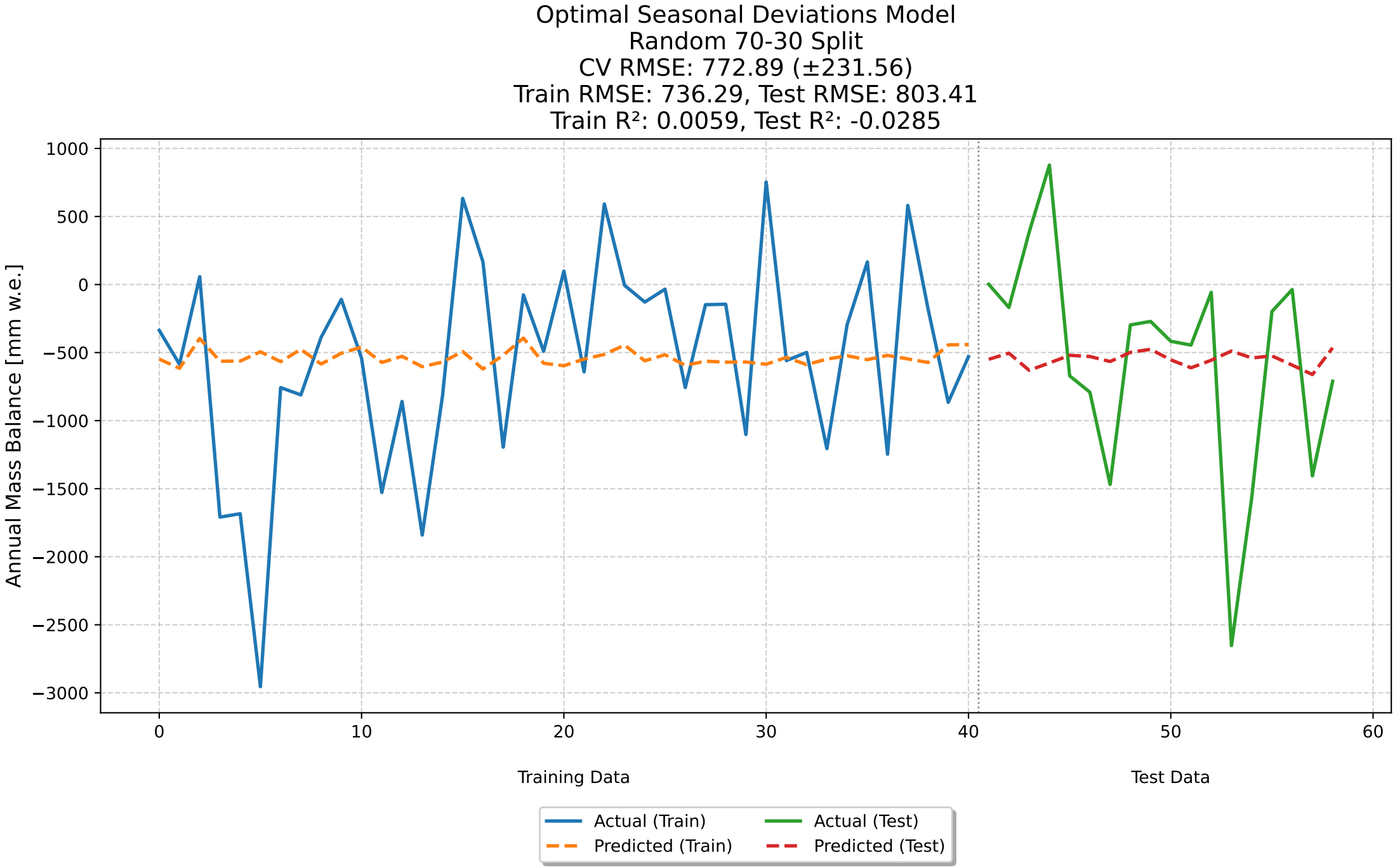
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	761.03 (±217.86)
Training RMSE	637.54
Training R^2	0.2547
Test RMSE	736.79
Test R^2	0.1350
Feature	Coefficient
may_td	42.3425
june_td	27.2908
july_td	13.9256
august_td	185.1182
september_td	-167.6723
october_pd	96.2619
november_pd	-158.0250
december_pd	245.0037
january_pd	19.8247
february_pd	-83.6530
march_pd	-264.1435
april_pd	111.1970
Intercept	-536.1707


Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 774.90 (±240.60)
Train RMSE: 737.63, Test RMSE: 796.05
Train R²: 0.0023, Test R²: -0.0097
Annual Mass Balance [mm w.e.]
1000
500
0
−500
−1000
−1500
−2000
−2500
−3000
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	774.90 (±240.60)
Training RMSE	737.63
Training R^2	0.0023
Test RMSE	796.05
Test R^2	-0.0097
Feature	Coefficient
summer_temp_dev	-31.1244
winter_precip_dev	12.7926
Intercept	-536.1707


Optimal Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 772.89 (±231.56)
Train RMSE: 736.29, Test RMSE: 803.41
Train R²: 0.0059, Test R²: -0.0285
Annual Mass Balance [mm w.e.]
1000
500
0
−500
−1000
−1500
−2000
−2500
−3000
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	772.89 (±231.56)
Training RMSE	736.29
Training R^2	0.0059
Test RMSE	803.41
Test R^2	-0.0285
Feature	Coefficient
optimal_summer_temp_dev	-11.5817
optimal_winter_precip_dev	53.7291
Intercept	-536.1707