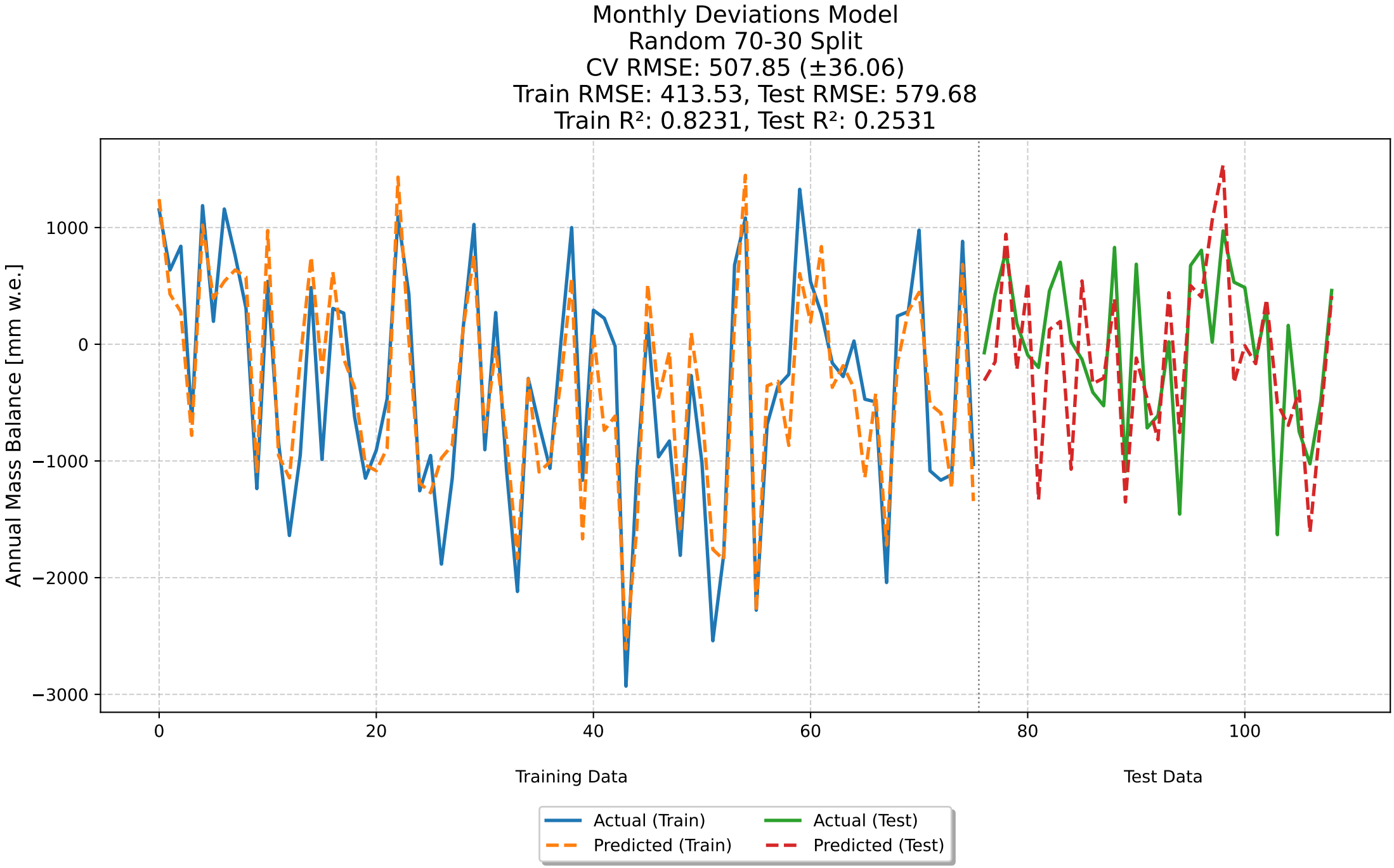
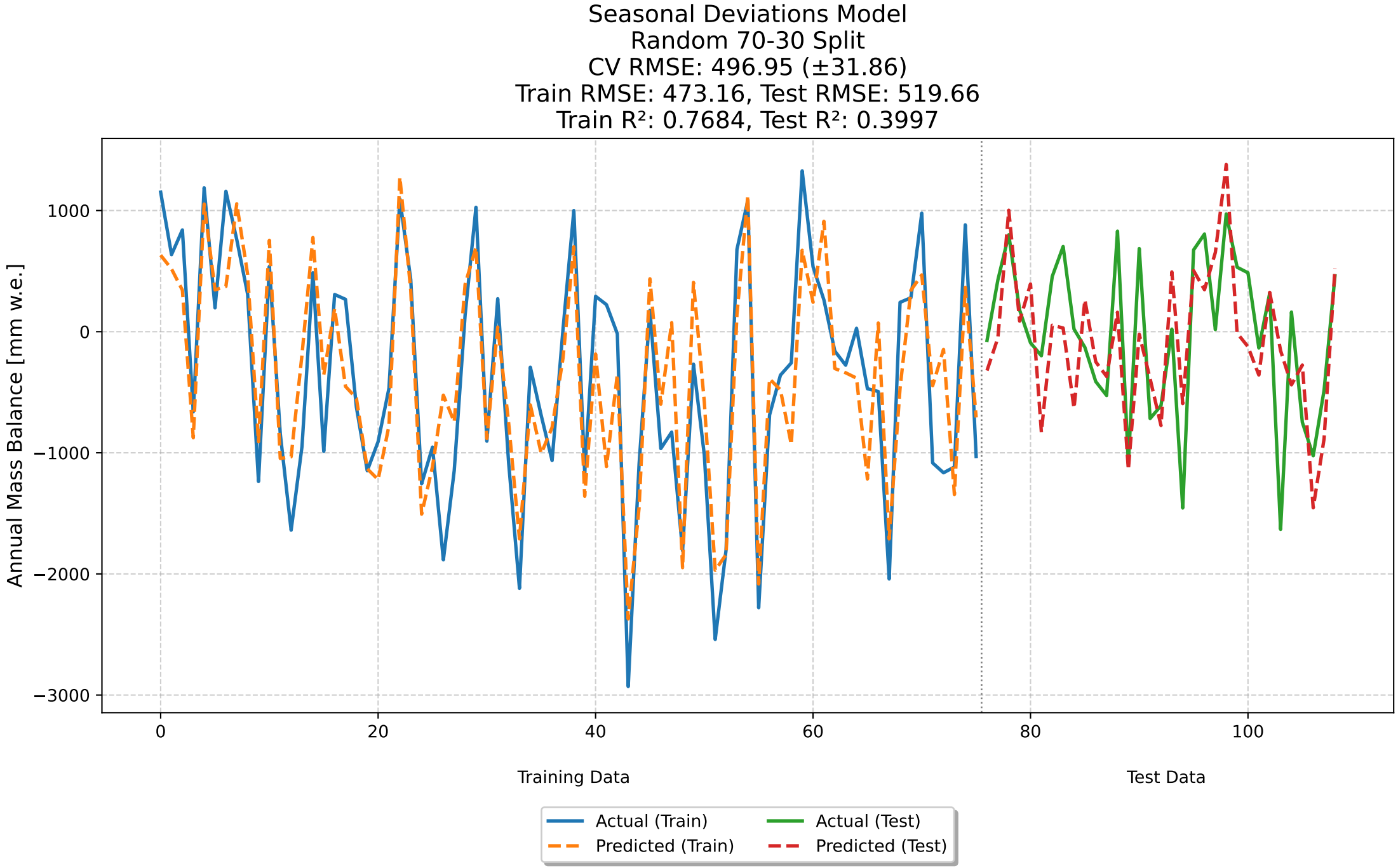
Glacier Mass Balance Model Results: Claridenfirn


Monthly Deviations Model
Random 70-30 Split
CV RMSE: 507.85 (±36.06)
Train RMSE: 413.53, Test RMSE: 579.68
Train R²: 0.8231, Test R²: 0.2531
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)

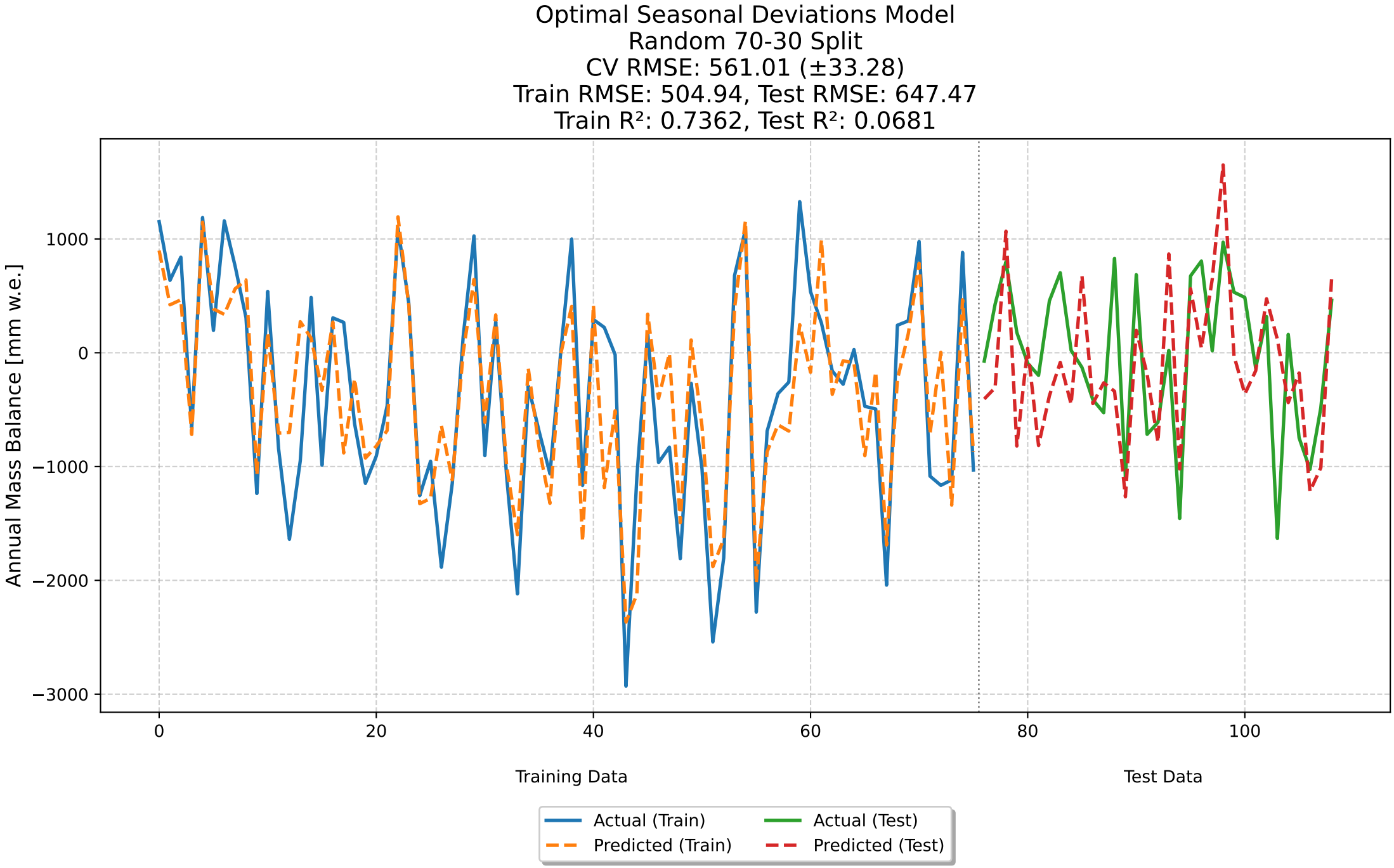
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	507.85 (±36.06)
Training RMSE	413.53
Training R^2	0.8231
Test RMSE	579.68
Test R^2	0.2531
Feature	Coefficient
may_td	-141.7722
june_td	-233.1469
july_td	-331.2694
august_td	-258.1959
september_td	-115.8549
october_pd	153.7593
november_pd	210.5257
december_pd	109.5623
january_pd	188.5453
february_pd	207.5013
march_pd	170.8148
april_pd	-25.6088
Intercept	-367.2632


Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 496.95 (±31.86)
Train RMSE: 473.16, Test RMSE: 519.66
Train R²: 0.7684, Test R²: 0.3997
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	473.16
Training R^2	0.7684
Test RMSE	519.66
Test R^2	0.3997
Feature	Coefficient
summer_temp_dev	-738.4833
winter_precip_dev	370.3009
Intercept	-367.2632


Optimal Seasonal Deviations Model
Random 70-30 Split
CV RMSE: 561.01 (±33.28)
Train RMSE: 504.94, Test RMSE: 647.47
Train R²: 0.7362, Test R²: 0.0681
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	504.94
Training R^2	0.7362
Test RMSE	647.47
Test R^2	0.0681
Feature	Coefficient
optimal_summer_temp_dev	-739.1180
optimal_winter_precip_dev	366.0818
Intercept	-367.2632