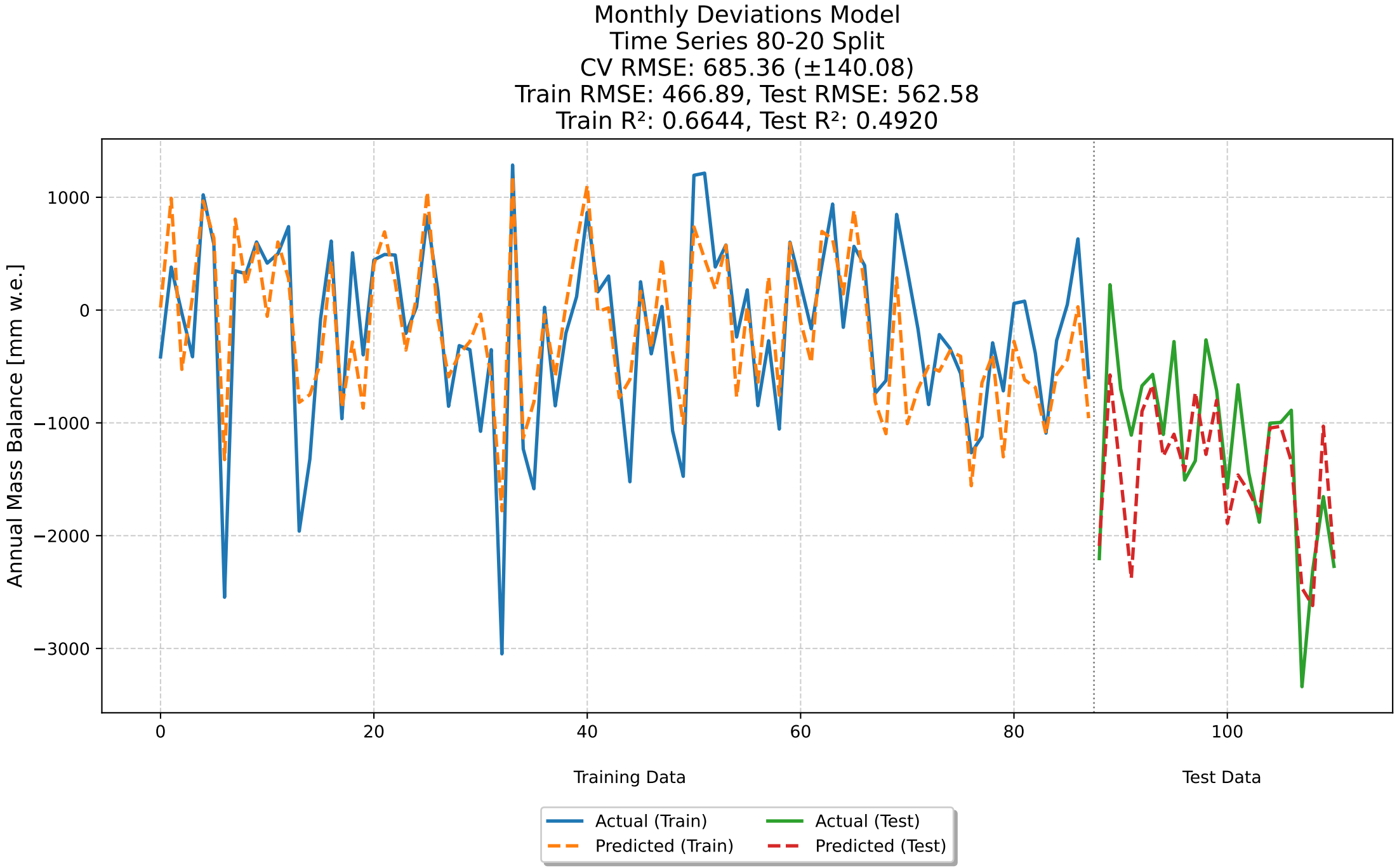
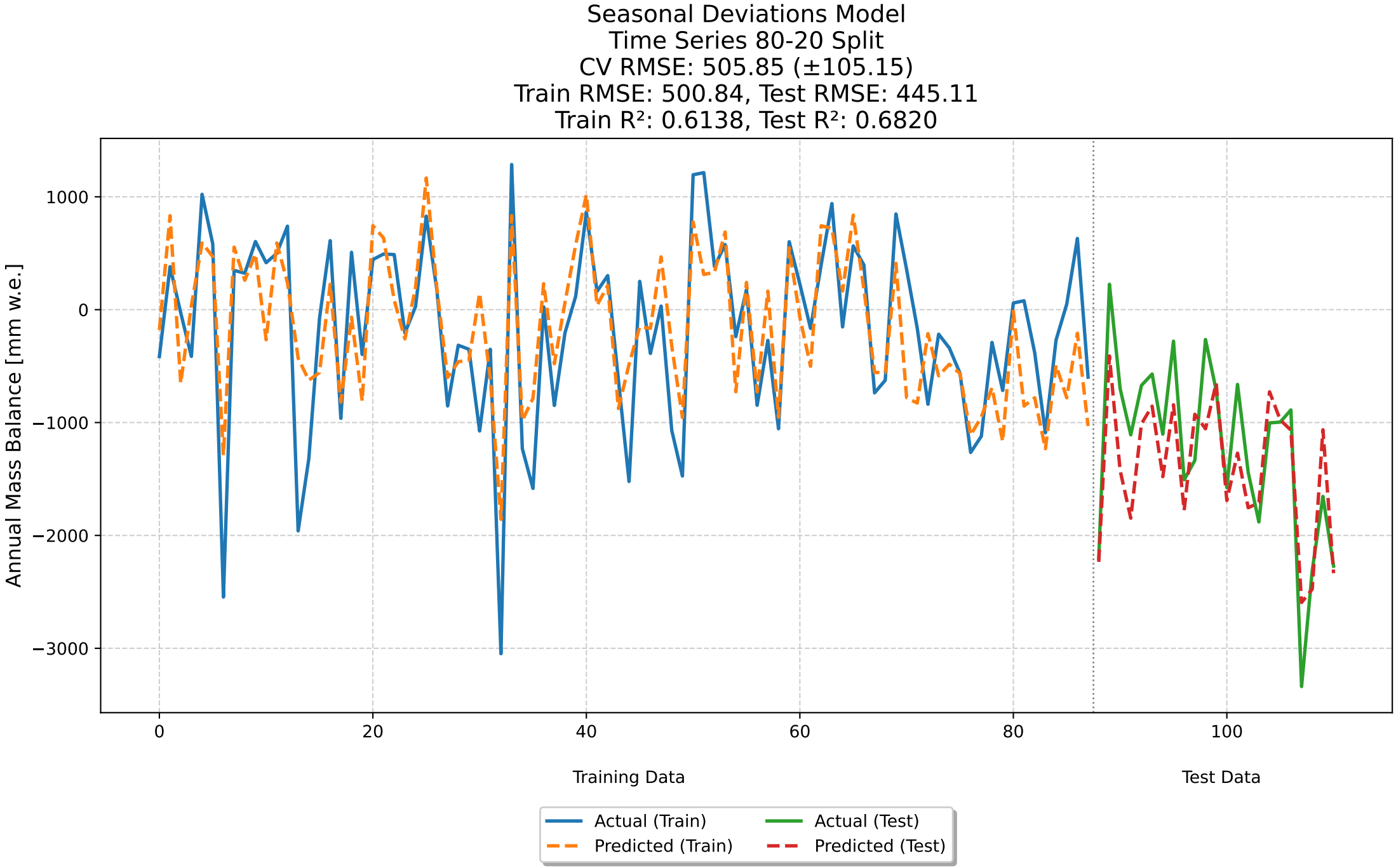
Glacier Mass Balance Model Results: Silvrettagletscher


Monthly Deviations Model
Time Series 80-20 Split
CV RMSE: 685.36 (±140.08)
Train RMSE: 466.89, Test RMSE: 562.58
Train R²: 0.6644, Test R²: 0.4920
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)

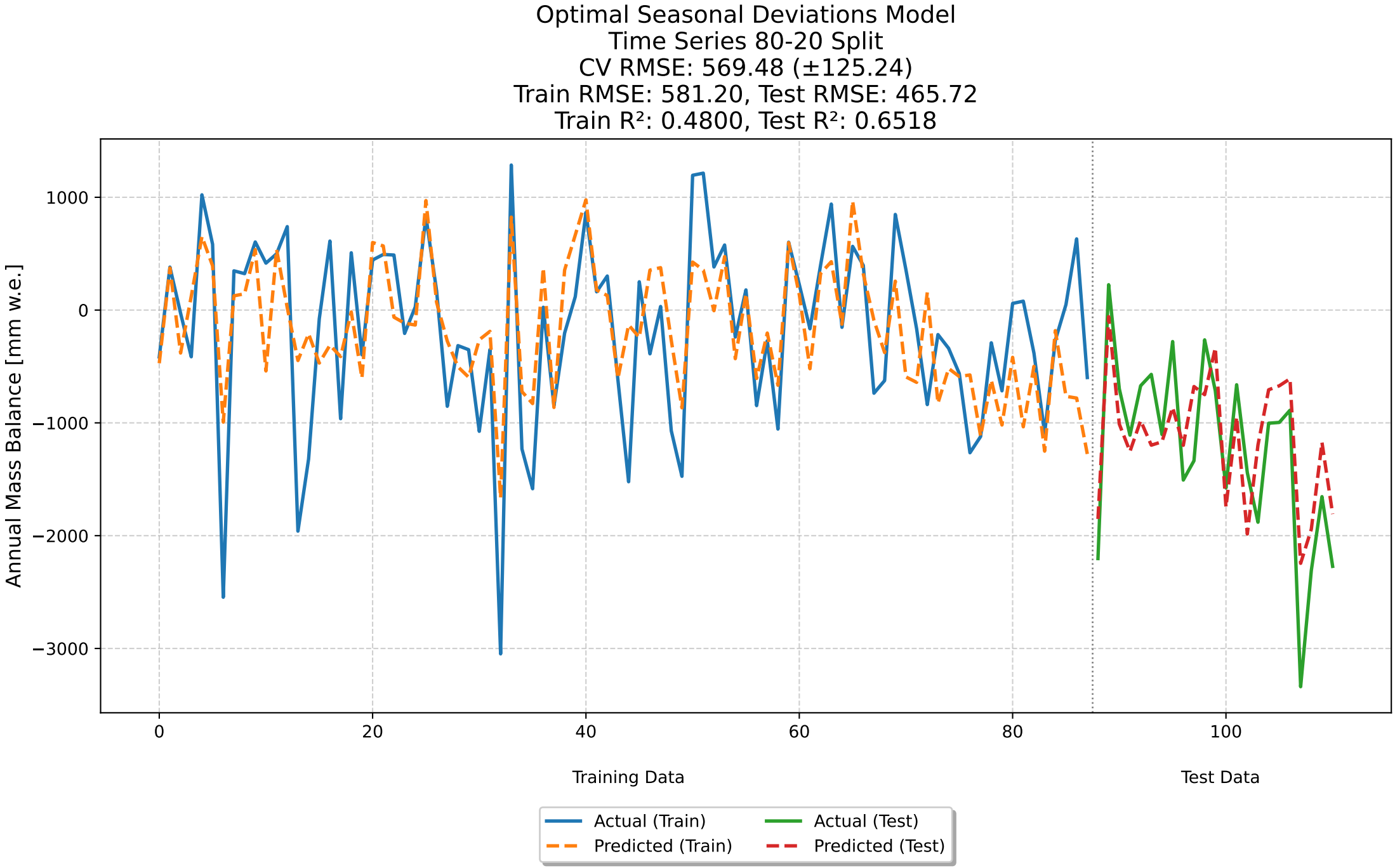
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	685.36 (±140.08)
Training RMSE	466.89
Training R^2	0.6644
Test RMSE	562.58
Test R^2	0.4920
Feature	Coefficient
may_td	-107.0820
june_td	-195.7864
july_td	-326.4757
august_td	-119.5710
september_td	-276.4520
october_pd	114.9650
november_pd	113.5602
december_pd	190.1502
january_pd	126.8063
february_pd	161.7662
march_pd	109.0023
april_pd	65.1257
Intercept	-170.2614


Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 505.85 (±105.15)
Train RMSE: 500.84, Test RMSE: 445.11
Train R²: 0.6138, Test R²: 0.6820
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	505.85 (±105.15)
Training RMSE	500.84
Training R^2	0.6138
Test RMSE	445.11
Test R^2	0.6820
Feature	Coefficient
summer_temp_dev	-543.5564
winter_precip_dev	344.1323
Intercept	-170.2614


Optimal Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 569.48 (±125.24)
Train RMSE: 581.20, Test RMSE: 465.72
Train R²: 0.4800, Test R²: 0.6518
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	569.48 (±125.24)
Training RMSE	581.20
Training R^2	0.4800
Test RMSE	465.72
Test R^2	0.6518
Feature	Coefficient
optimal_summer_temp_dev	-458.2590
optimal_winter_precip_dev	298.7673
Intercept	-170.2614