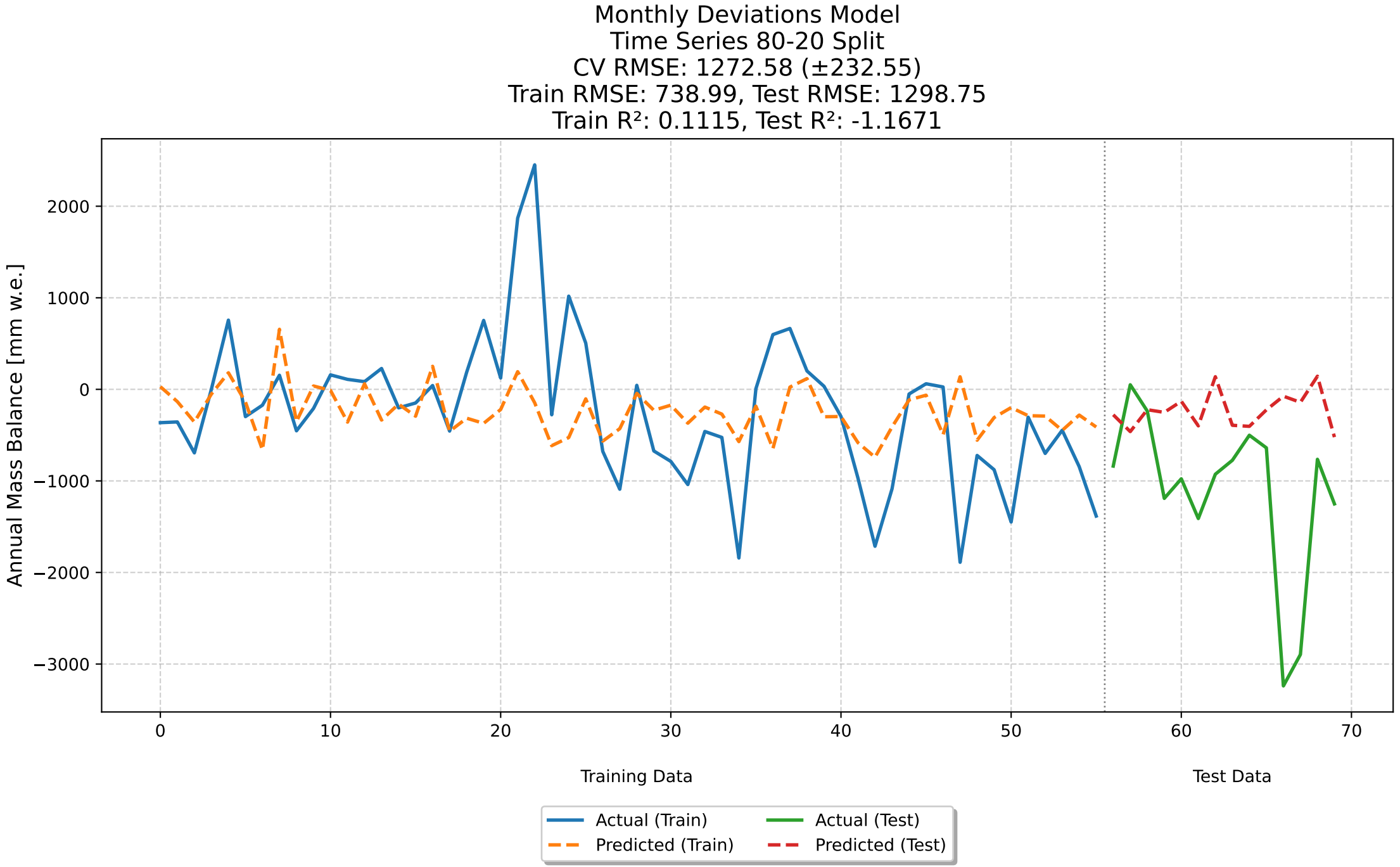
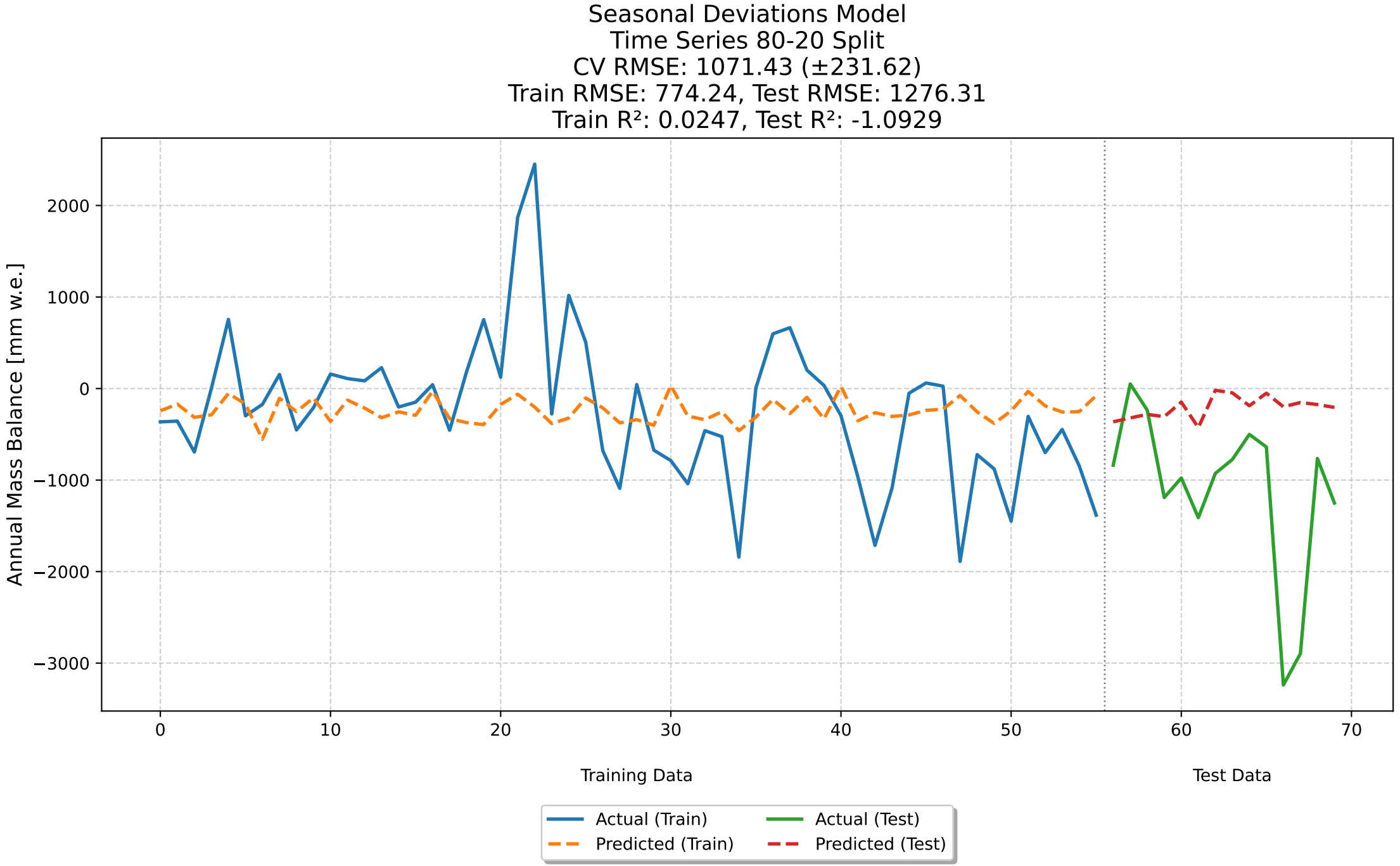
Glacier Mass Balance Model Results: Schwarzberggletscher


Monthly Deviations Model
Time Series 80-20 Split
CV RMSE: 1272.58 (±232.55)
Train RMSE: 738.99, Test RMSE: 1298.75
Train R²: 0.1115, Test R²: -1.1671
Annual Mass Balance [mm w.e.]
2000
1000
0
−1000
−2000
−3000
0
10
20
30
40
50
60
70
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

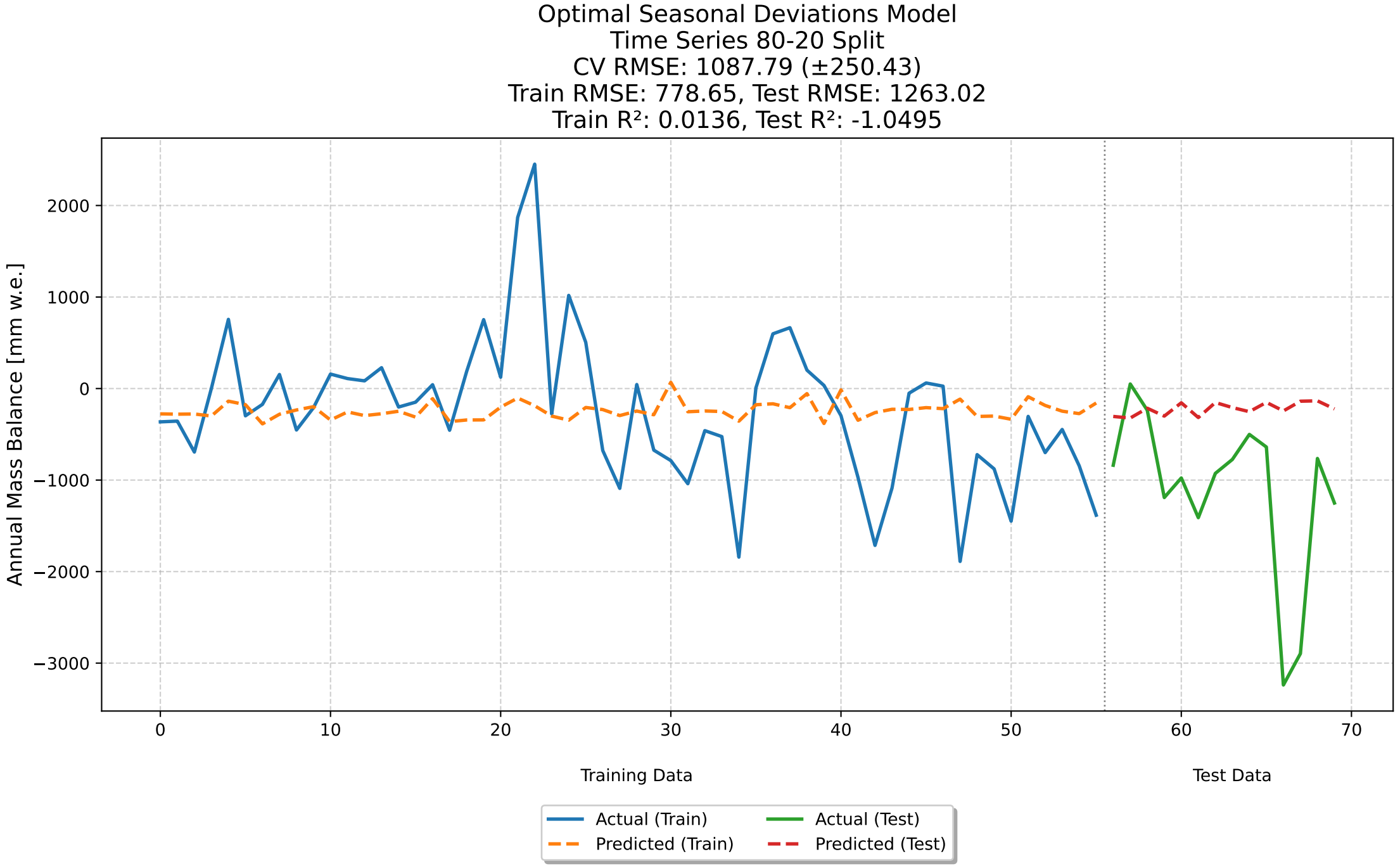
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	1272.58 (±232.55)
Training RMSE	738.99
Training R^2	0.1115
Test RMSE	1298.75
Test R^2	-1.1671
Feature	Coefficient
may_td	103.5986
june_td	12.3596
july_td	-26.0454
august_td	128.8276
september_td	-132.5056
october_pd	131.5305
november_pd	-22.2900
december_pd	100.9363
january_pd	22.5604
february_pd	8.7359
march_pd	13.8959
april_pd	147.3402
Intercept	-239.0357


Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 1071.43 (±231.62)
Train RMSE: 774.24, Test RMSE: 1276.31
Train R²: 0.0247, Test R²: -1.0929
Annual Mass Balance [mm w.e.]
2000
1000
0
−1000
−2000
−3000
0
10
20
30
40
50
60
70
Training Data
Test Data
Actual (Train)
Predicted (Train)
Actual (Test)
Predicted (Test)

Seasonal Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	1071.43 (±231.62)
Training RMSE	774.24
Training R^2	0.0247
Test RMSE	1276.31
Test R^2	-1.0929
Feature	Coefficient
summer_temp_dev	-18.8851
winter_precip_dev	118.8340
Intercept	-239.0357


Optimal Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 1087.79 (±250.43)
Train RMSE: 778.65, Test RMSE: 1263.02
Train R²: 0.0136, Test R²: -1.0495
Annual Mass Balance [mm w.e.]
2000
1000
0
−1000
−2000
−3000
0
10
20
30
40
50
60
70
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	1087.79 (±250.43)
Training RMSE	778.65
Training R^2	0.0136
Test RMSE	1263.02
Test R^2	-1.0495
Feature	Coefficient
optimal_summer_temp_dev	27.2477
optimal_winter_precip_dev	90.7799
Intercept	-239.0357