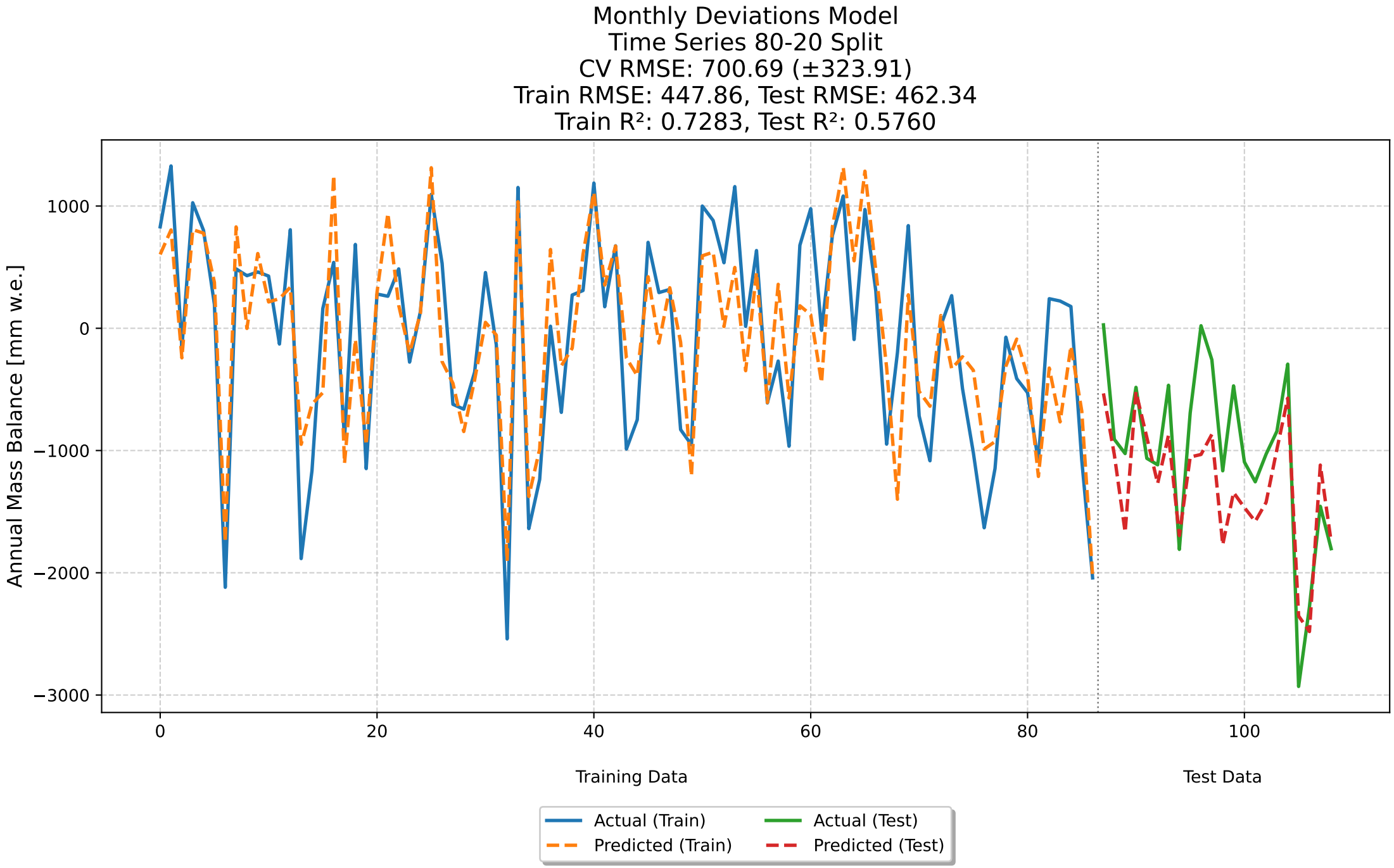
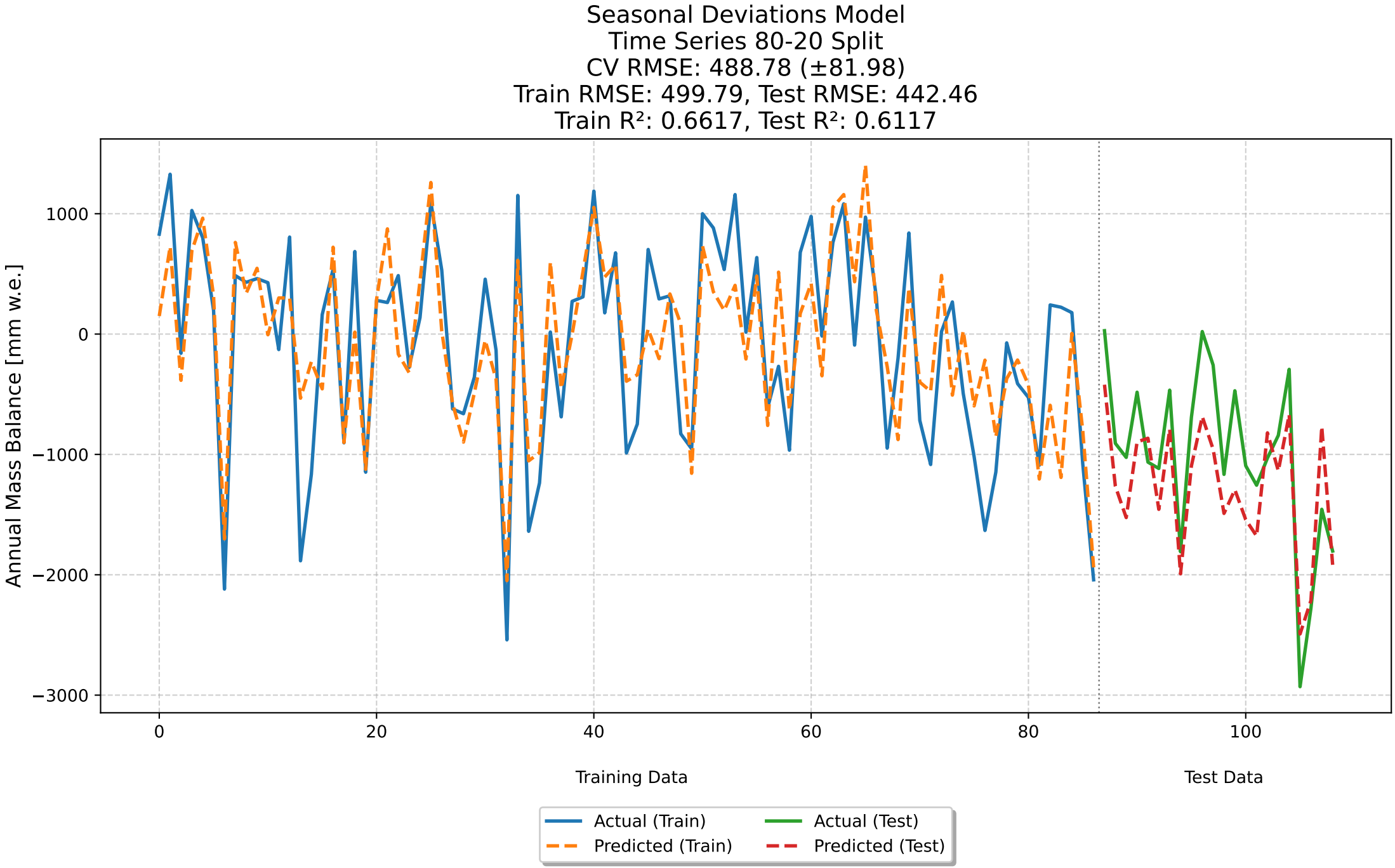
Glacier Mass Balance Model Results: Claridenfirn


Monthly Deviations Model
Time Series 80-20 Split
CV RMSE: 700.69 (±323.91)
Train RMSE: 447.86, Test RMSE: 462.34
Train R²: 0.7283, Test R²: 0.5760
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)

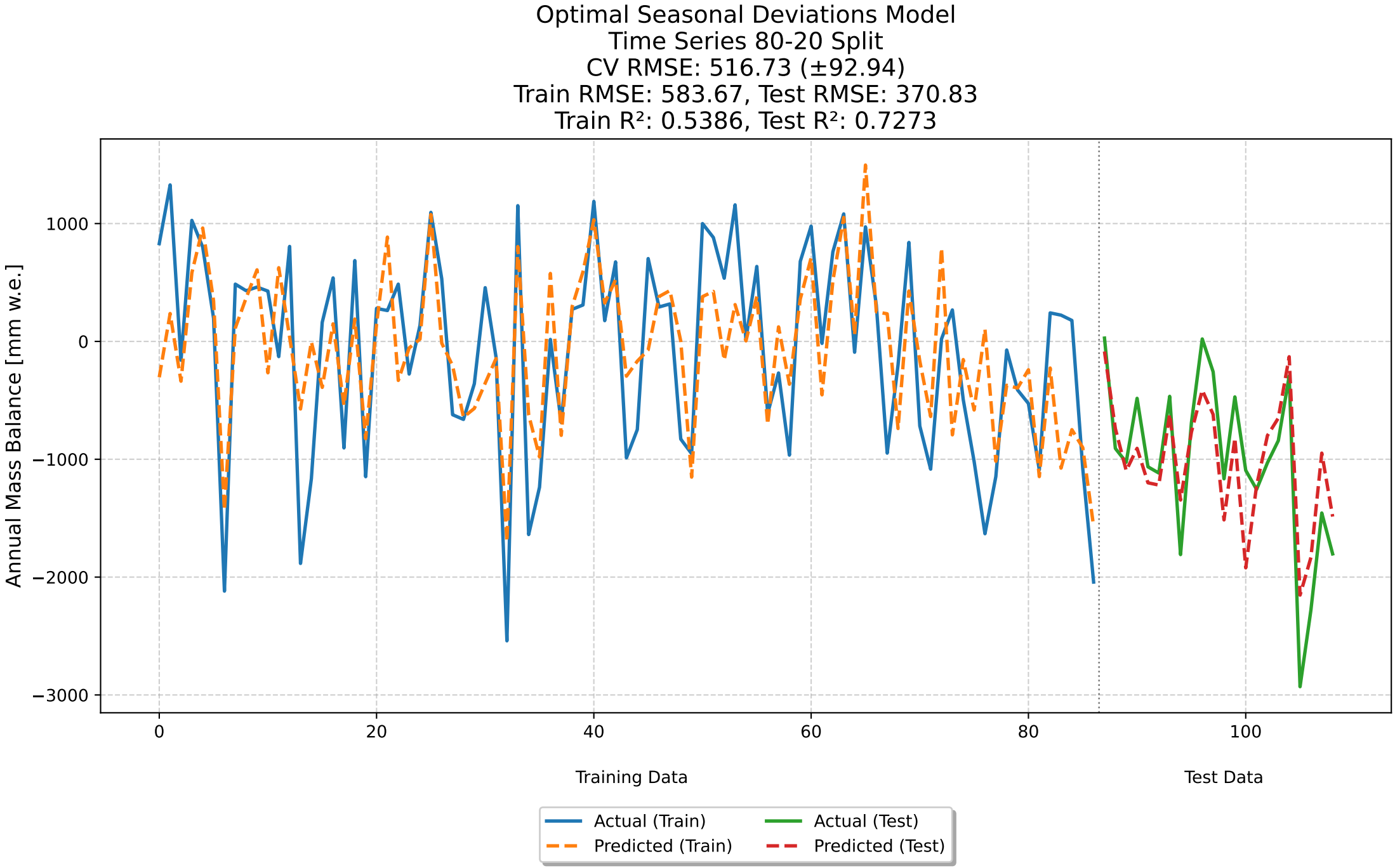
Monthly Deviations Model - Performance Metrics and Coefficients

Metric	Value
Cross-Validation RMSE	700.69 (±323.91)
Training RMSE	447.86
Training R^2	0.7283
Test RMSE	462.34
Test R^2	0.5760
Feature	Coefficient
may_td	-104.7603
june_td	-167.2489
july_td	-313.6564
august_td	-252.6689
september_td	-221.0288
october_pd	173.0745
november_pd	137.9595
december_pd	119.7503
january_pd	107.4740
february_pd	217.2529
march_pd	111.5743
april_pd	-12.2298
Intercept	-72.3793


Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 488.78 (±81.98)
Train RMSE: 499.79, Test RMSE: 442.46
Train R²: 0.6617, Test R²: 0.6117
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	488.78 (±81.98)
Training RMSE	499.79
Training R^2	0.6617
Test RMSE	442.46
Test R^2	0.6117
Feature	Coefficient
summer_temp_dev	-625.7358
winter_precip_dev	351.9757
Intercept	-72.3793


Optimal Seasonal Deviations Model
Time Series 80-20 Split
CV RMSE: 516.73 (±92.94)
Train RMSE: 583.67, Test RMSE: 370.83
Train R²: 0.5386, Test R²: 0.7273
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	516.73 (±92.94)
Training RMSE	583.67
Training R^2	0.5386
Test RMSE	370.83
Test R^2	0.7273
Feature	Coefficient
optimal_summer_temp_dev	-553.9525
optimal_winter_precip_dev	313.6396
Intercept	-72.3793