

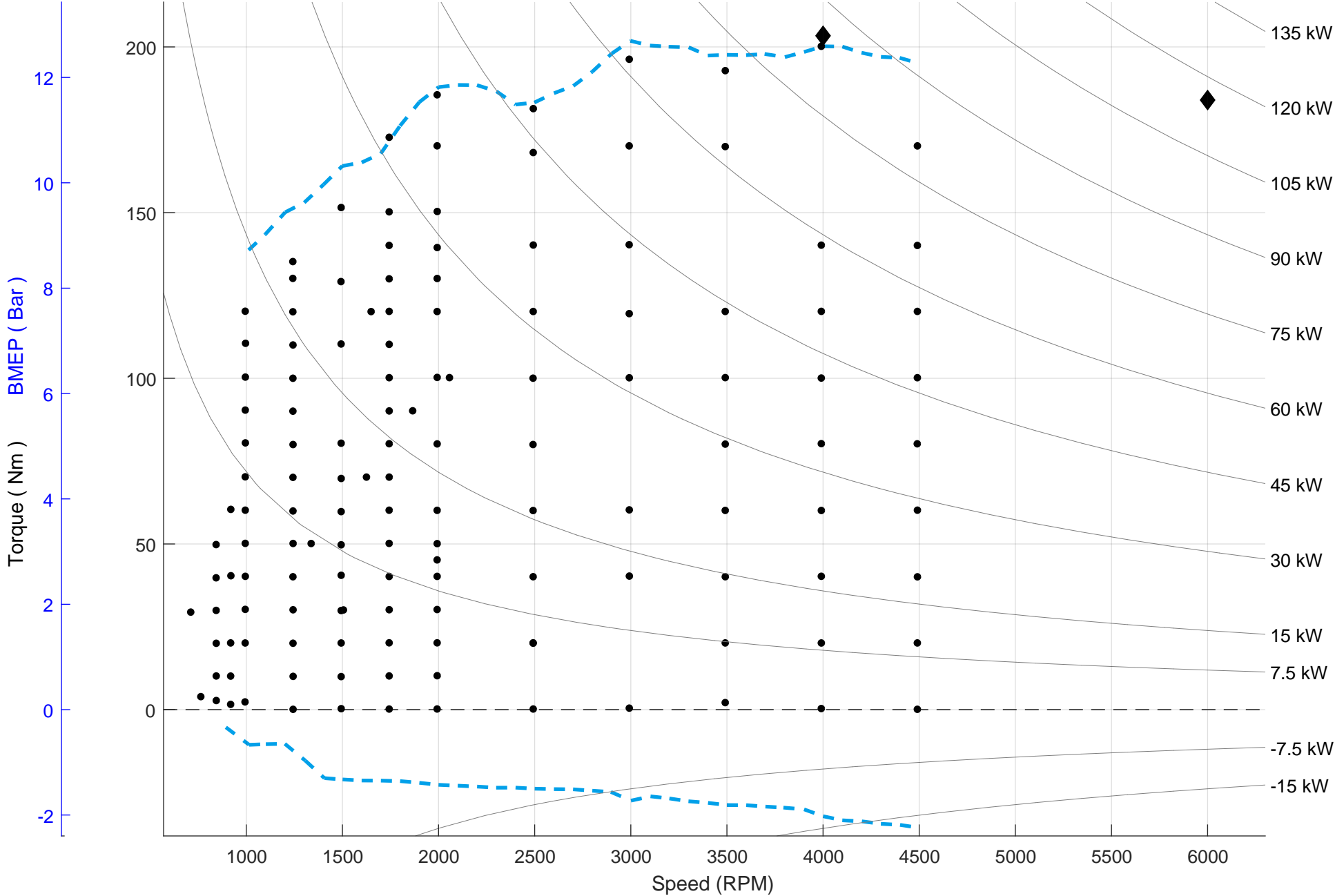
2014 Mazda 2.0L SKYACTIV-G Tier 2 Fuel - Test Data Plots

SUGGESTED CITATION: *2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Package*. Version 2018-02. Ann Arbor, MI: US EPA, National Vehicle and Fuel Emissions Laboratory, National Center for Advanced Technology, 2018.

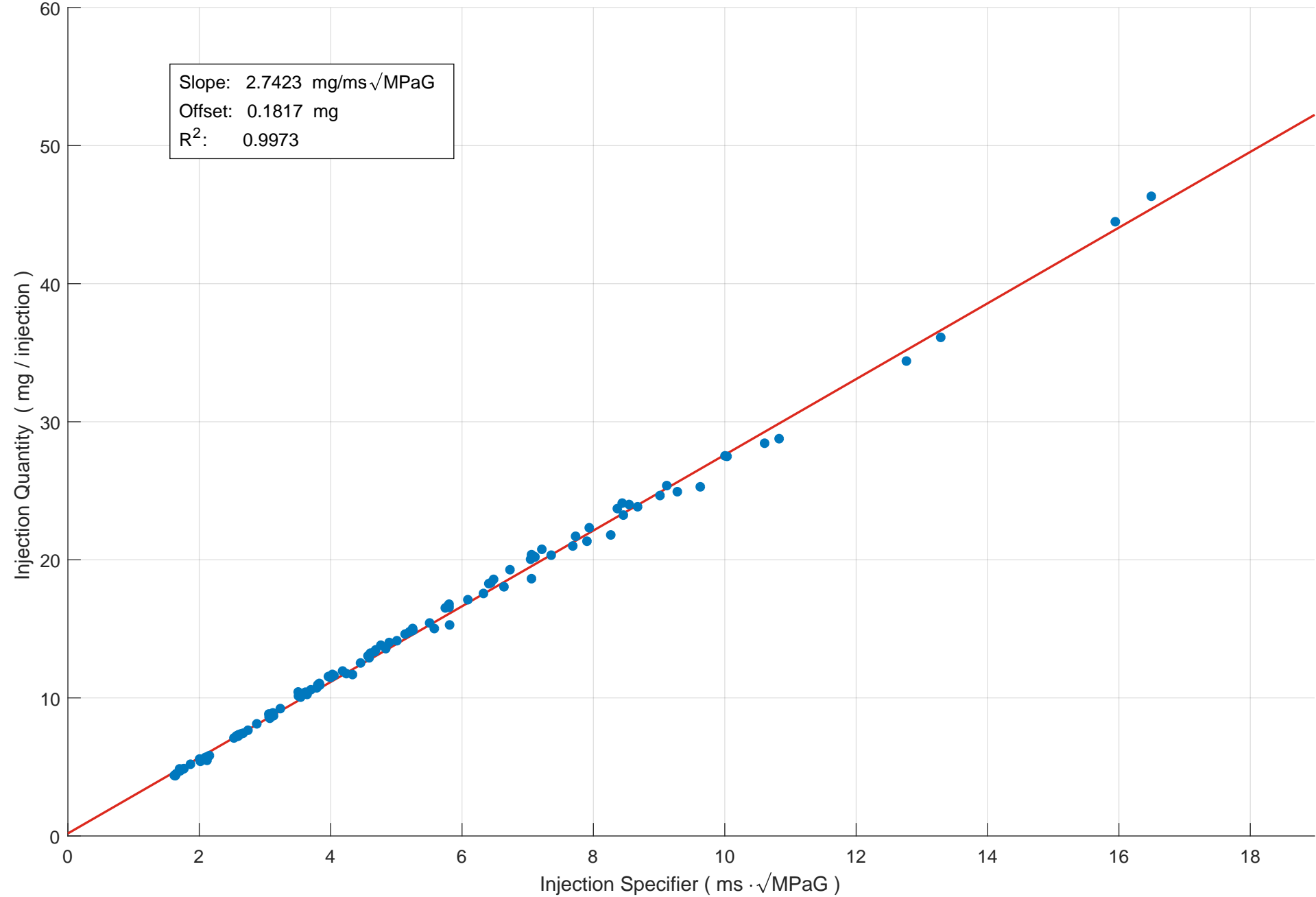
- ◆ Black diamonds indicate rated torque & power points advertised by the manufacturer
- Black dots indicate speed/load points at which steady state data was acquired
- — Light Blue dashed line indicates speed/load points selected to represent maximum or minimum engine torque
- ✗ Red Xs indicate speed/load points where data was not collected or did not meet quality standards

Note: In these contour plots, individual data points may be ignored or removed, using our best engineering judgment, to correct irregularities in the visual presentation of the contour lines; additional details are contained in the test report.

2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots
Test Data Points



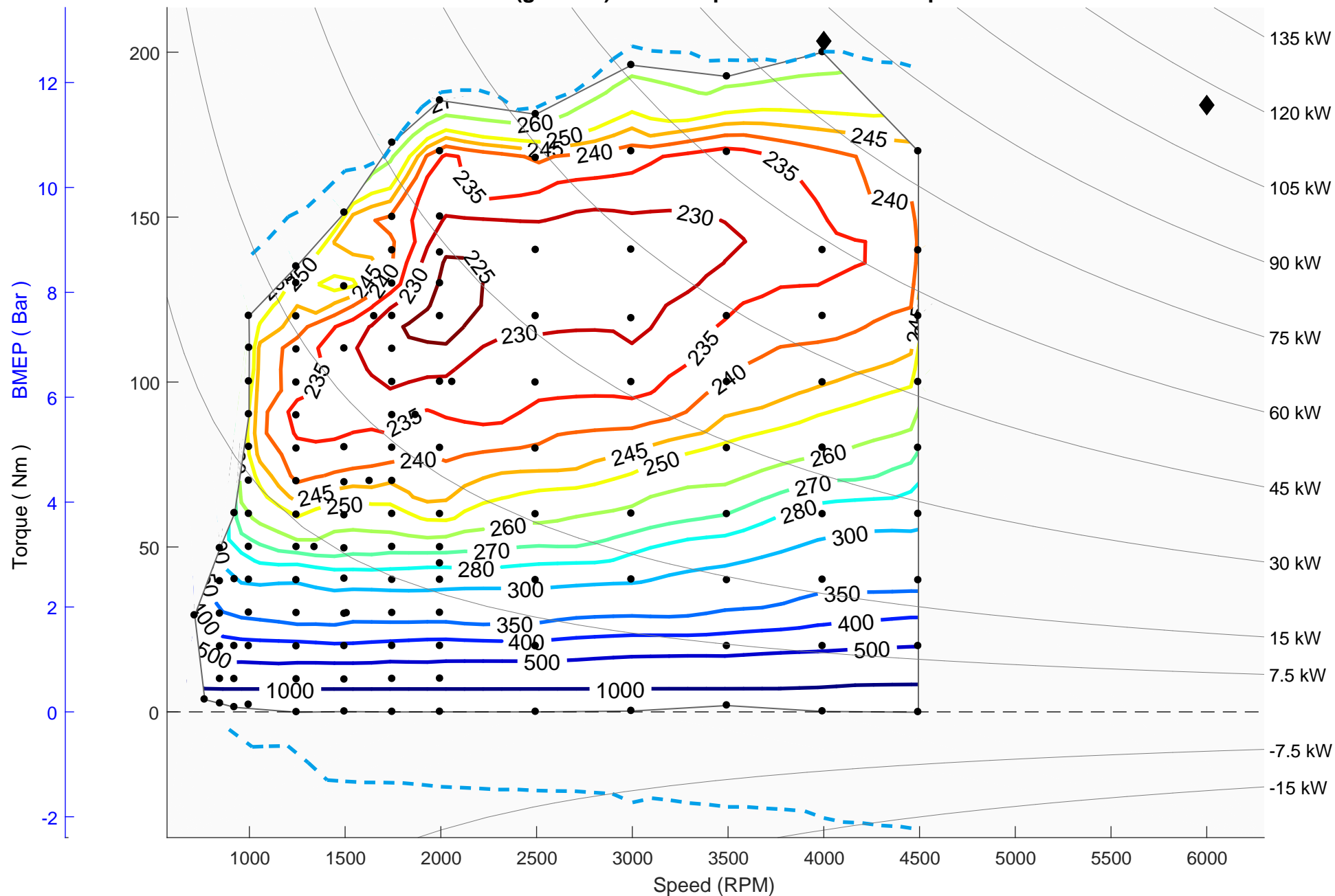
2014 Mazda 2.0L SKYACTIV-G Tier 2 Fuel - Test Data Plots
Injector Calibration



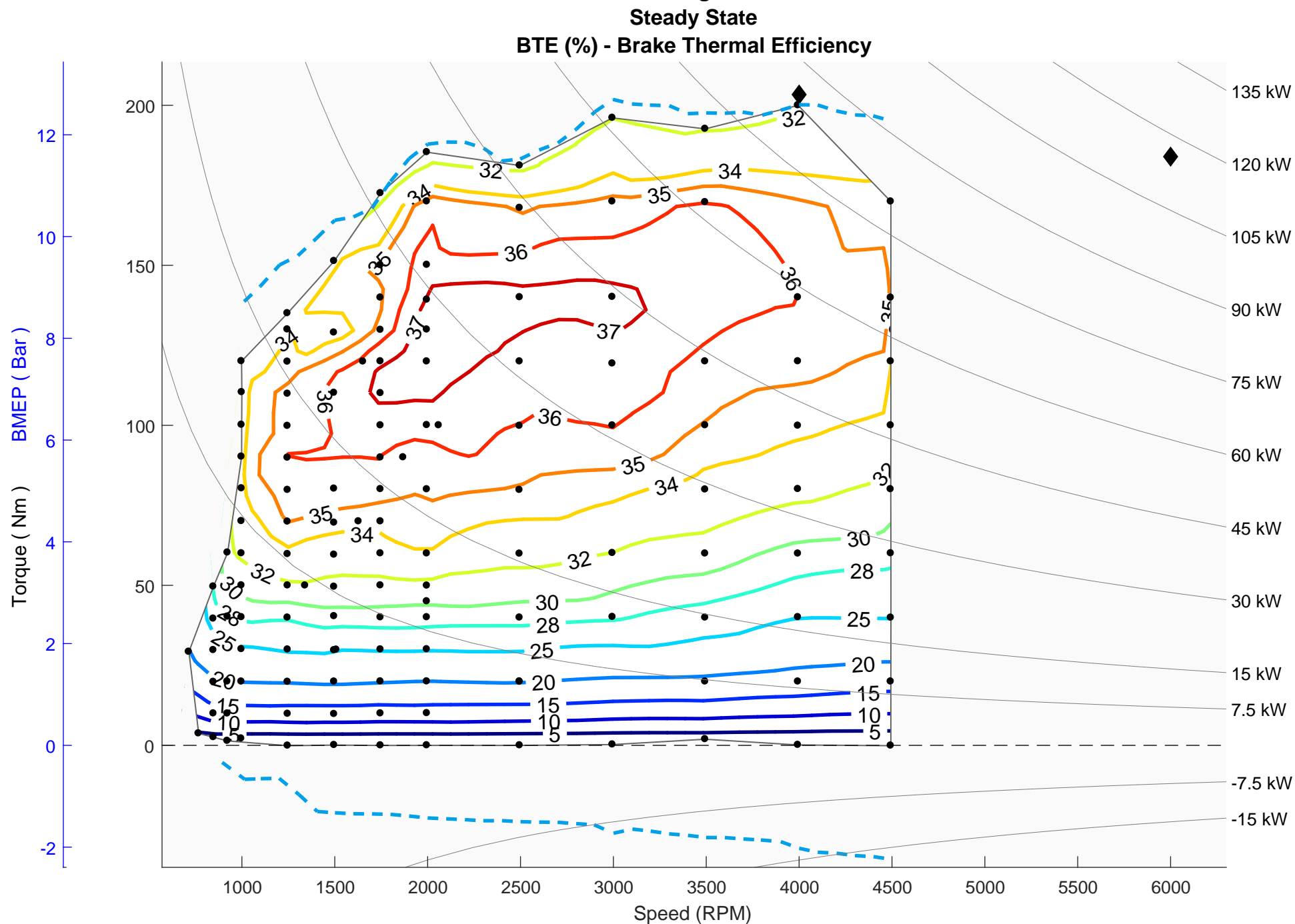
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

BSFC (g/kW-hr) - Brake Specific Fuel Consumption



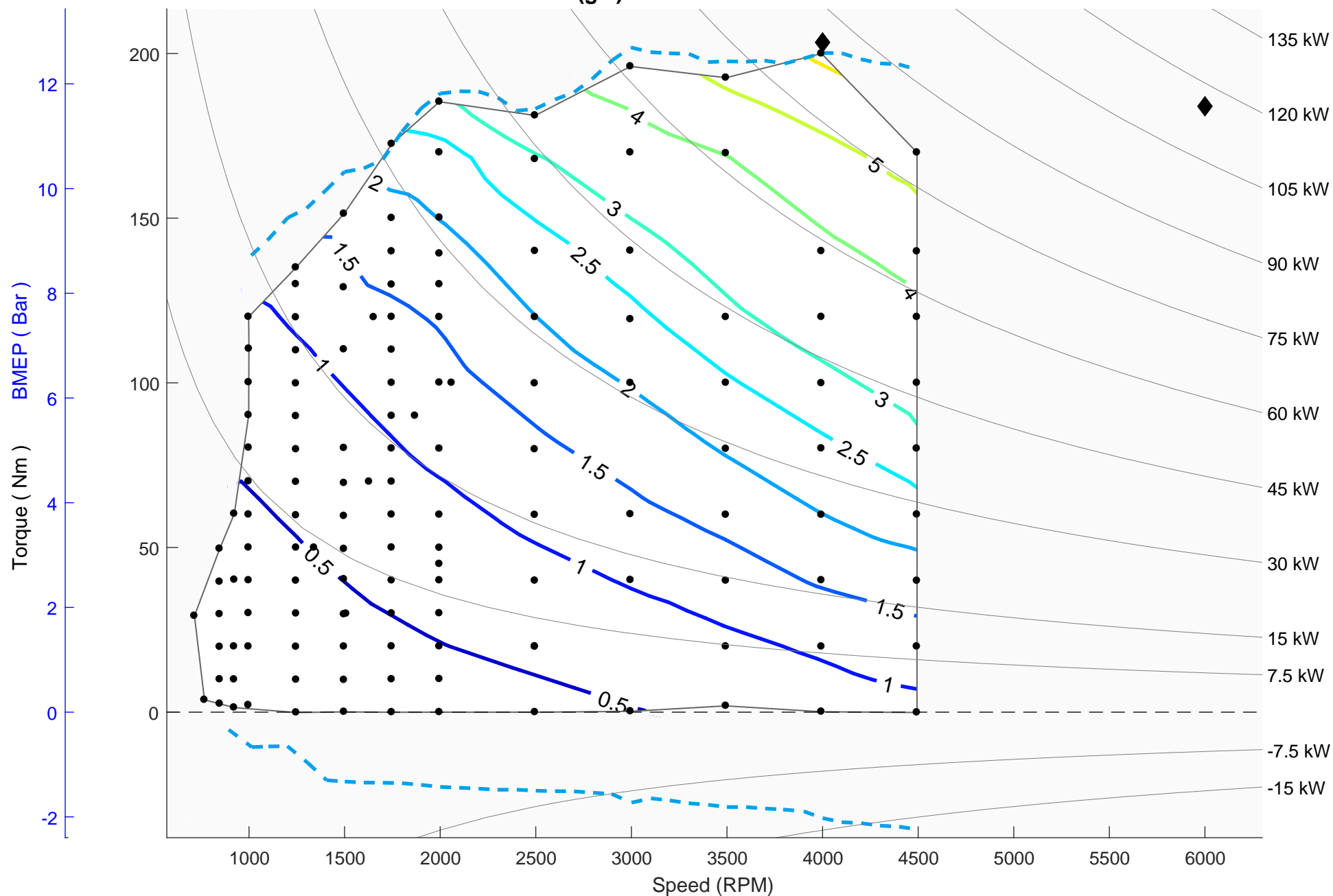
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots



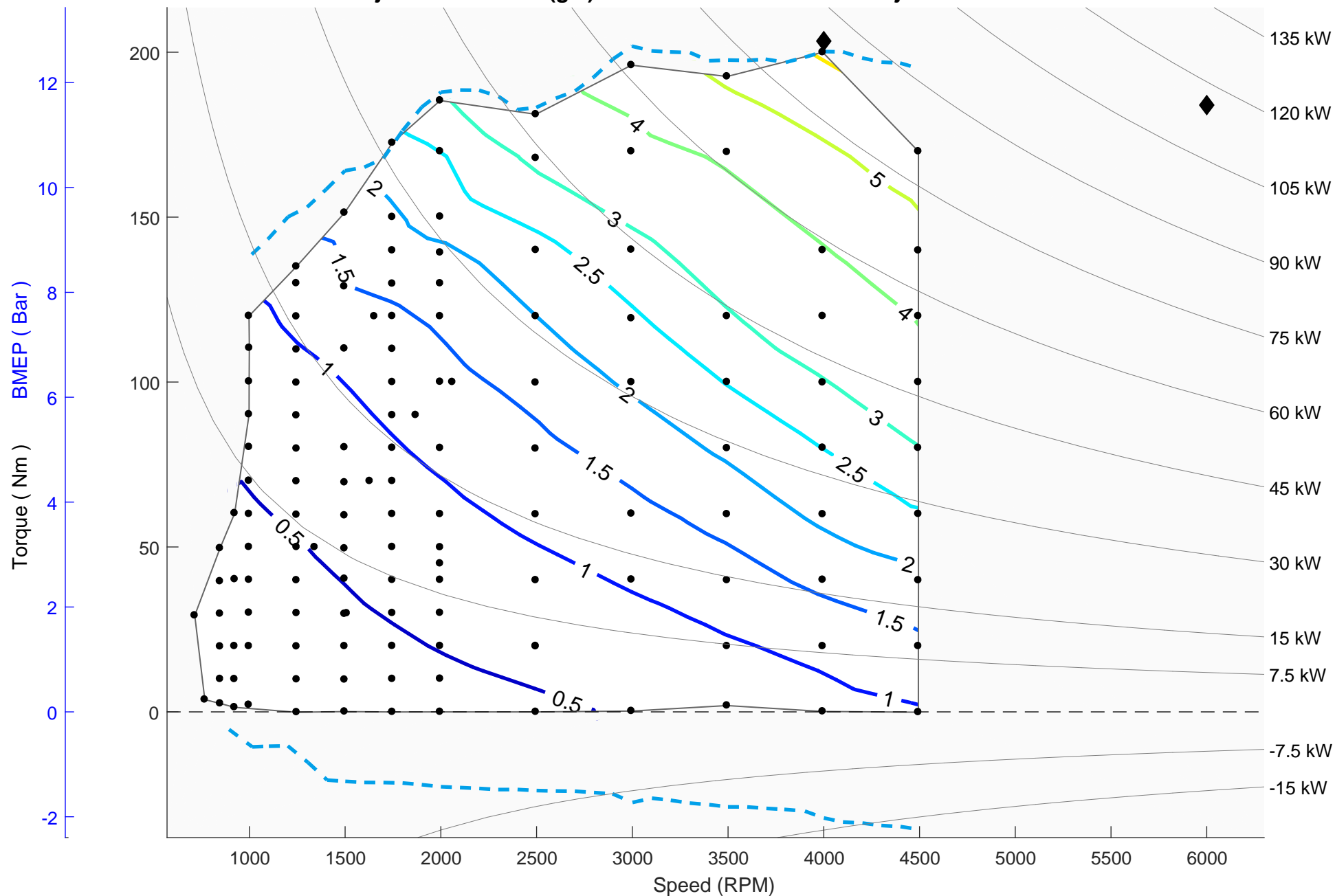
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

Fuel Meter Flow (g/s) - Fuel Flow Measured with Flow Meter



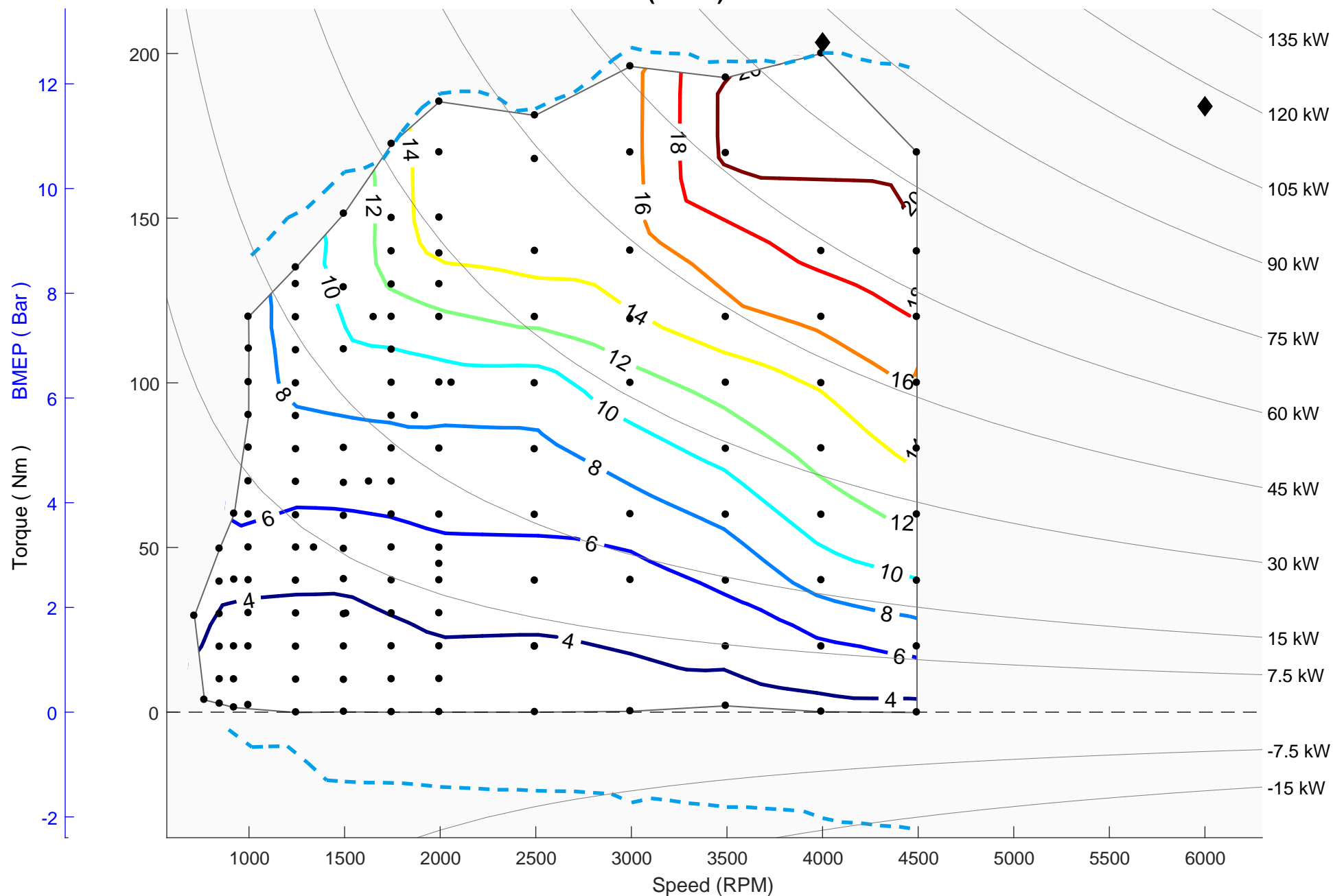
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots
Steady State
Injector Fuel Flow (g/s) - Fuel Flow Estimate from Injector Calibration



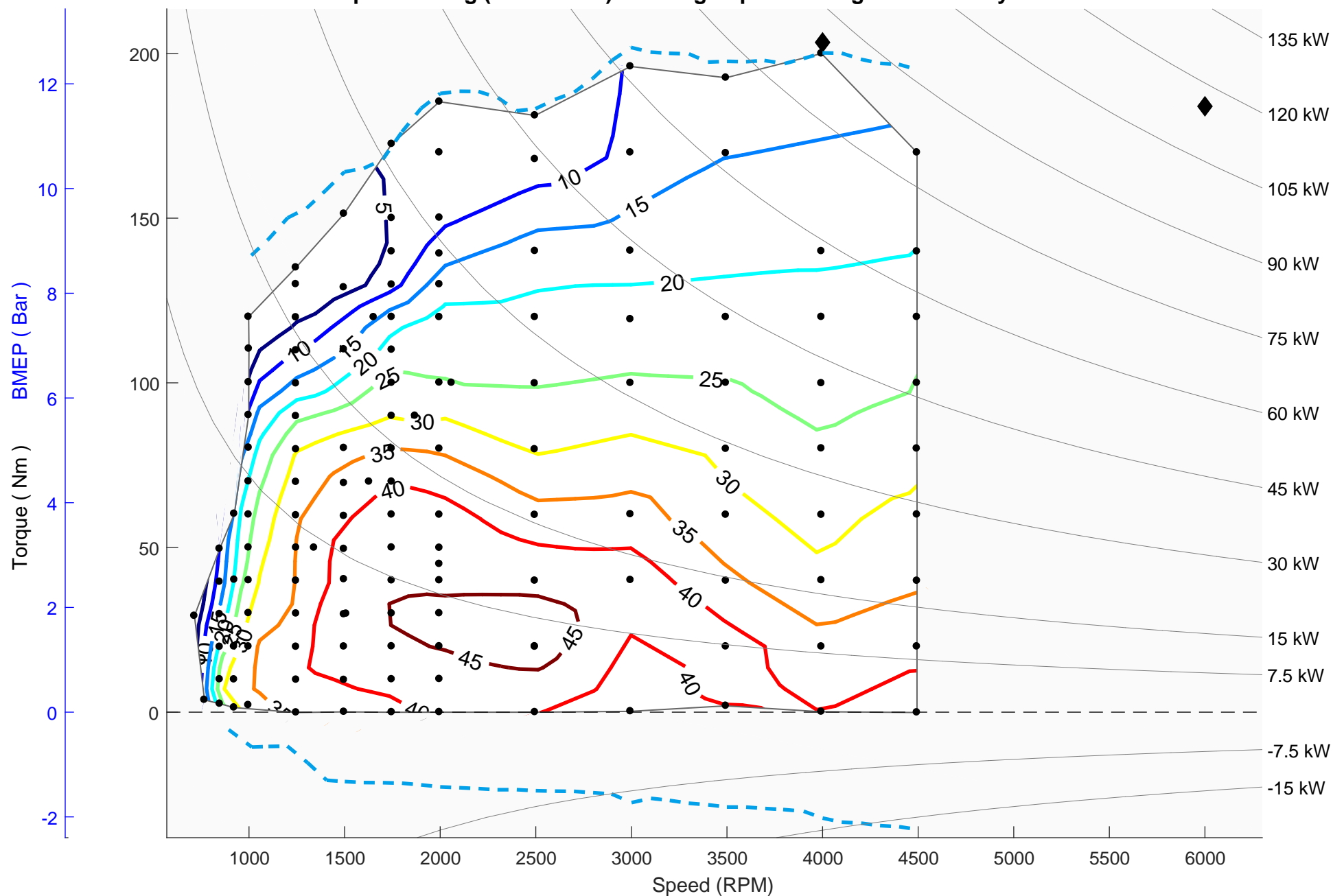
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

Fuel Rail Press (MPaG) - Fuel Rail Pressure*



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots
Steady State
Spark Timing (CAD BTDC) - Average Spark Timing Across all Cylinders*

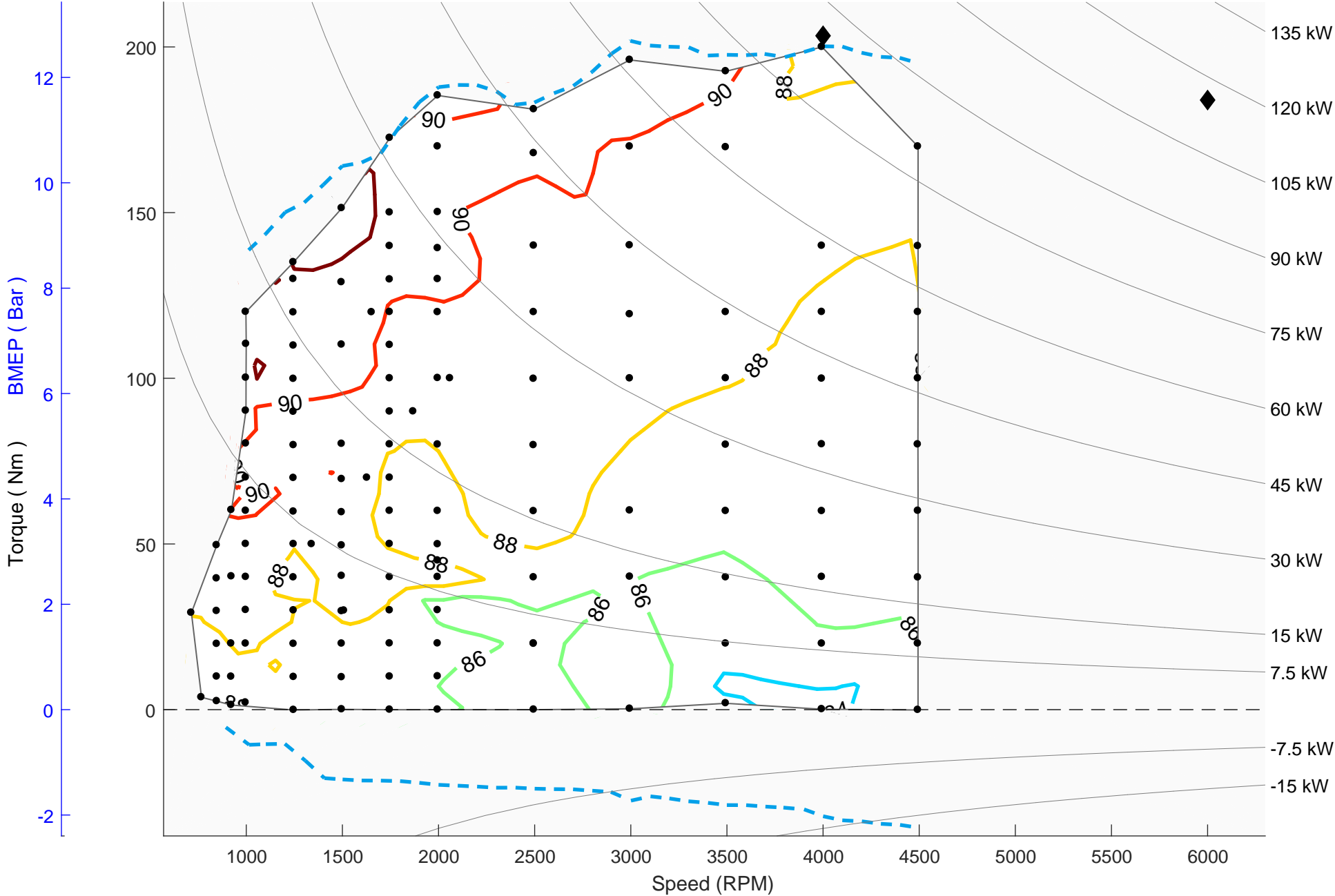


* Reference Only

2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

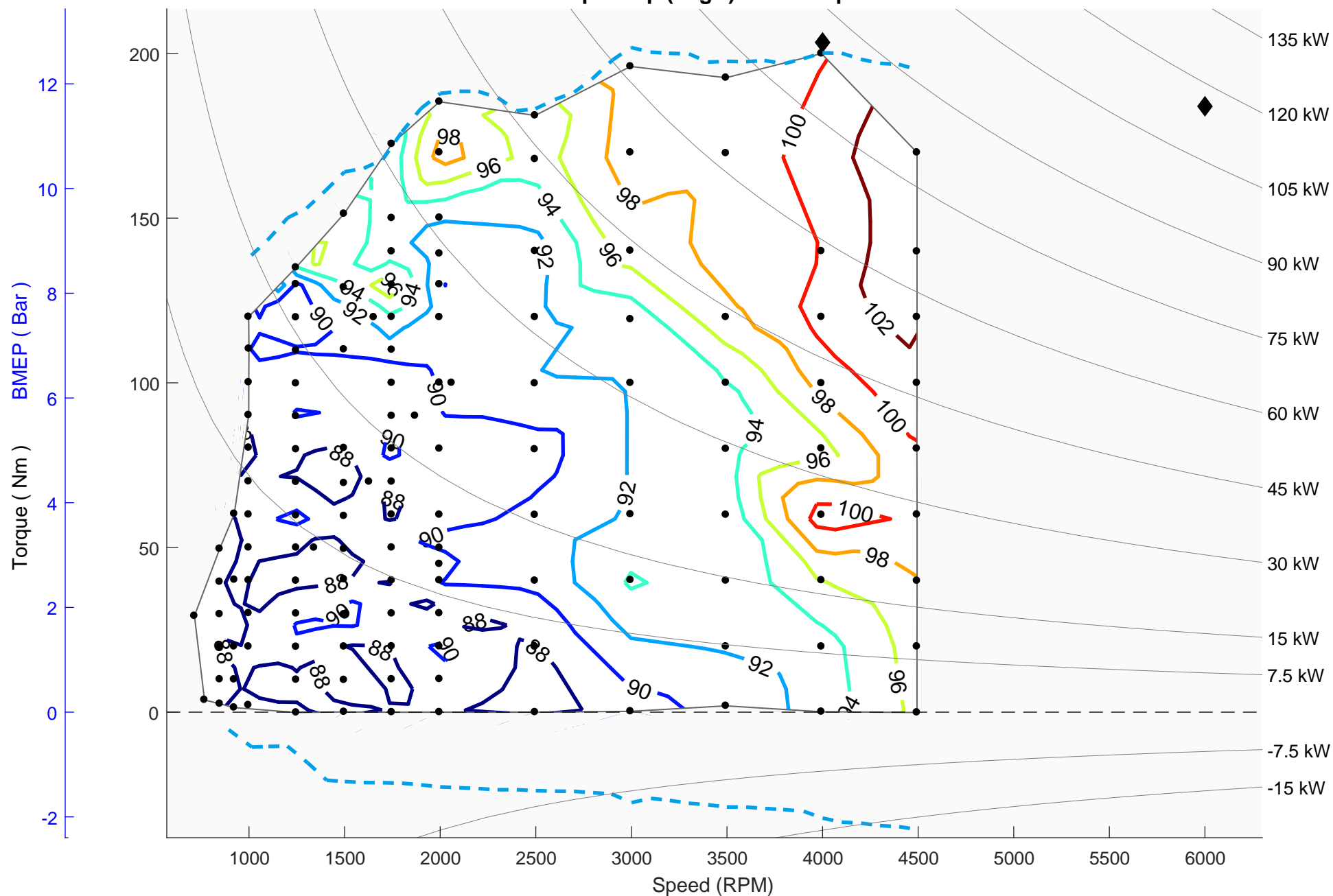
Coolant Temp (degC) - Coolant Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

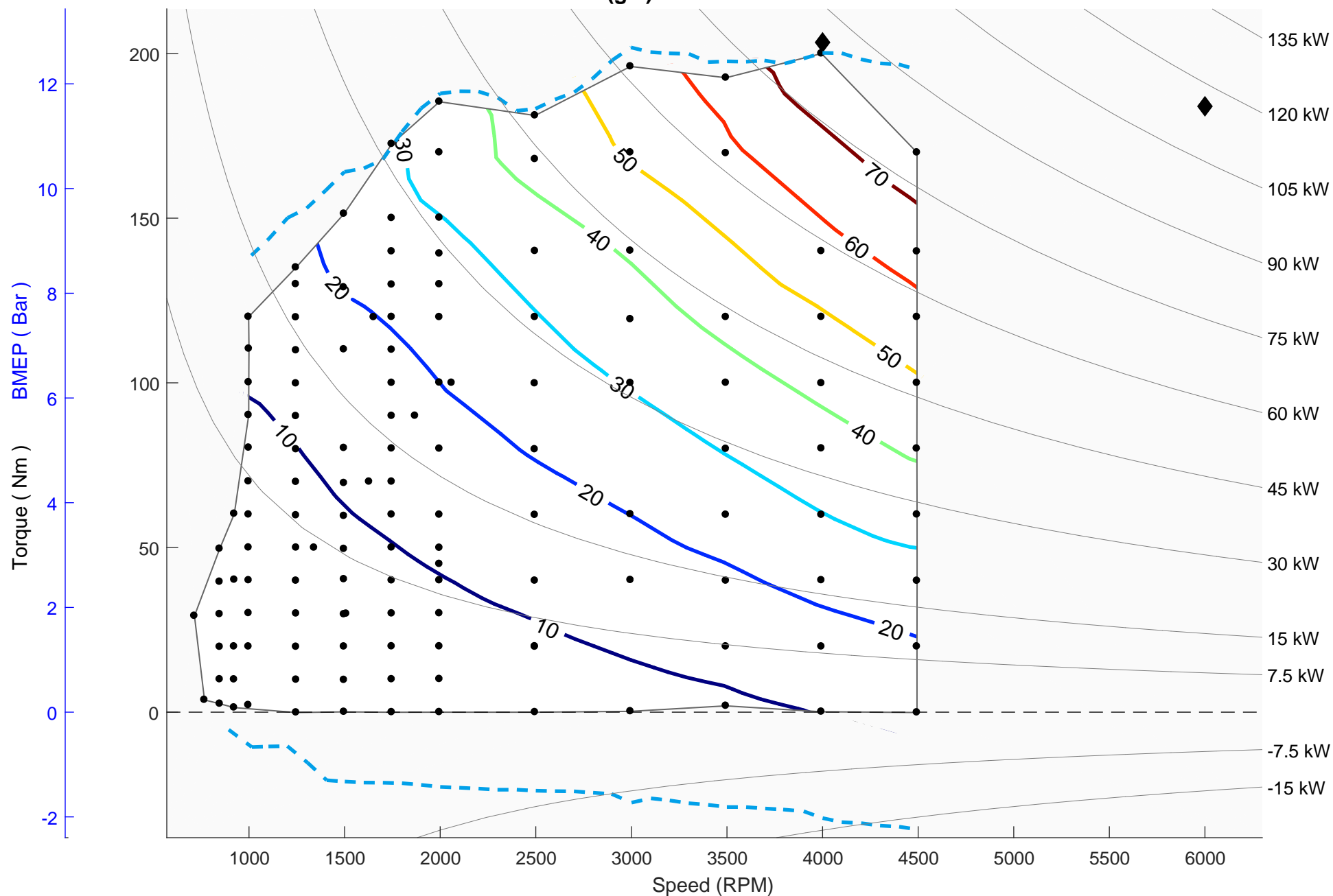
Oil Sump Temp (degC) - Oil Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

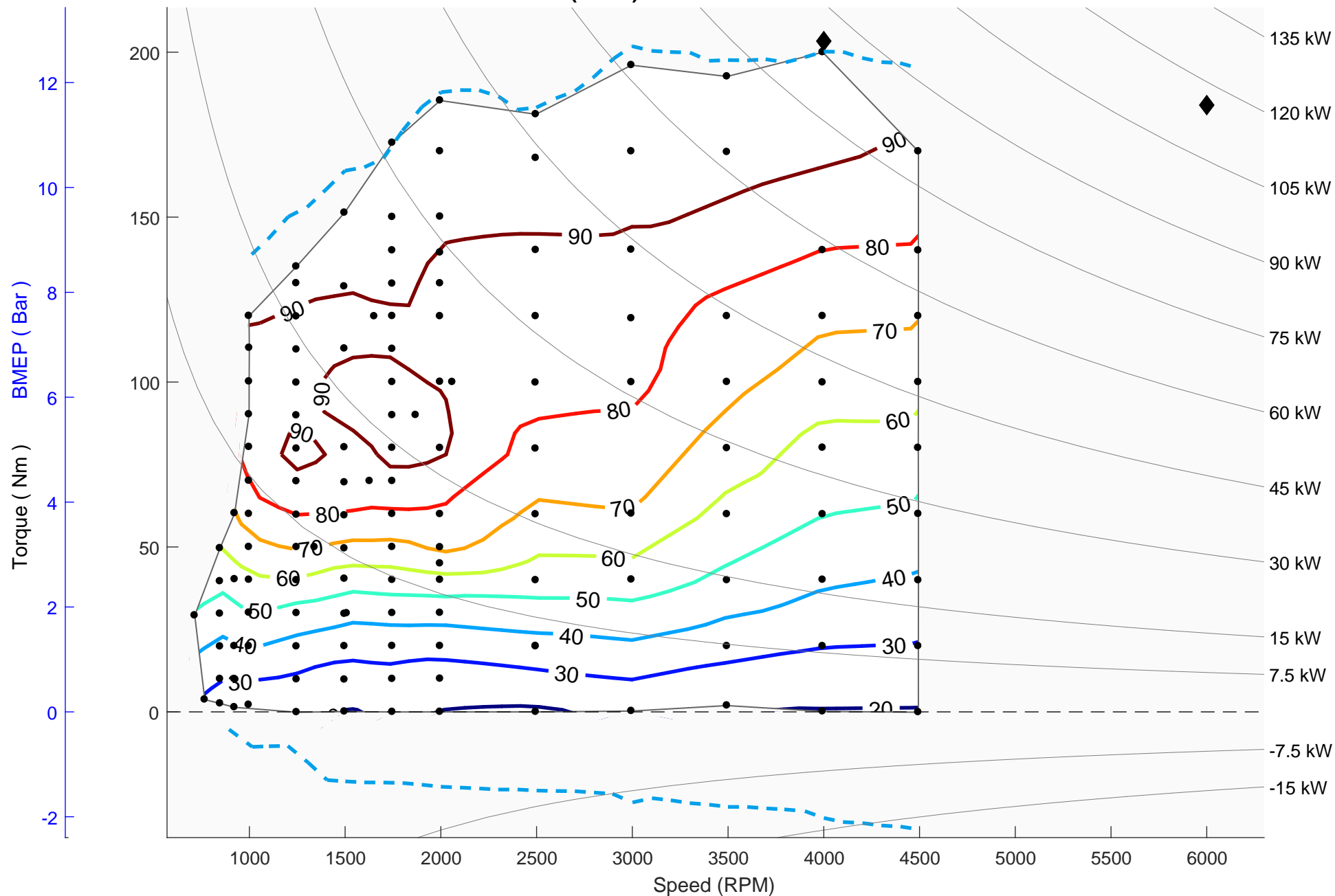
Inlet Air Flow (g/s) - Air Flow Measured with LFE



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

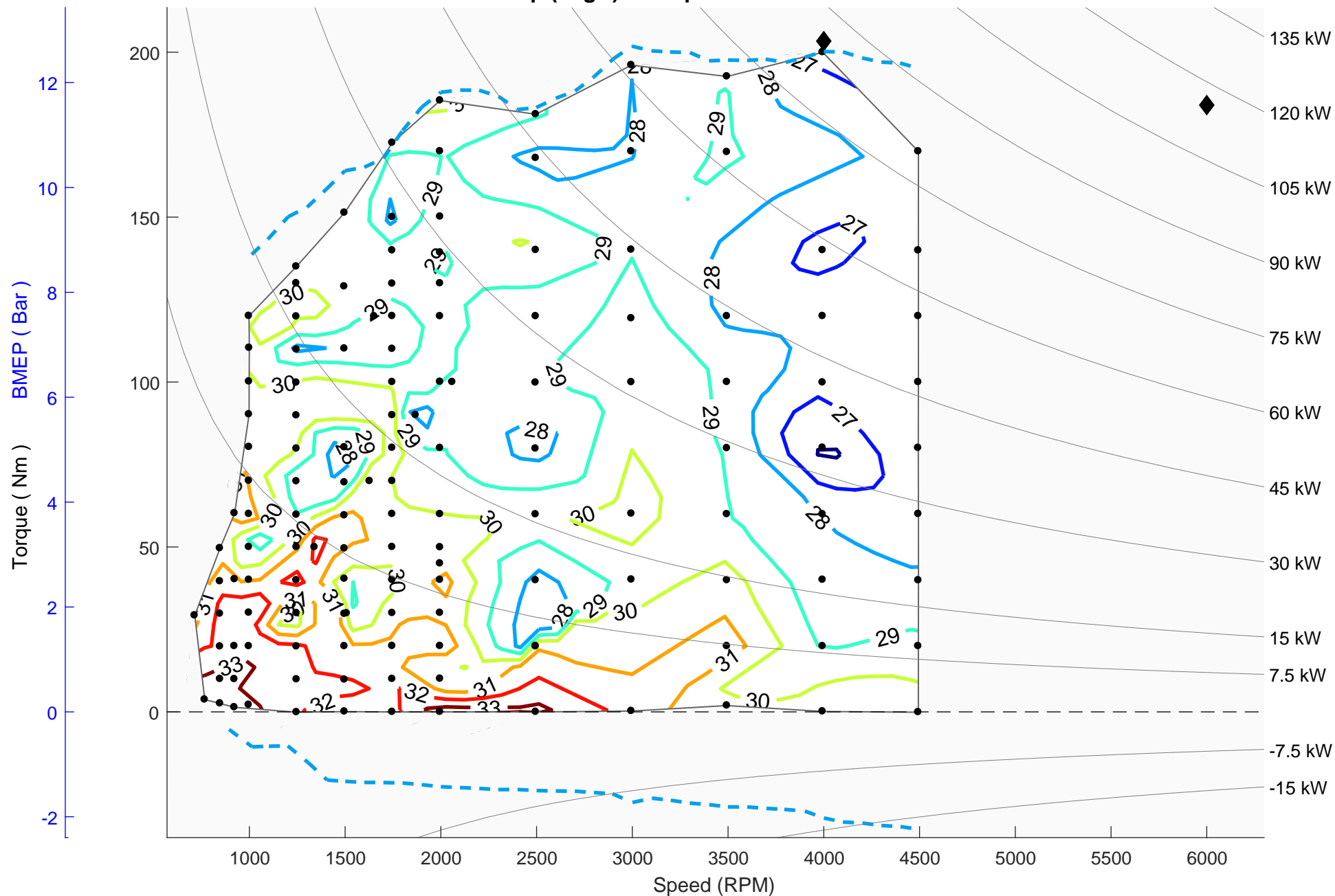
Intake Manifold Press (kPaA) - Pressure Measured in the Intake Manifold



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

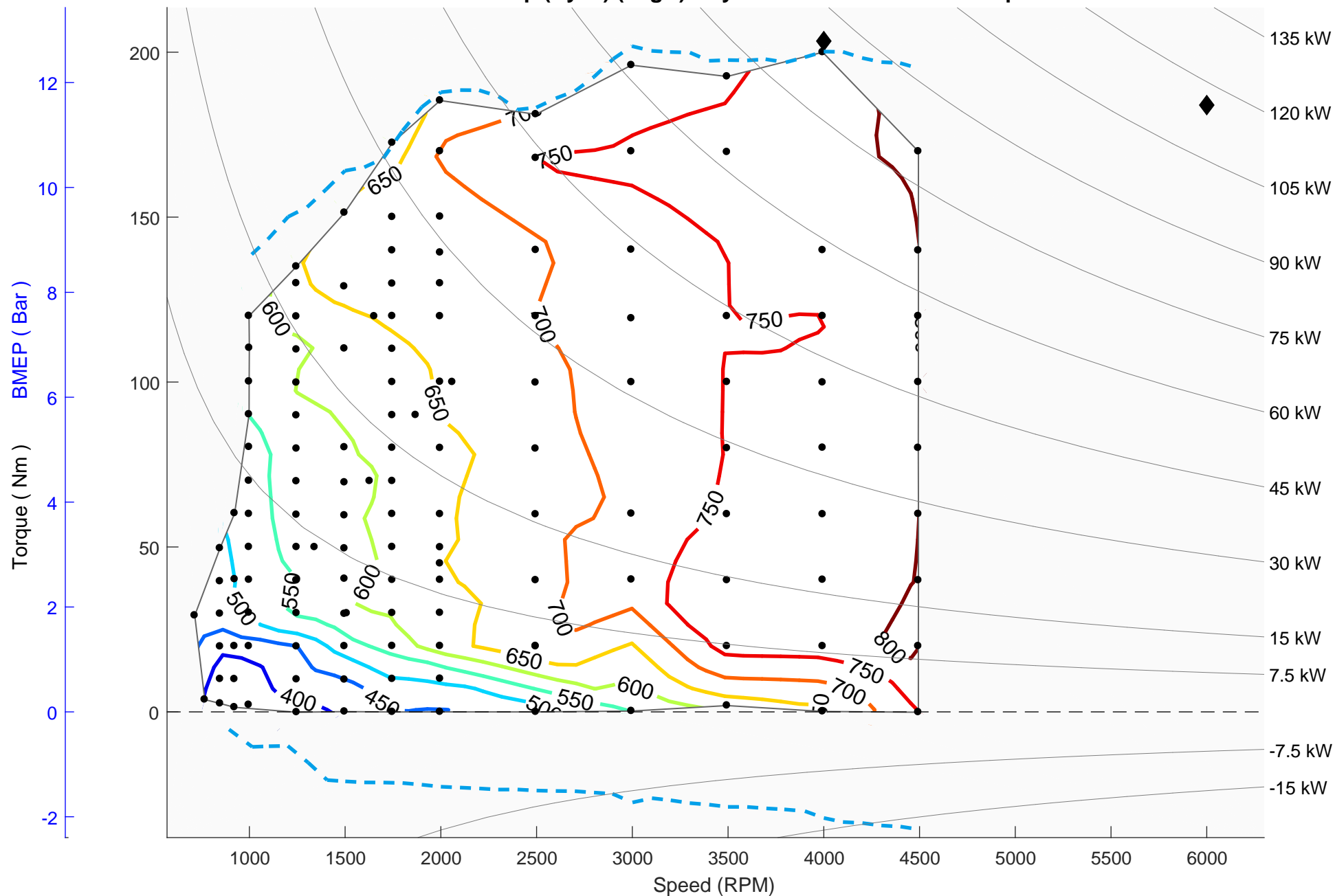
Intake Manifold Temp (degC) - Temperature Measured in the Intake Manifold



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

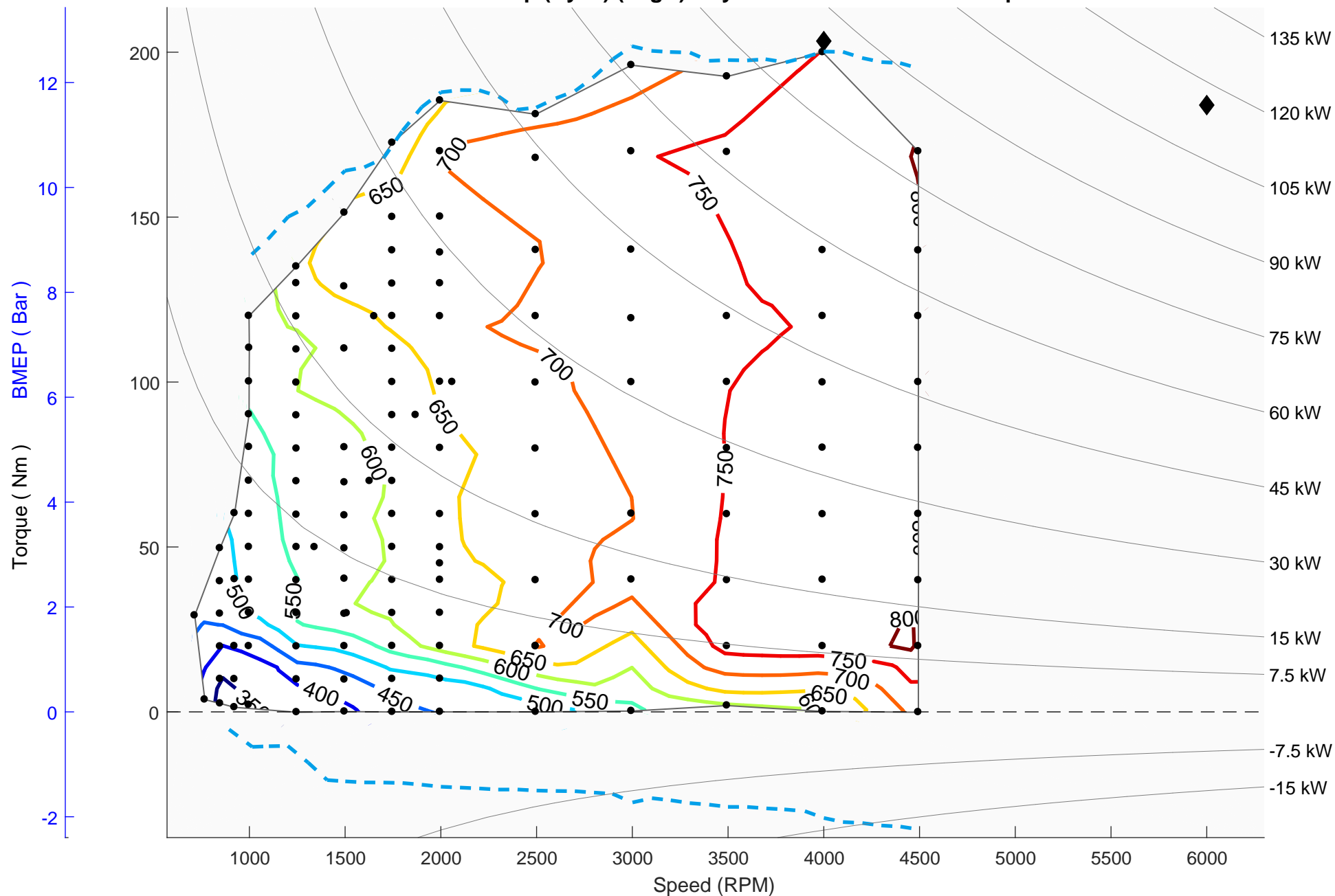
Exhaust Port Temp (Cyl 1) (degC) - Cylinder 1 Exhaust Port Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

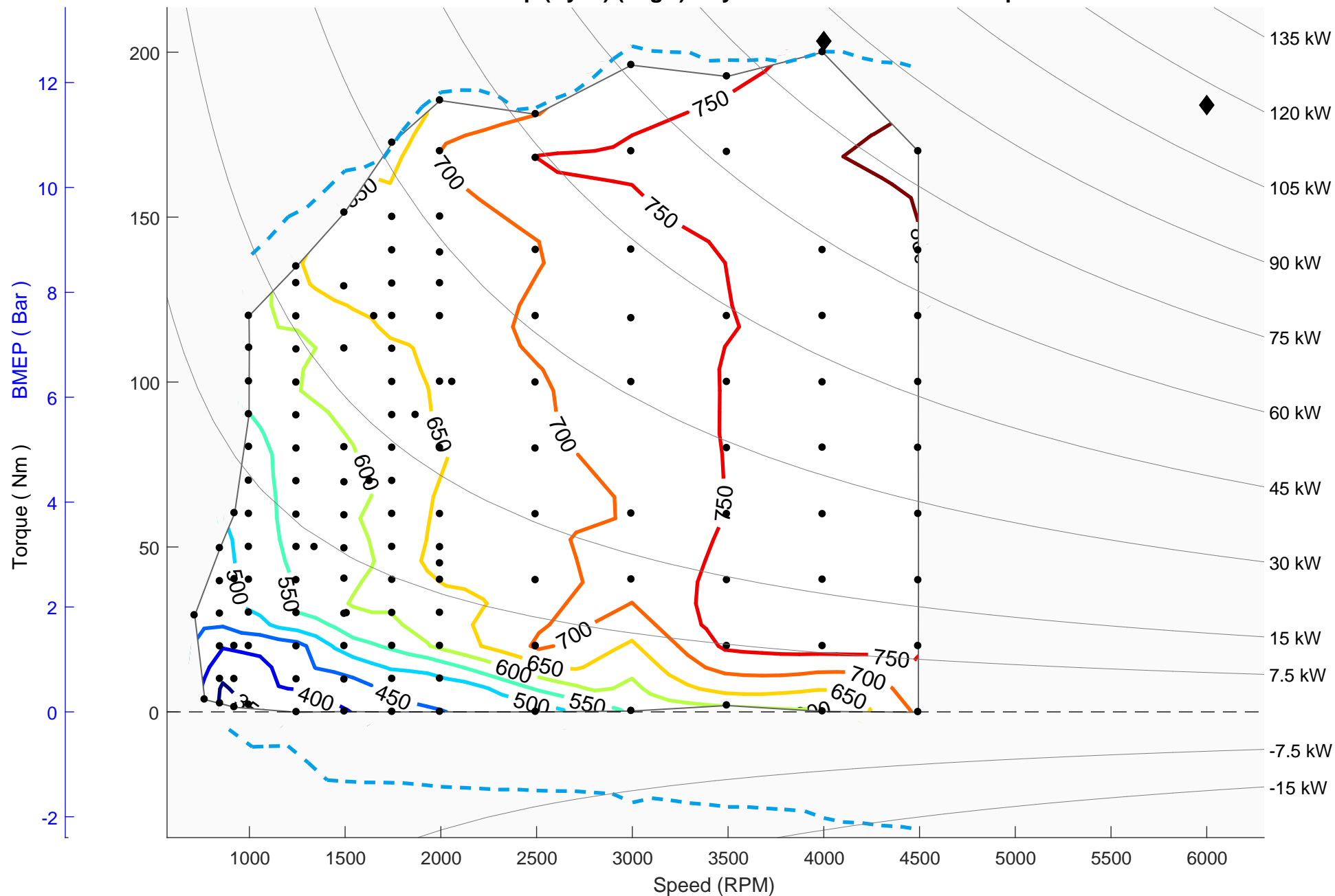
Exhaust Port Temp (Cyl 2) (degC) - Cylinder 2 Exhaust Port Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

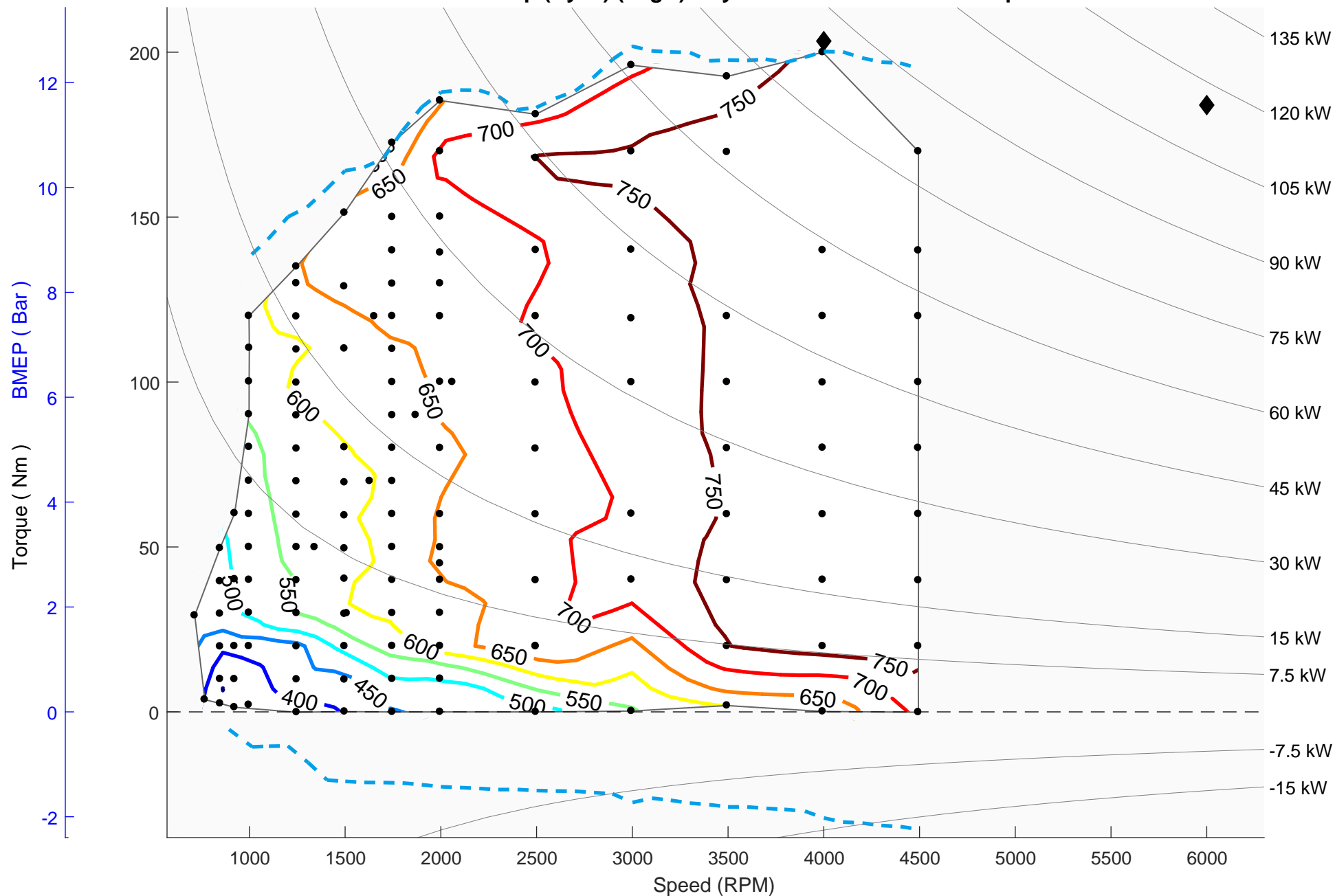
Exhaust Port Temp (Cyl 3) (degC) - Cylinder 3 Exhaust Port Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

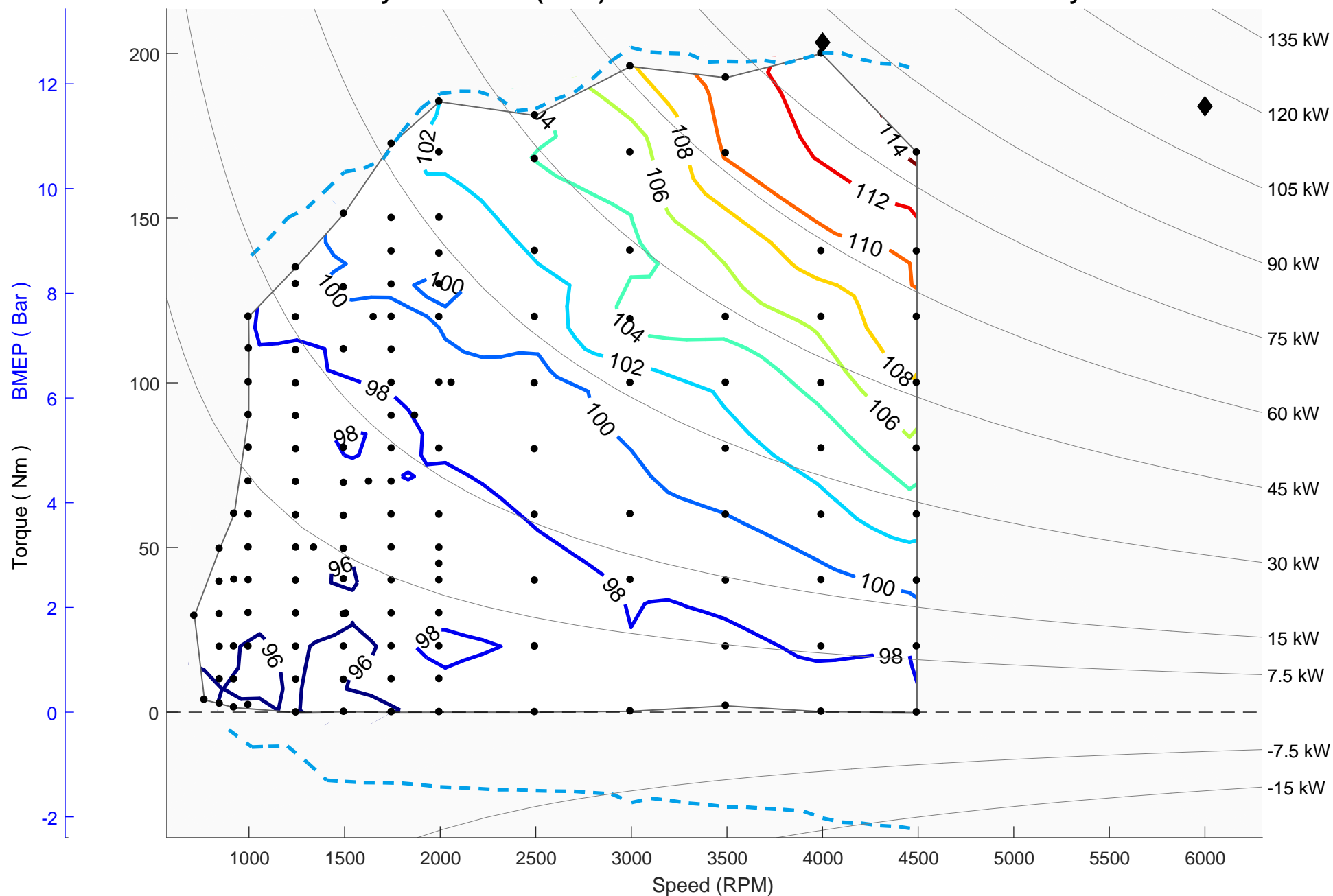
Exhaust Port Temp (Cyl 4) (degC) - Cylinder 4 Exhaust Port Temperature



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

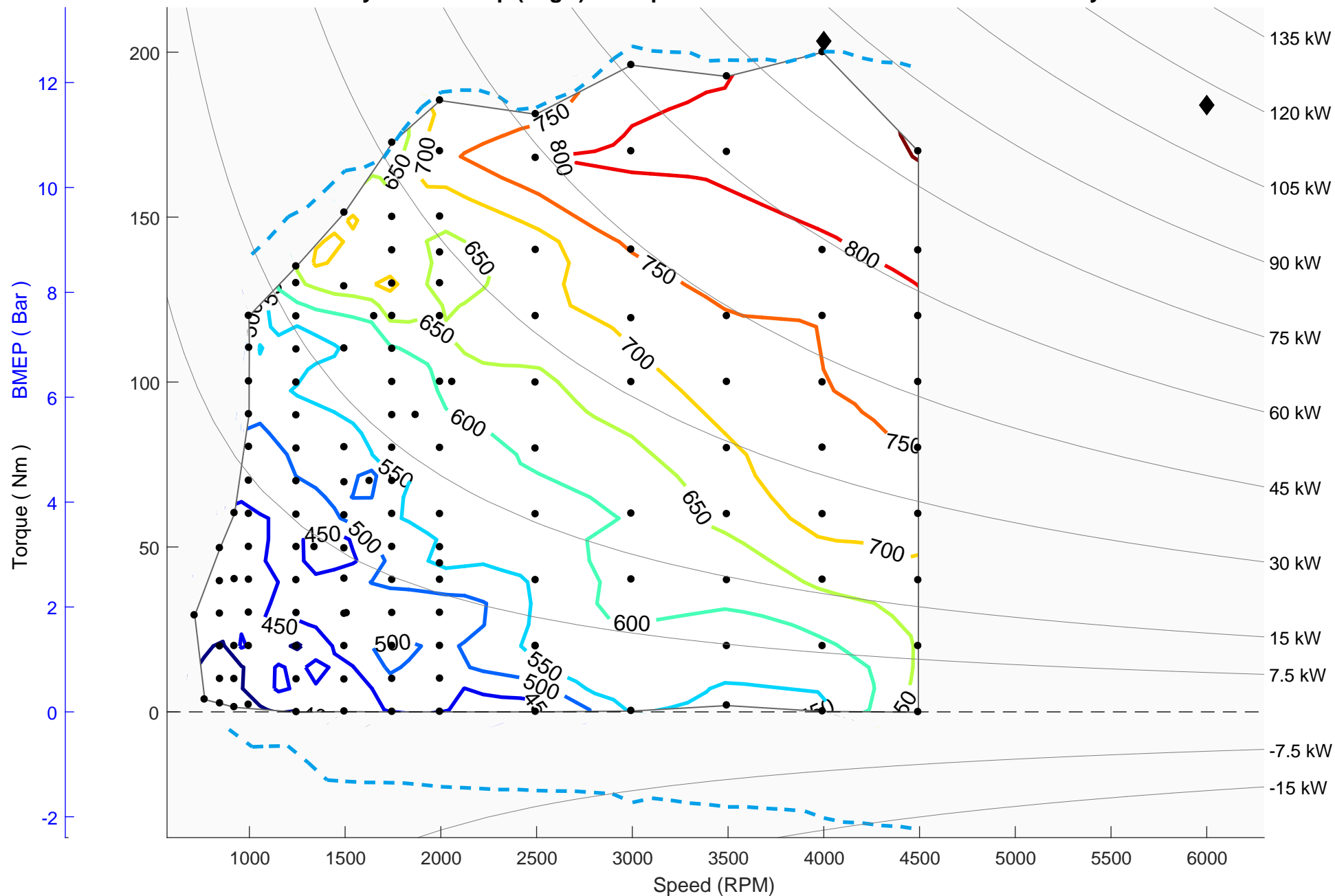
Catalyst Inlet Press (kPaA) - Pressure Measured at the Inlet to the Catalyst



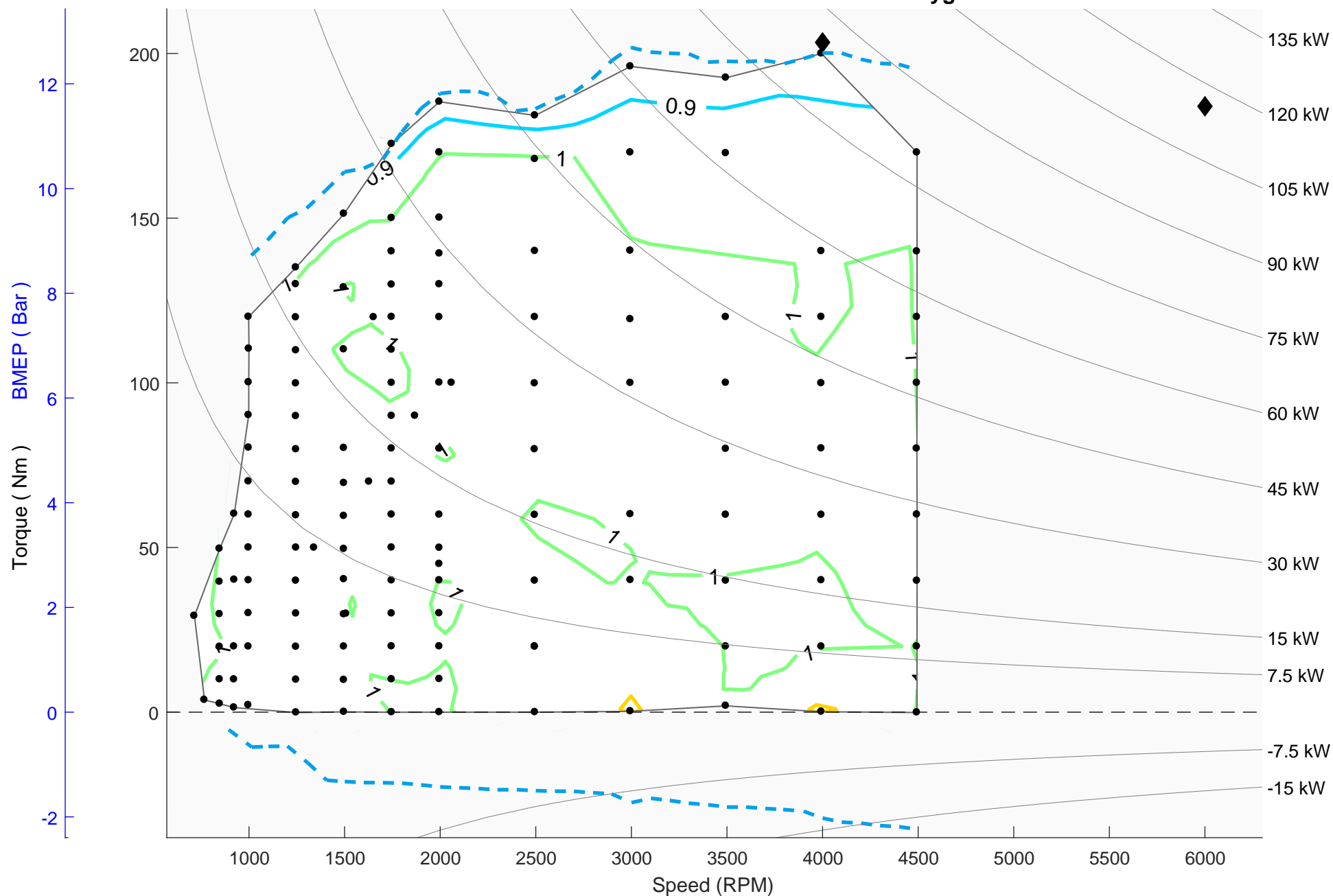
2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

Catalyst Inlet Temp (degC) - Temperature Measured at the Inlet to the Catalyst



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots
Steady State
Exhaust Lambda - Measured via Wideband Exhaust Oxygen Sensor*

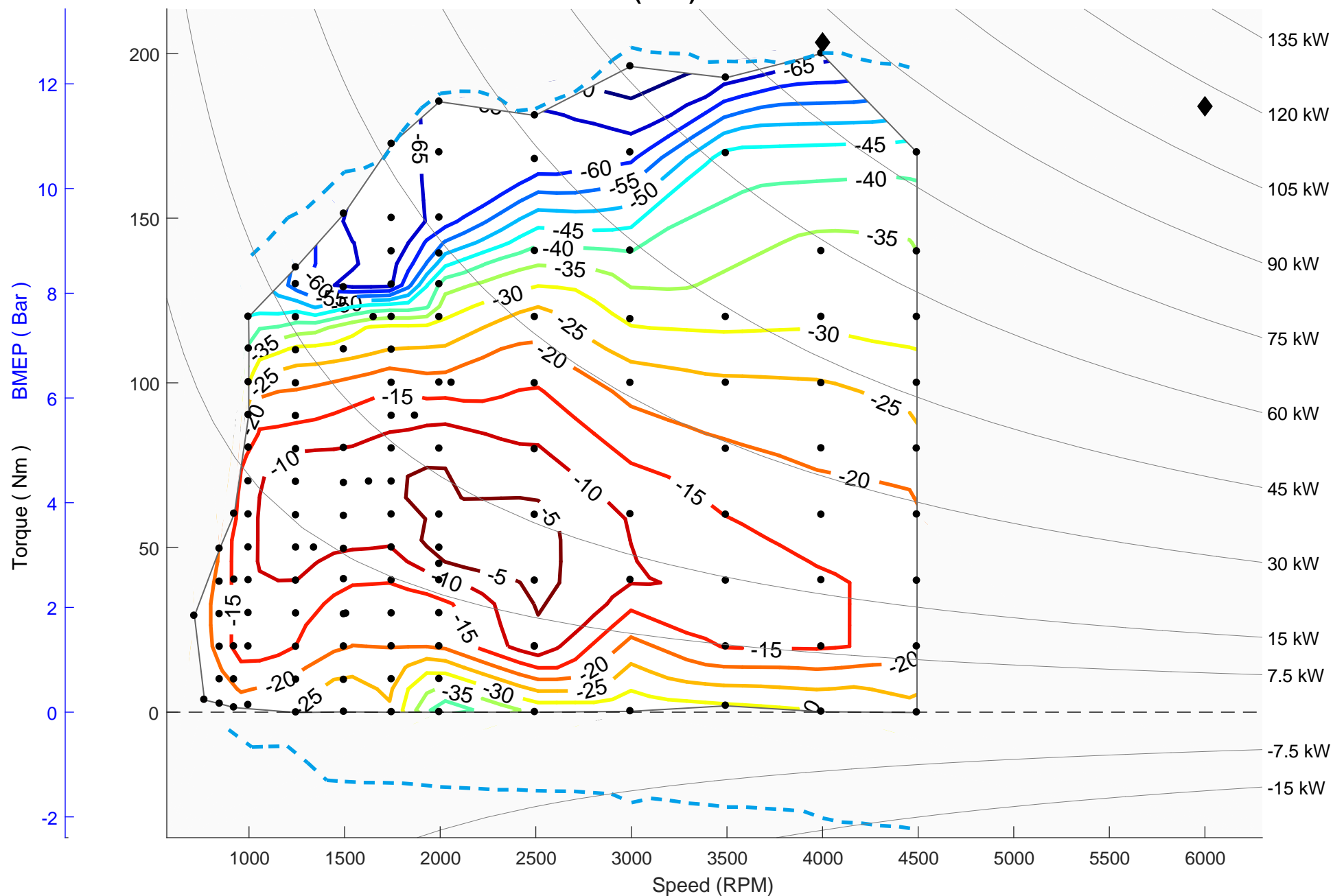


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2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

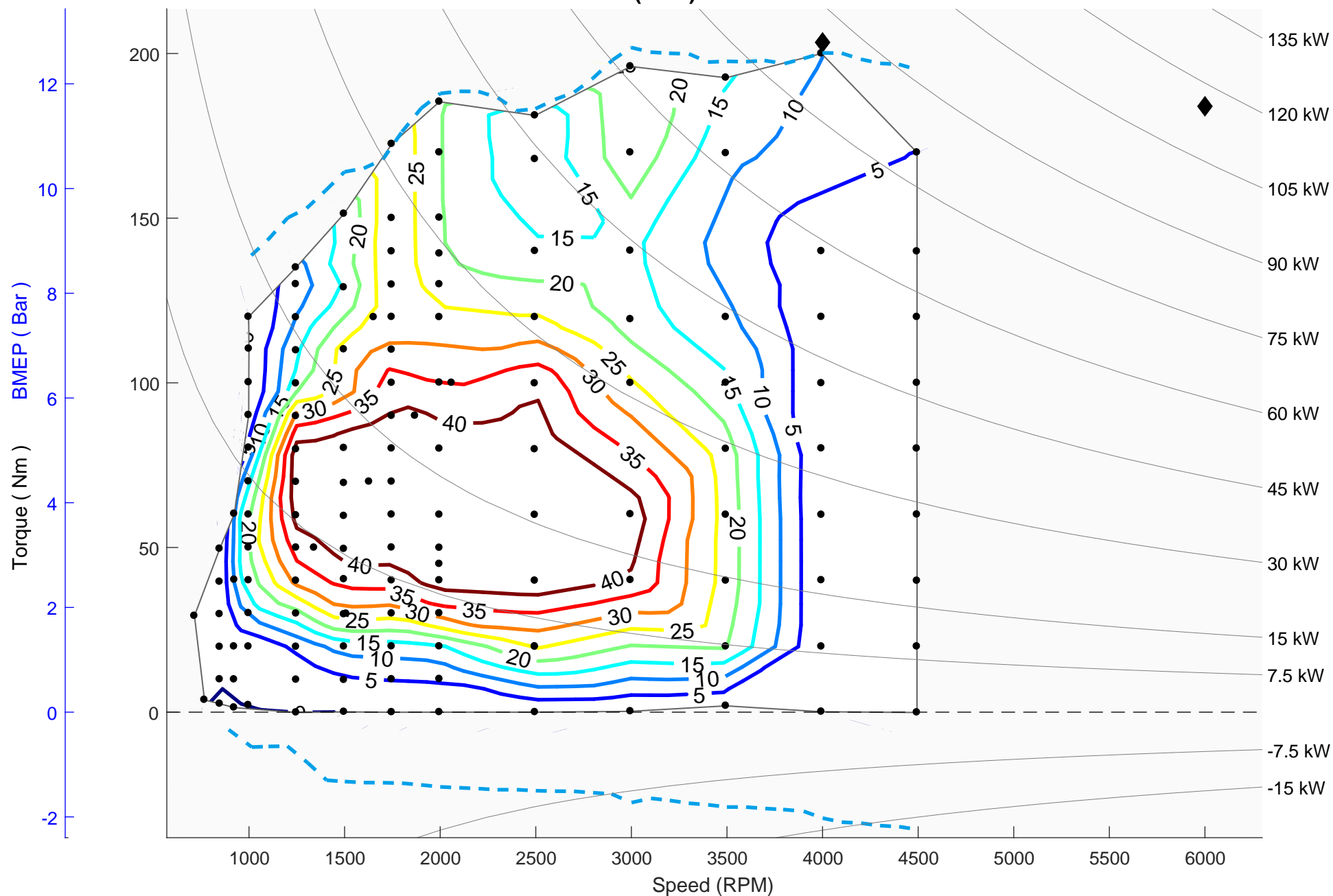
Intake Cam Phase (CAD) - Intake Cam Phaser Retard



2014 Mazda 2.0L SKYACTIV-G Engine Tier 2 Fuel - Test Data Plots

Steady State

Exhaust Cam Phase (CAD) - Exhaust Cam Phaser Retard



Valve Overlap (CAD) - Estimated Valve Timing Overlap from Cam Phase Measurements

