



Figure 3. Comparison between the prediction results and the actual QAR data

5. CONCLUSIONS

Through stepwise linear regression, this paper models the fuel flow of Boeing 737-700 in the climb phase, verifies the accuracy of the model, and applies the model to predict the fuel flow of the aircraft in an actual flight. The model accuracy and prediction error both fell in the acceptable range.

Of course, the model accuracy could be further improved, especially the relative high contingency of the prediction results. The high contingency is attributable to the limited number of QAR data files. This problem will be solved in future research.

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