

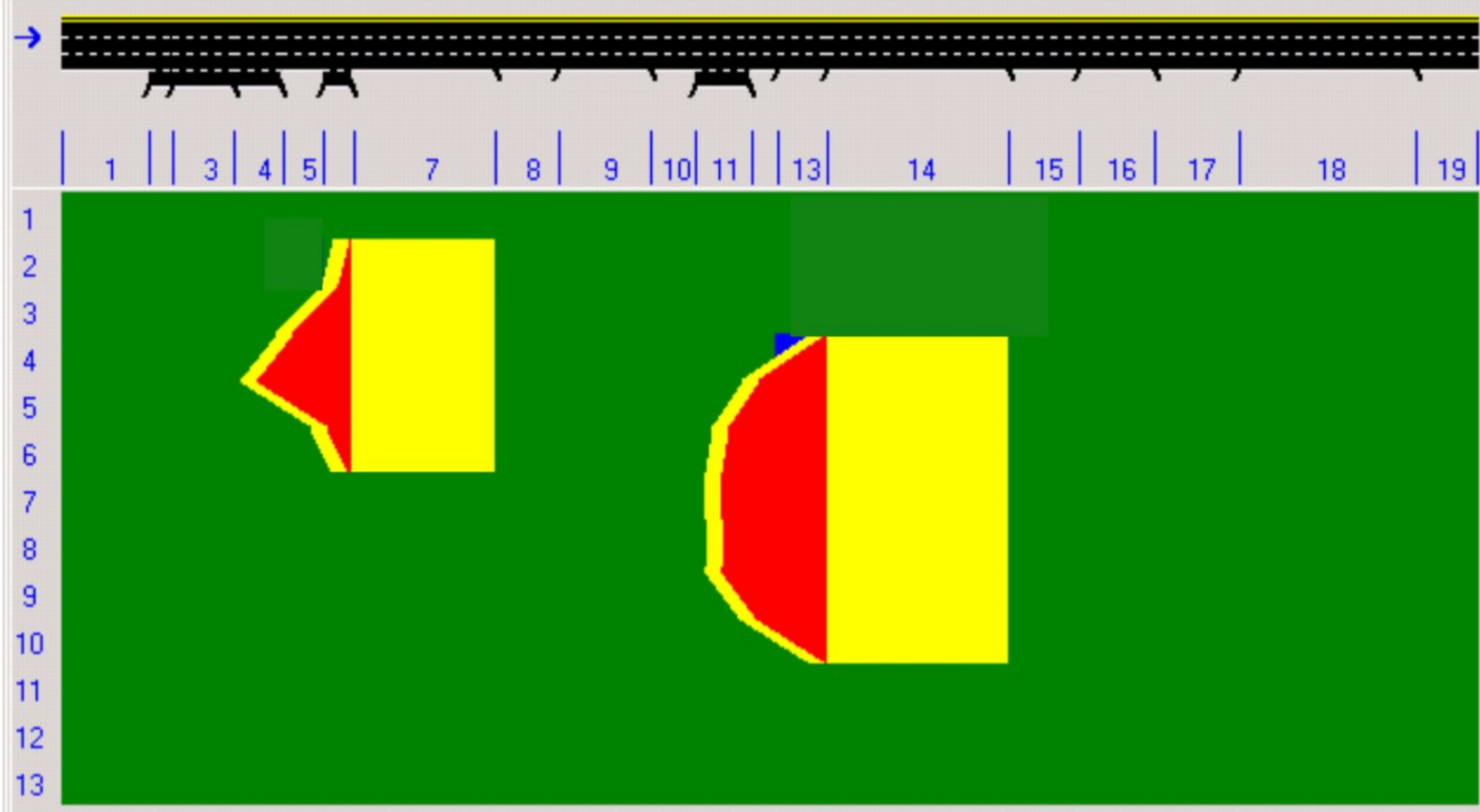
FREEWAY CORRDOR MODELING

Intelligent Transportation Systems

Team: Bingyi Fan, Yingying Chen



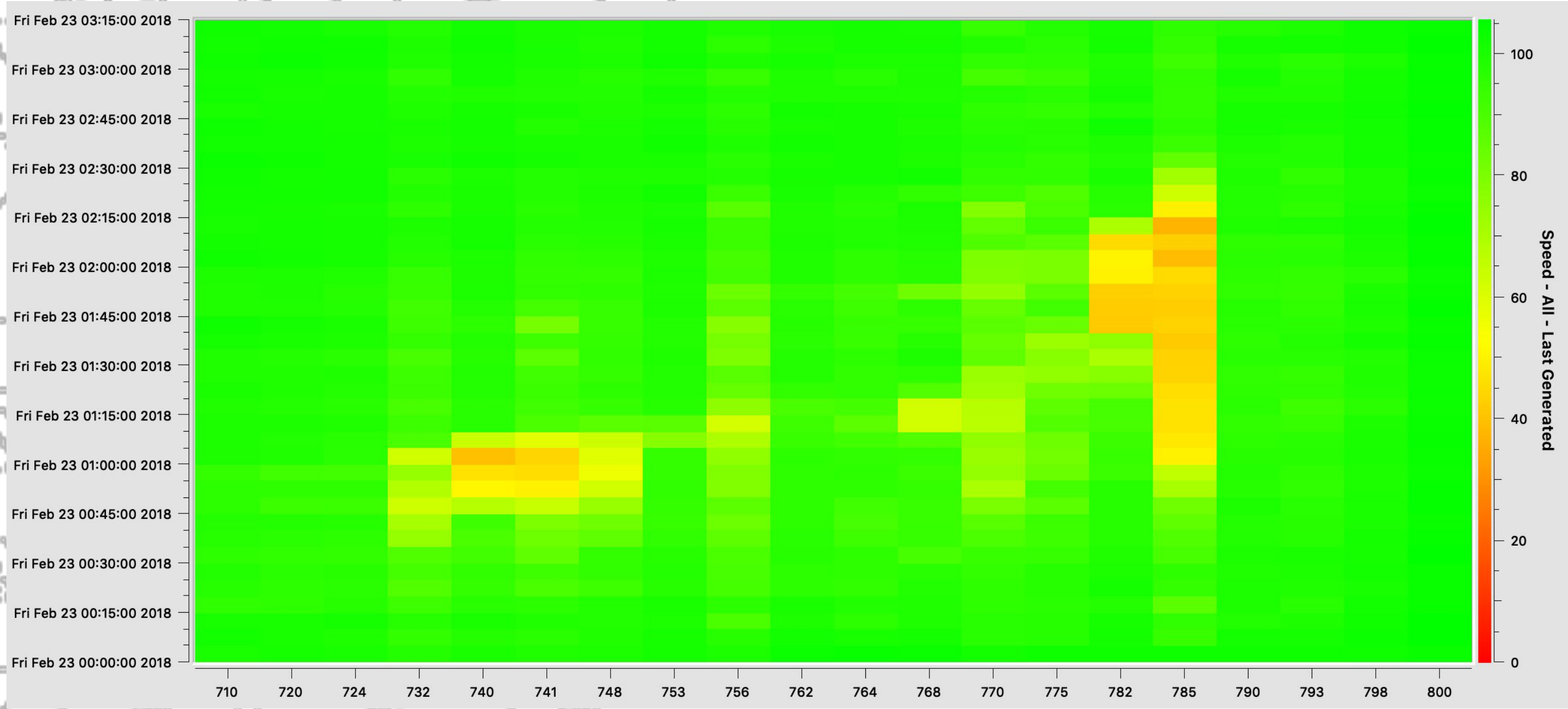
Study Section



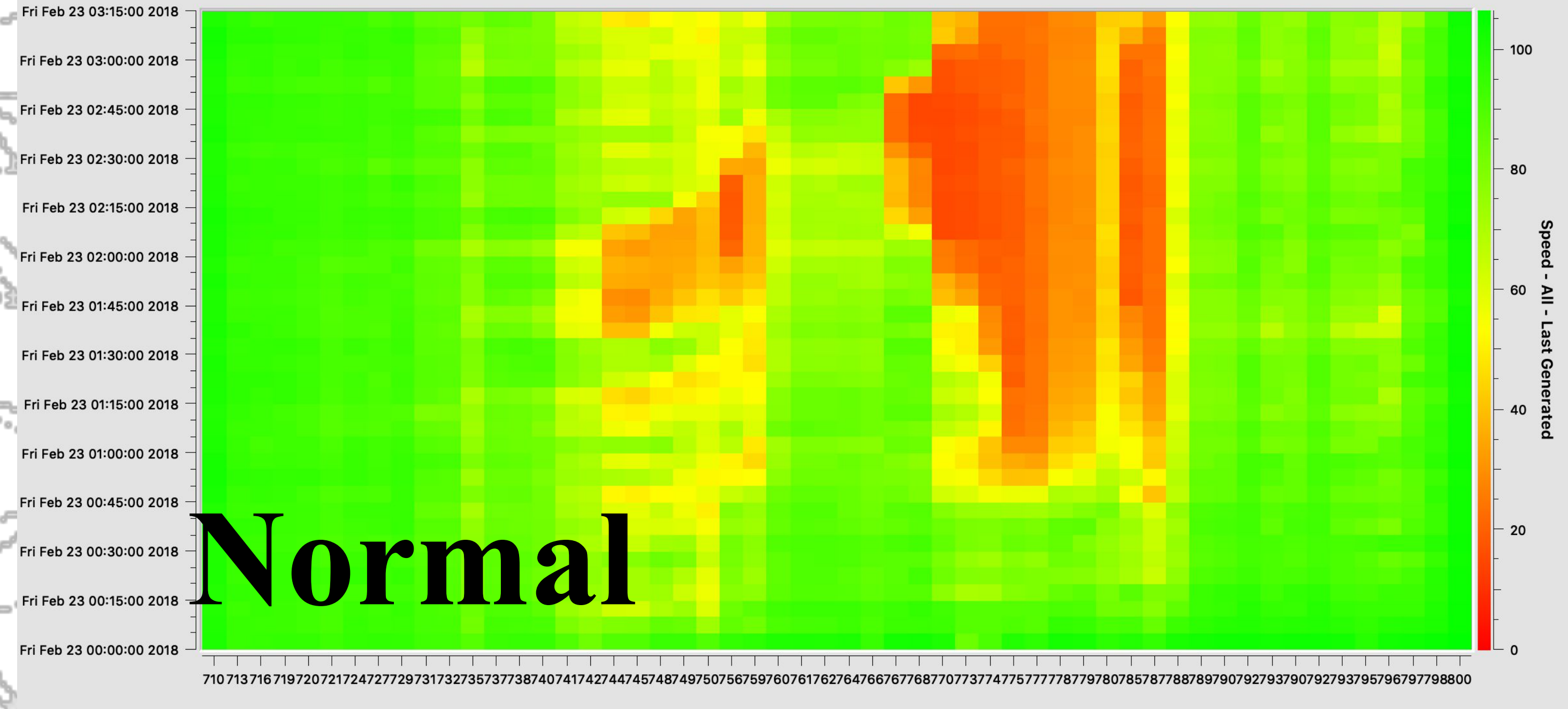
Model Calibration

Modified the parameters such as acceleration / deceleration, and parameters of the car following model including gap and sensitivity factor.

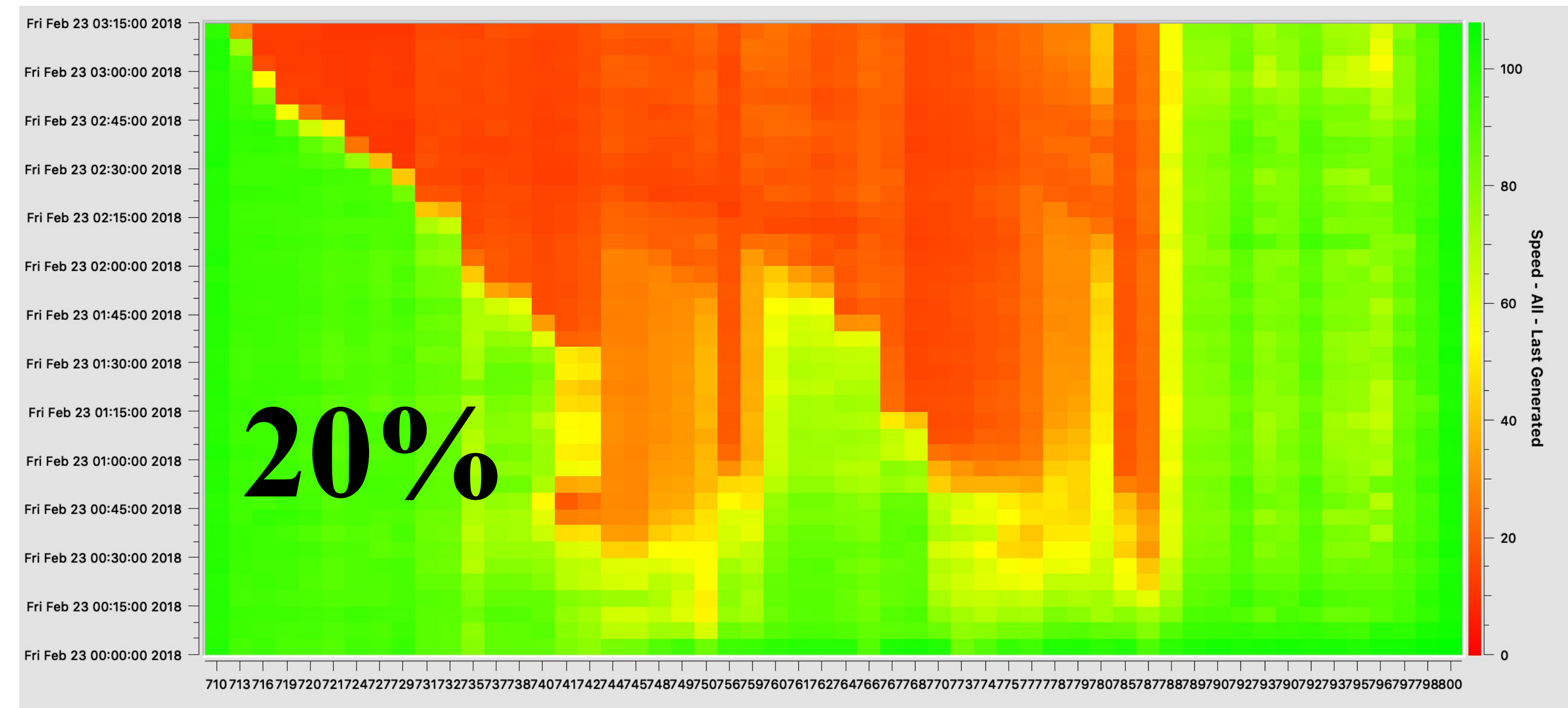
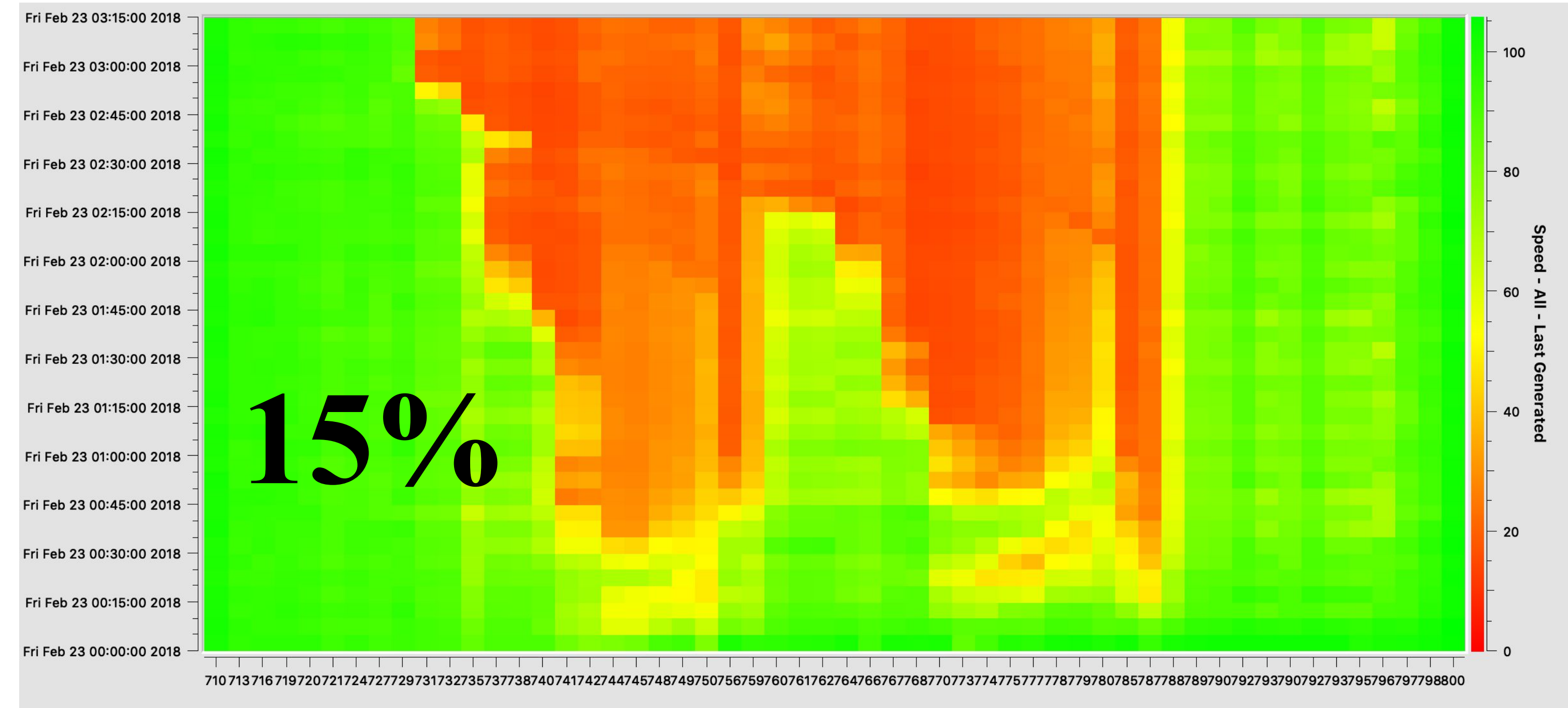
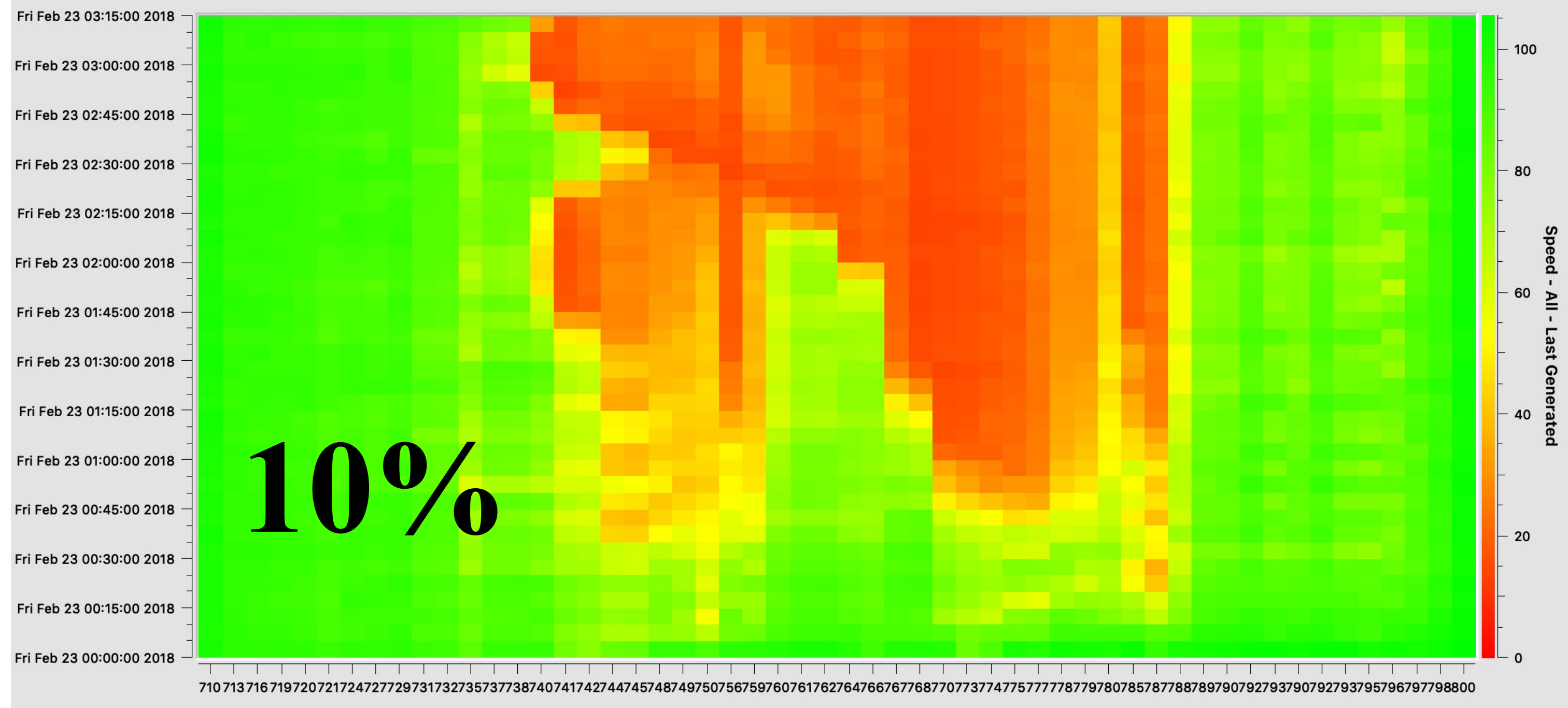
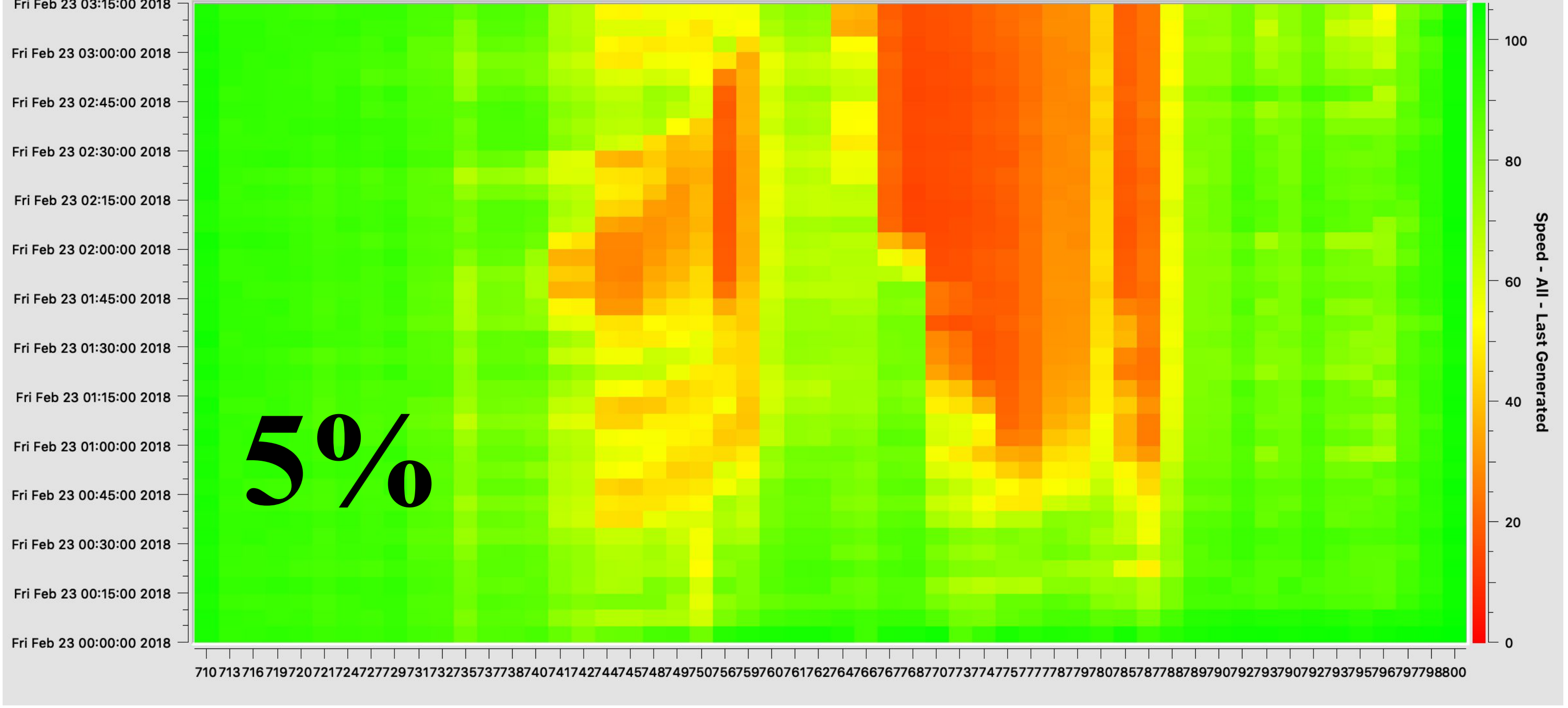
Before:



After:



Impacts of Traffic Growth

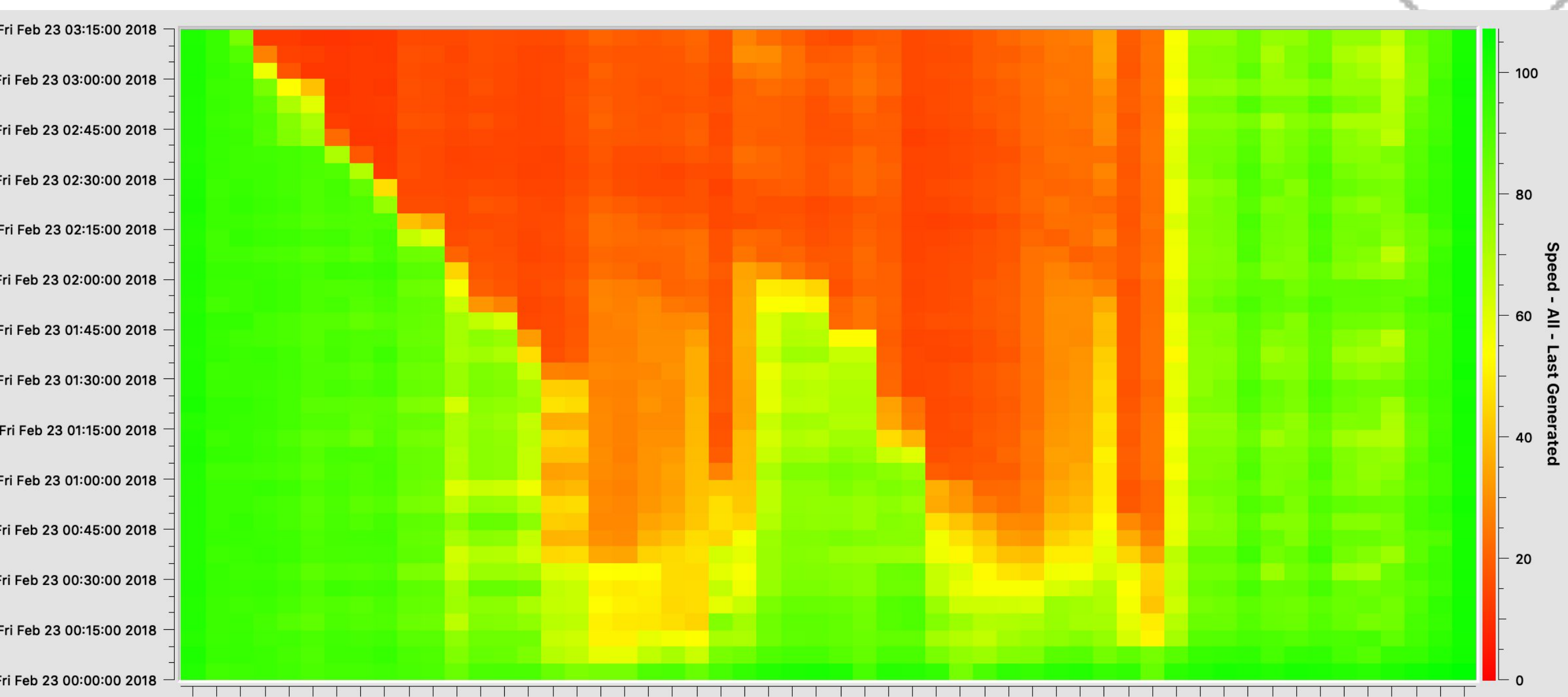
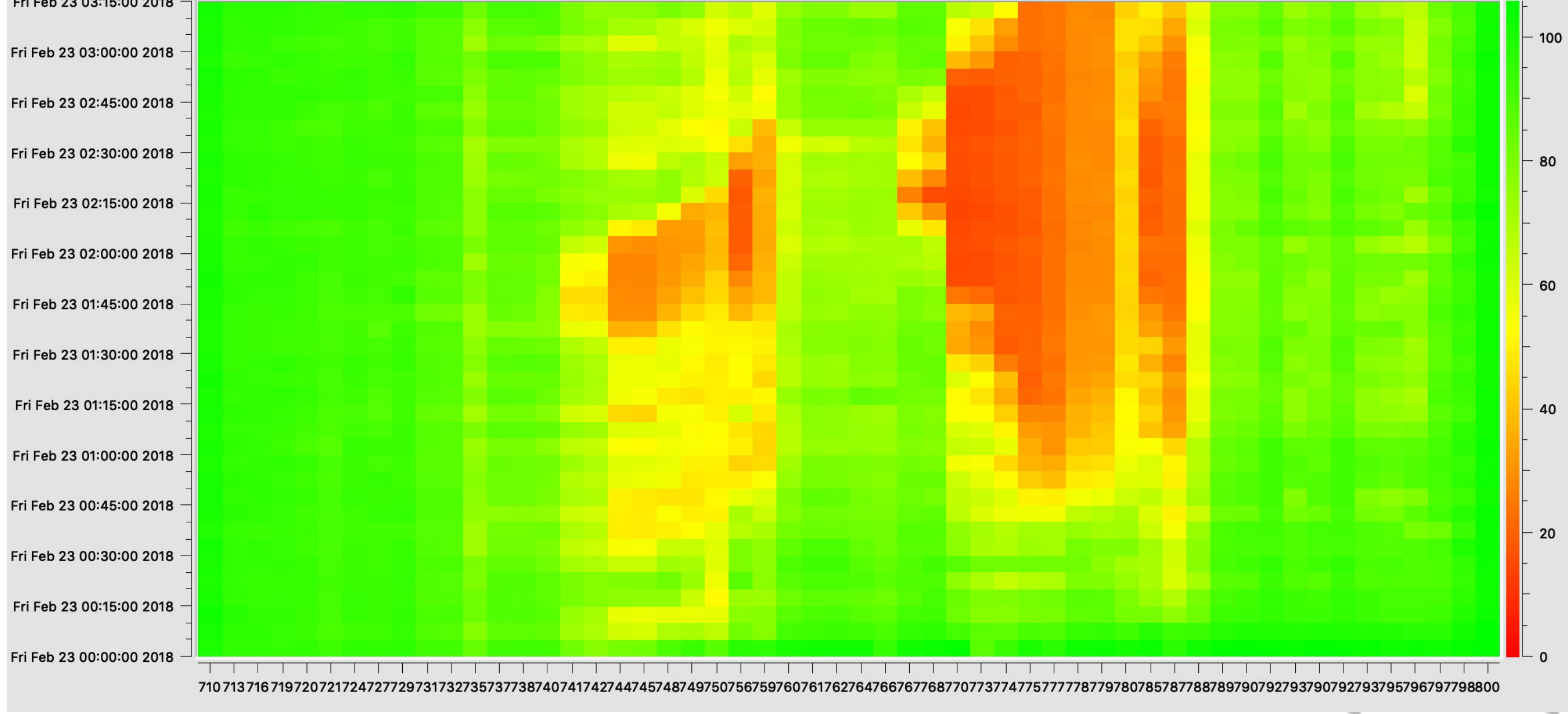


Ramp Metering

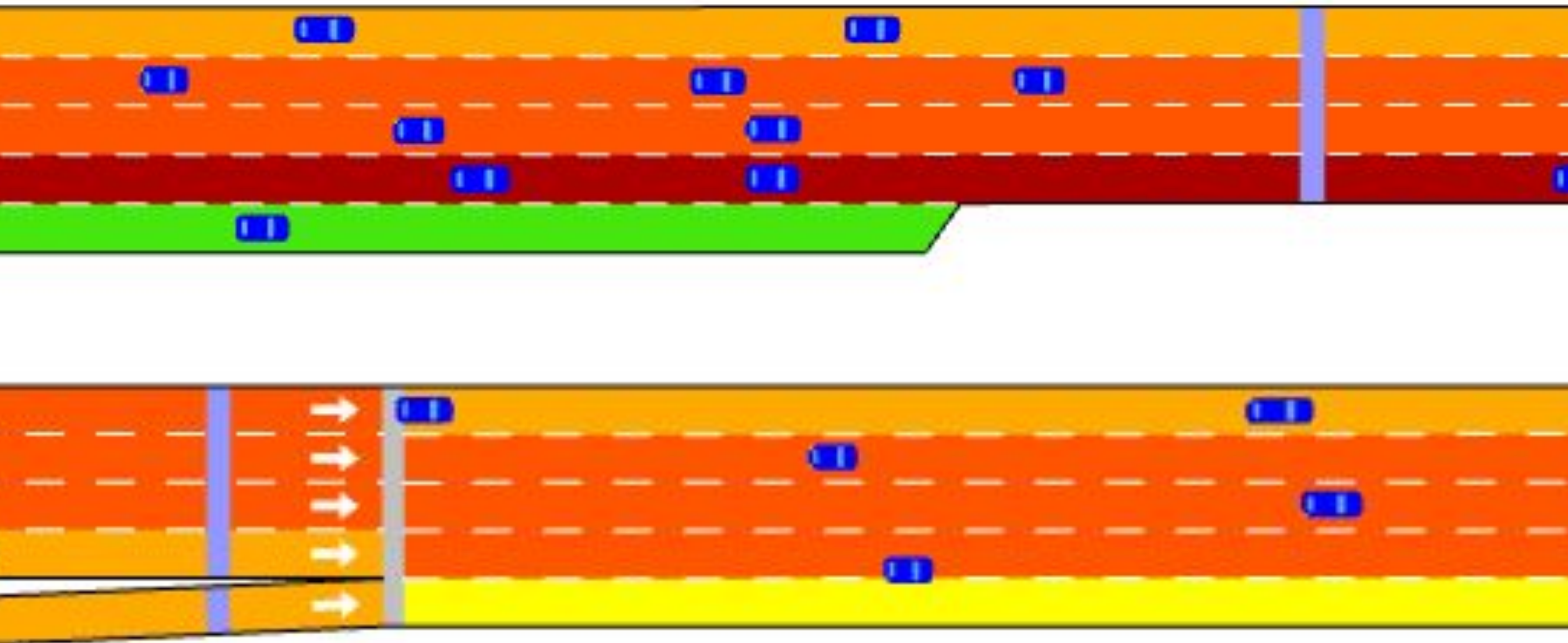
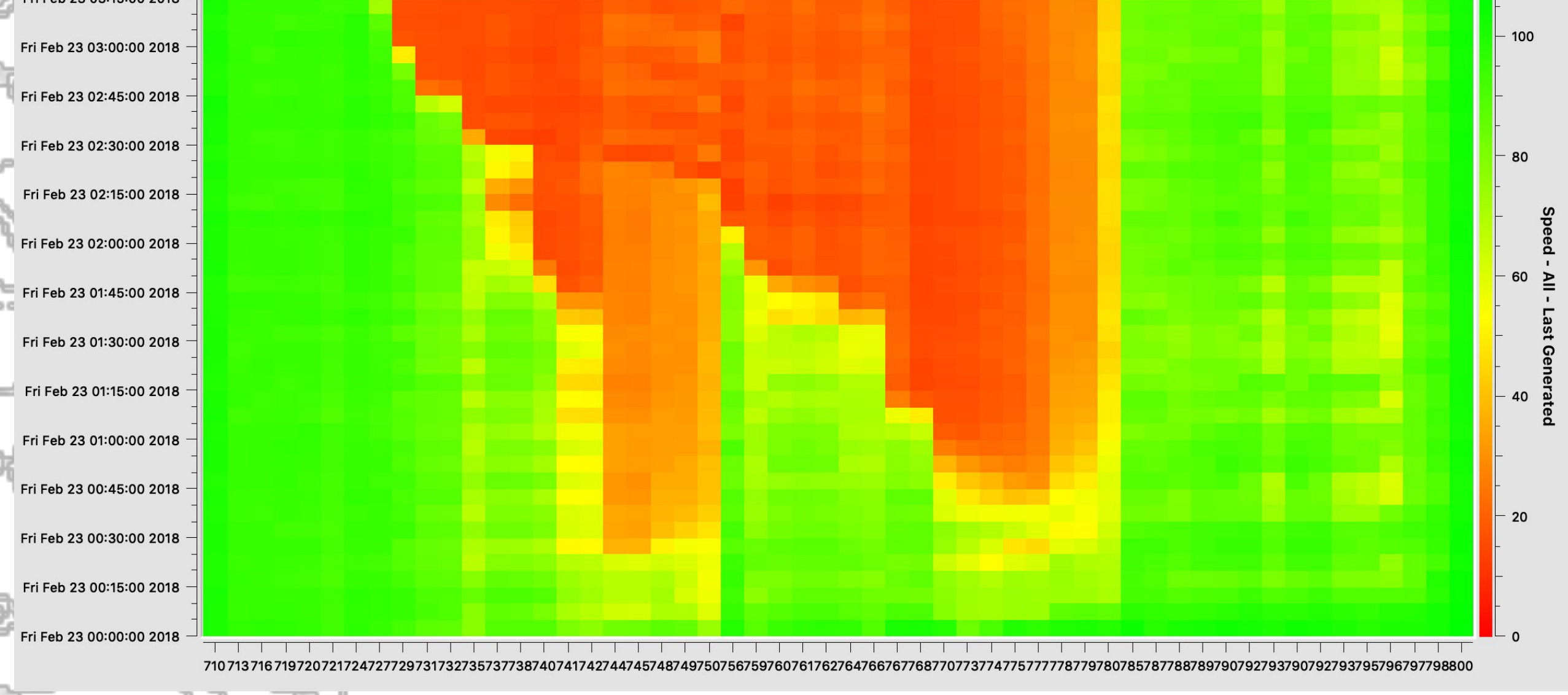
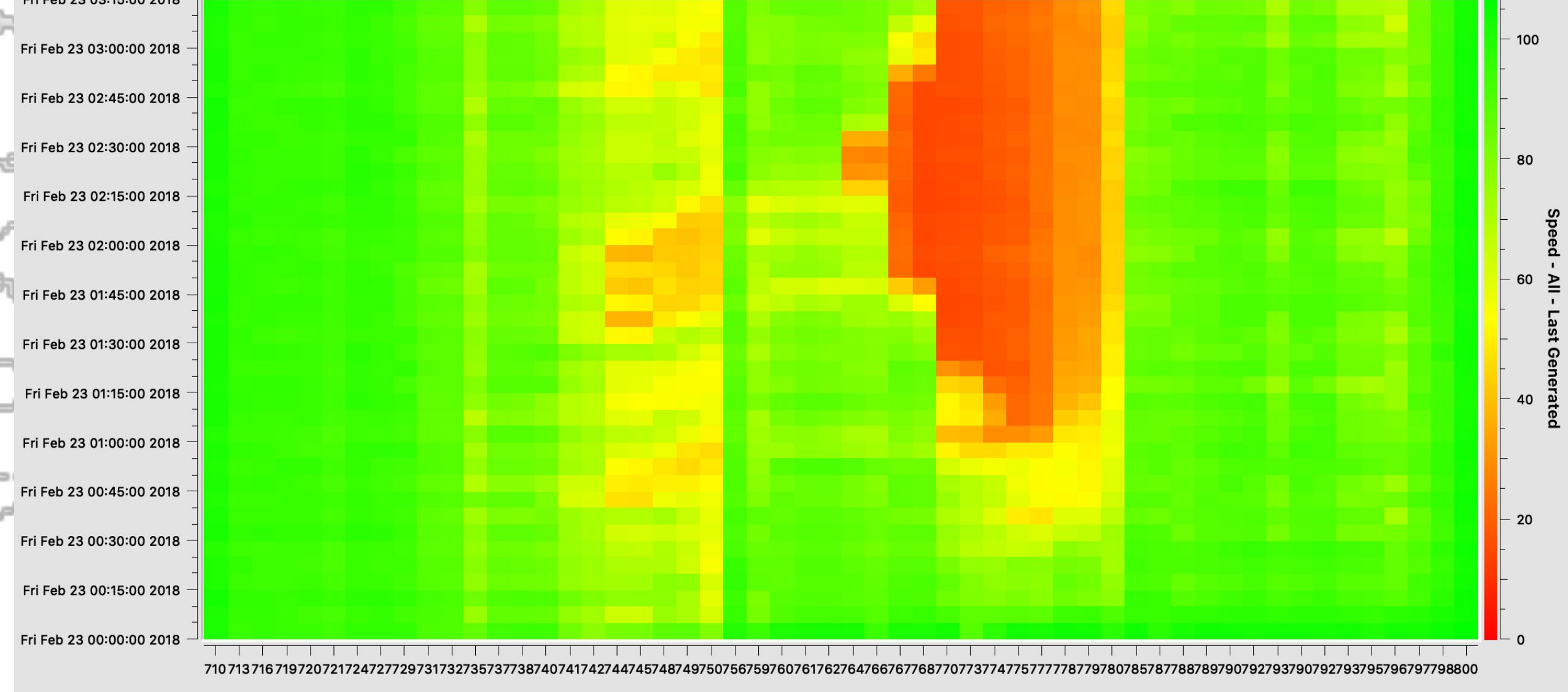
Ramp Fine

Ramp Jam

Incident Management



Geometric Expansion



Concluding Remarks

Ramp metering and geometric expansion can substantially mitigate highway congestion during rush hours. A good incident management plan has a significant but less substantial impact.