Dear Ashley,

Please find below an abstract for a proposed paper/presentation at the PEMS 2019 conference for your consideration:

*The tailpipe NOx emissions from in-service Euro V and Euro VI buses have been measured using specialised fast response emissions analyzers to provide high resolution data during the transients inherent within real world driving.  The sharp "spikes" of NOx have furthermore been plotted against accurate RTK GPS co-ordinates to provide spatially accurate positioning of the high concentration wake of NOx. The results clearly reveal the localised yet high levels of NOx produced during typical bus manoeuvres including: bus stops, traffic intersections, speed bumps and extended idling periods.  The associated dashcam footage contextualises the emissions events with traffic conditions and street geography.  Correlations are made between the exhaust temperature (affected by driving conditions) and the tailpipe NOx. The gear change settings and degradation of aftertreatment hardware are identified as probable causes of frequent high levels tailpipe NOx events.*