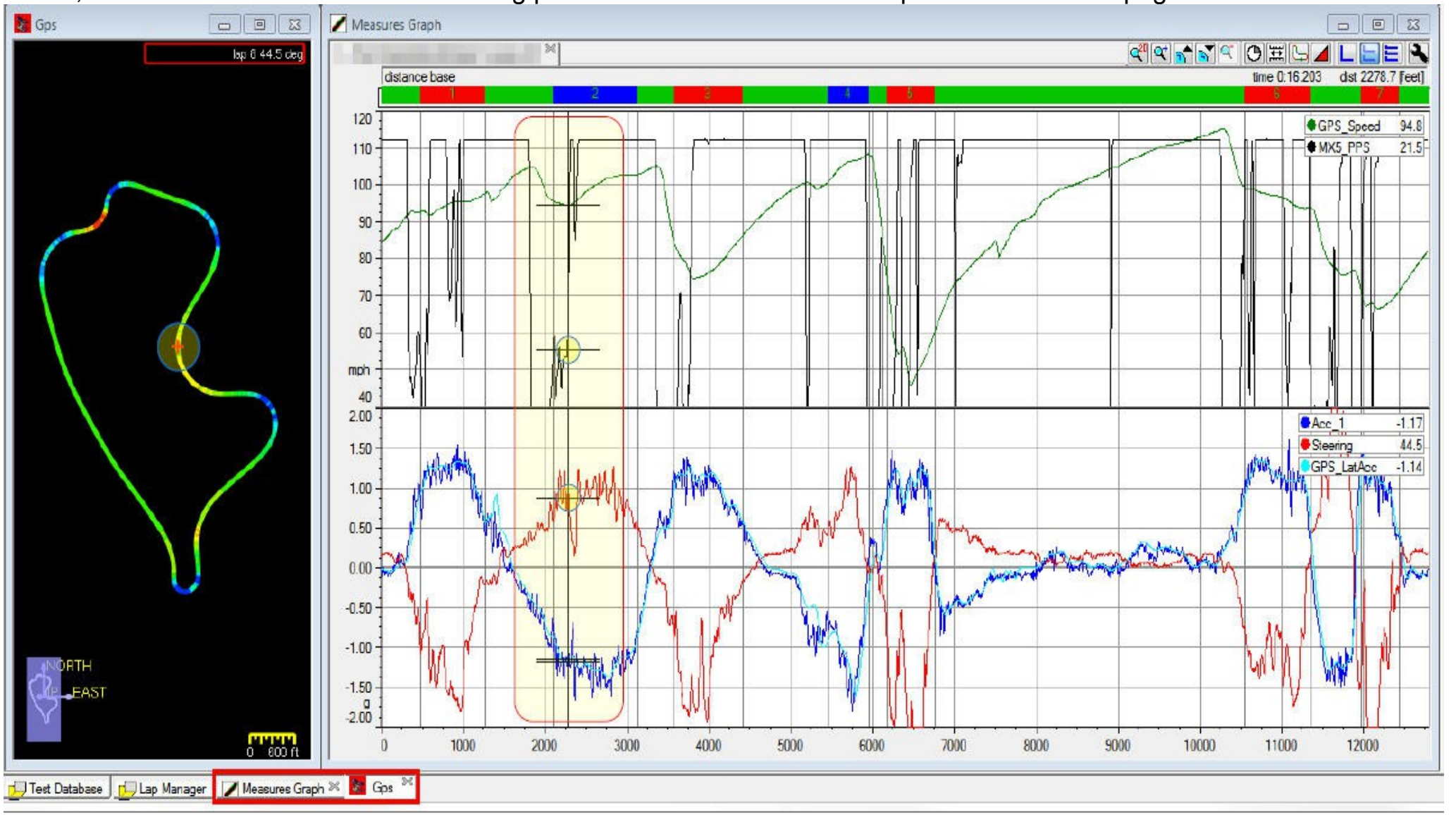
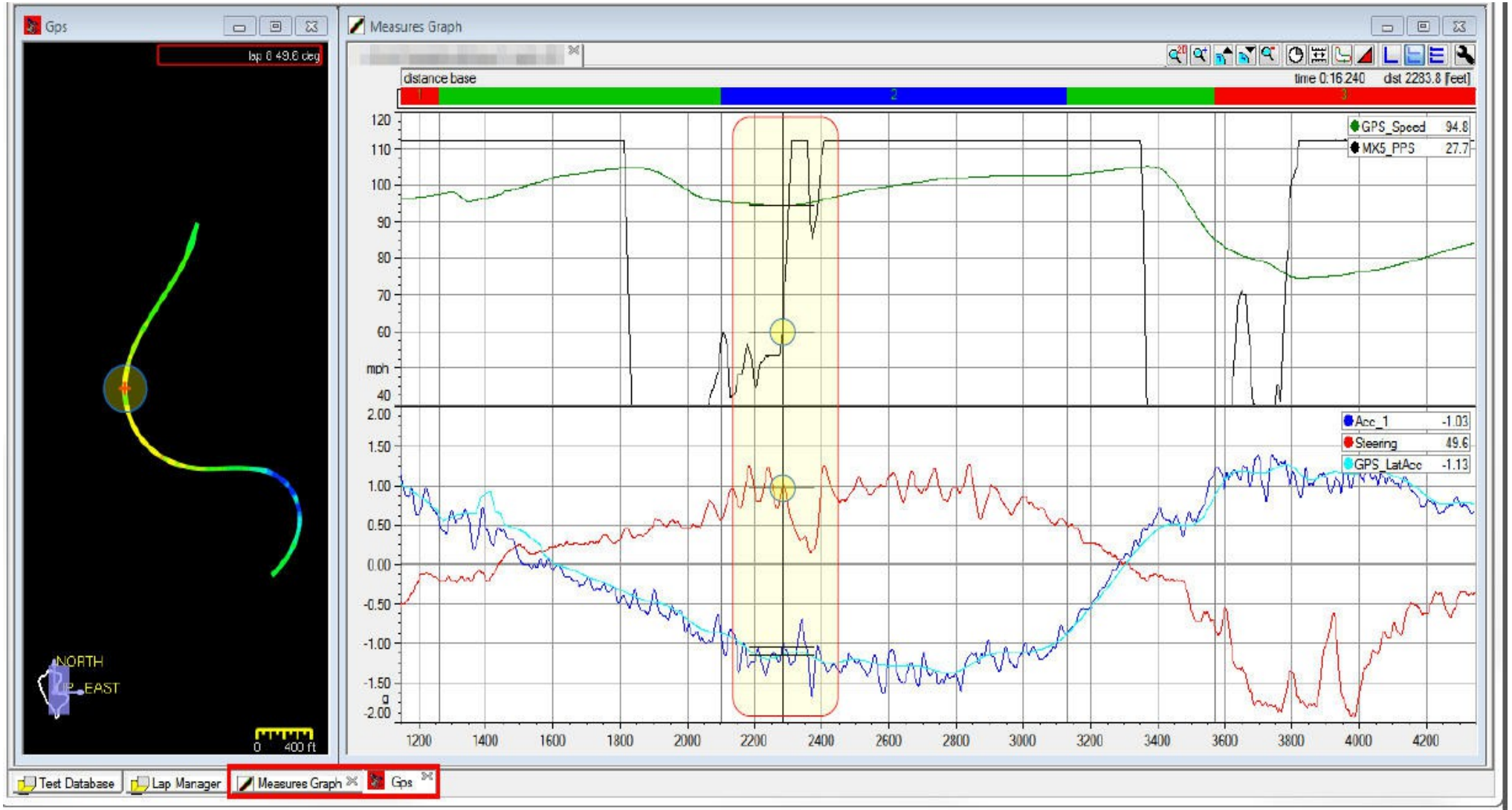
Mr. Caddell talks about analysis looking for understeer then oversteer. The example below corner is fast, over a hill, tricky.... So errors are likely. Steering is red curve, G sensor is blue, and ground speed is in the top pair as well as throttle. When you turn the wheel and the Gs increase all is well, but if the Gs curve levels out as the wheel continues to to turn the wheel, this is understeer. Z But the following plot will show oversteer. Zoom plotted on the next page.



WITH A STEERING AND LATERAL ACCELERATION SENSORS, IDENTIFYING UNDER/OVER STEERING AREAS CAN BE SEEN. HERE WE ALSO HAVE A THROTTLE POSITION TO HELP UNDERSTAND WHY THE UNDER/OVERSTEER HAPPENED. INSIDE THE RED HIGHLIGHTED AREA; THE ENTRY IS OK BUT AS SOON AS HE WENT TO FULL THROTTLE, SNAP OVERSTEER. I HAVE ALSO SHOWN BOTH THE SENSORS AND GPS BASED LATERAL ACCELERATION DATA. INTERESTING HOW GOOD THE CALCULATED GPS_LATACC IS WITH AIM DATA.

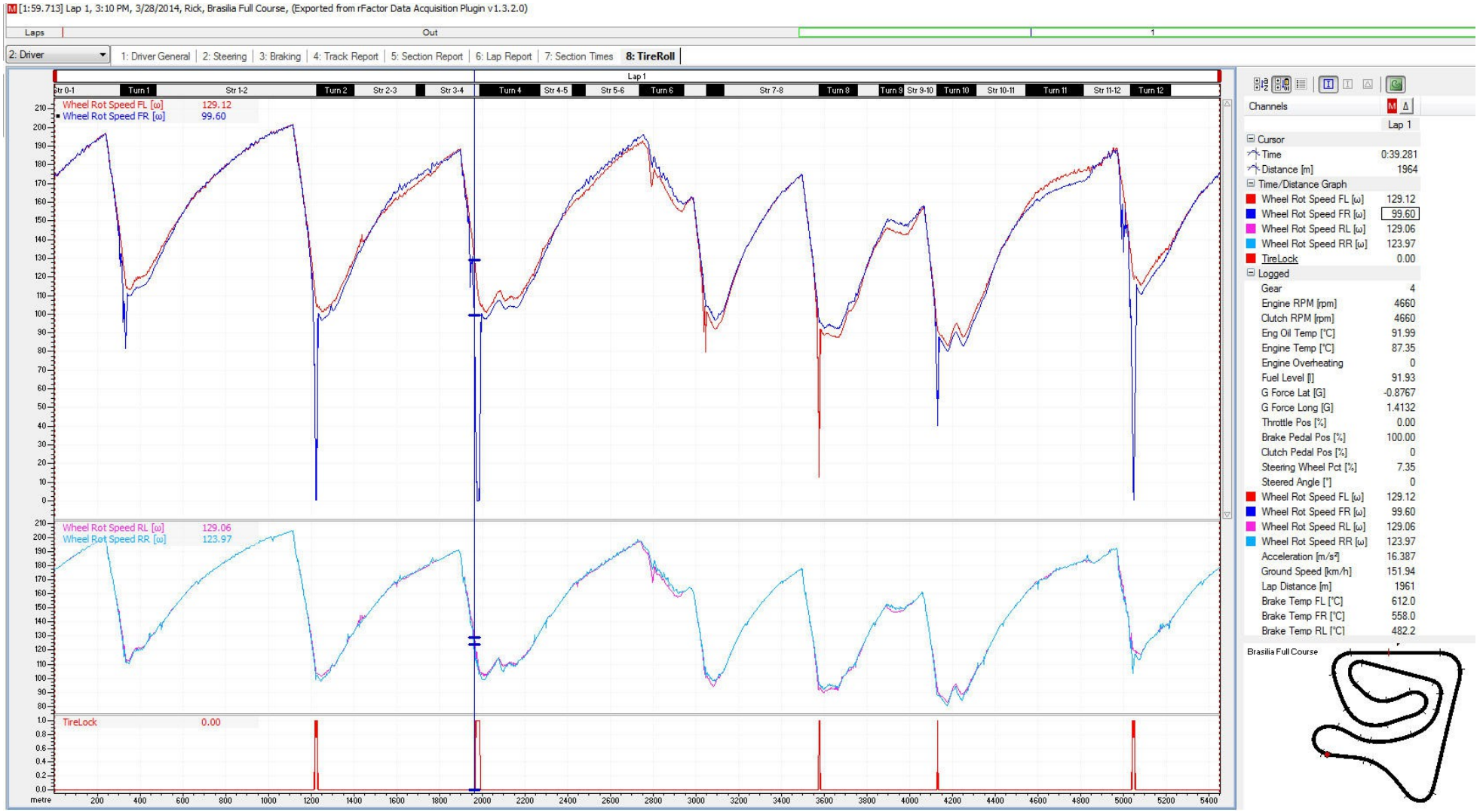
This is the detail plot of a over steer instance. You can see where the cursor is marked (yellow circles) and this is when the throttle is pushed (upper black curve). Right after that time, a steering change (red curve drops) is seen in an attempt to correct the issue. The driver caused the issue. Throttle-on oversteer. This clearly can be done with no math equations in GSC MoTeC.



UNDER/OVER STEERING HERE WE ARE ZOOMED IN TO THE SAME DATA AS THE PRIOR SLIDE TO SHOW MORE DETAIL. THE CURSER IS PLACED RIGHT AS THE DRIVER IS GOING TO FULL THROTTLE (UPPER WINDOW) AND YOU CAN SEE THAT THE DRIVER THEN HAD TO COUNTER STEER (LOWER WINDOW) TO BEST UNDERSTAND WHAT TO 'FIX', WE NEED TO KNOW DID THE DRIVER REACT TO THE CAR OR DID THE CAR REACT TO THE DRIVER?

The video goes on to more subjects. I have tried to give you a summary of part of it but watch the video if you want to hear Mr. Caddell give the details for each of the images.

As I was building my own maths in MoTeC I decided to look at the tire rotation since that data is collected. This is a quick way to see which tires are going into lockup and on what corners. You can quickly see which tire's rotation went to 0 and when. Fronts are plotted in the top pair and bottoms on the lower. The rears never lockup. Might be a good way to review bias setting and try moving it toward the rear and to remove the lockup.



Here is my rolling or coasting time plot (AI at 85% in red vs me in black) AI coasts more in turn 2 at the blue cursor.