

2016 CiSCO CEMS User's Group

NH₃ Monitoring and Determination

What we know now – a follow up

The Case Study

- Site in New Jersey
 - Combined Cycle Combustion Turbine
 - Site has been certified and running for over a year
 - There is a high temp NH_3 to NO Converter at the probe with split sample line to two NO_x analyzers (traditional NH_3 determination method).
 - Also have a SCR NO_x analyzer so we can calculate NH_3 Slip using a traditional calculation (also need amount of NH_3 injected)
 - There is a cross stack TDL (Tunable Diode Laser) NH_3 analyzer at the stack
 - There is an extractive TDL analyzer at the probe, but communication issues with the PLC have prevented data collection from that analyzer
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What the data shows



What the data shows

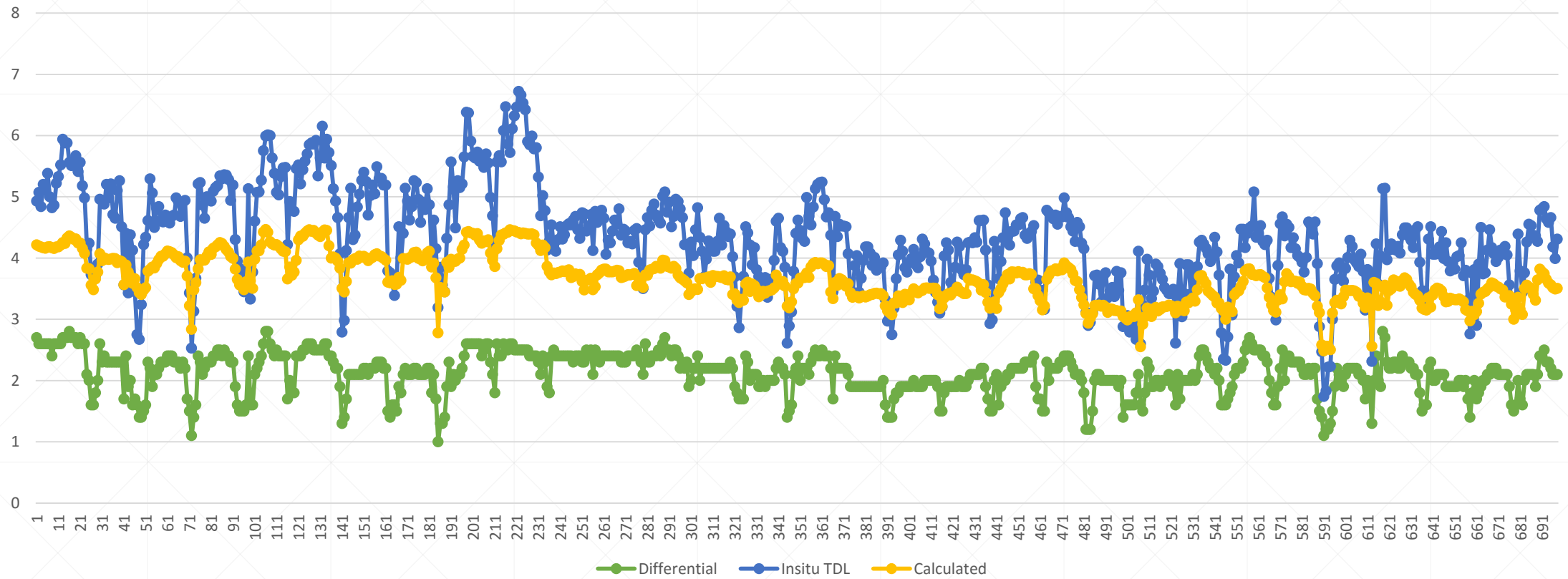


What the data shows



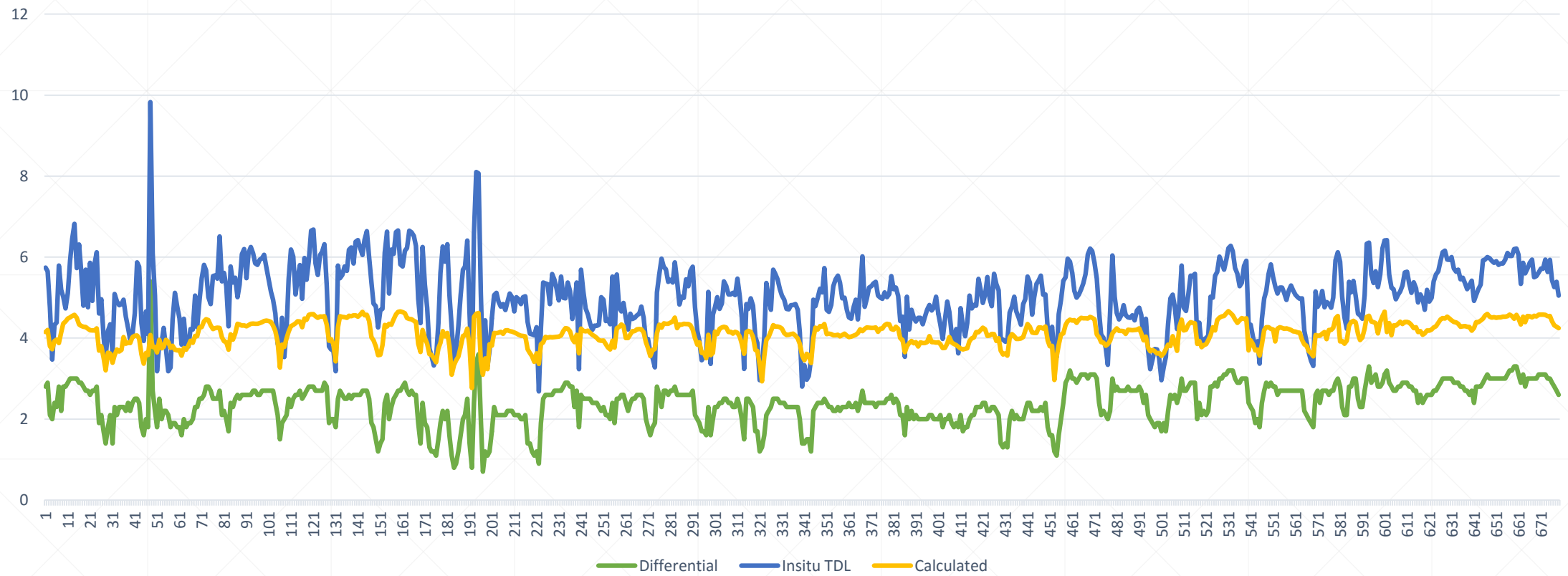
What the data shows

August Data



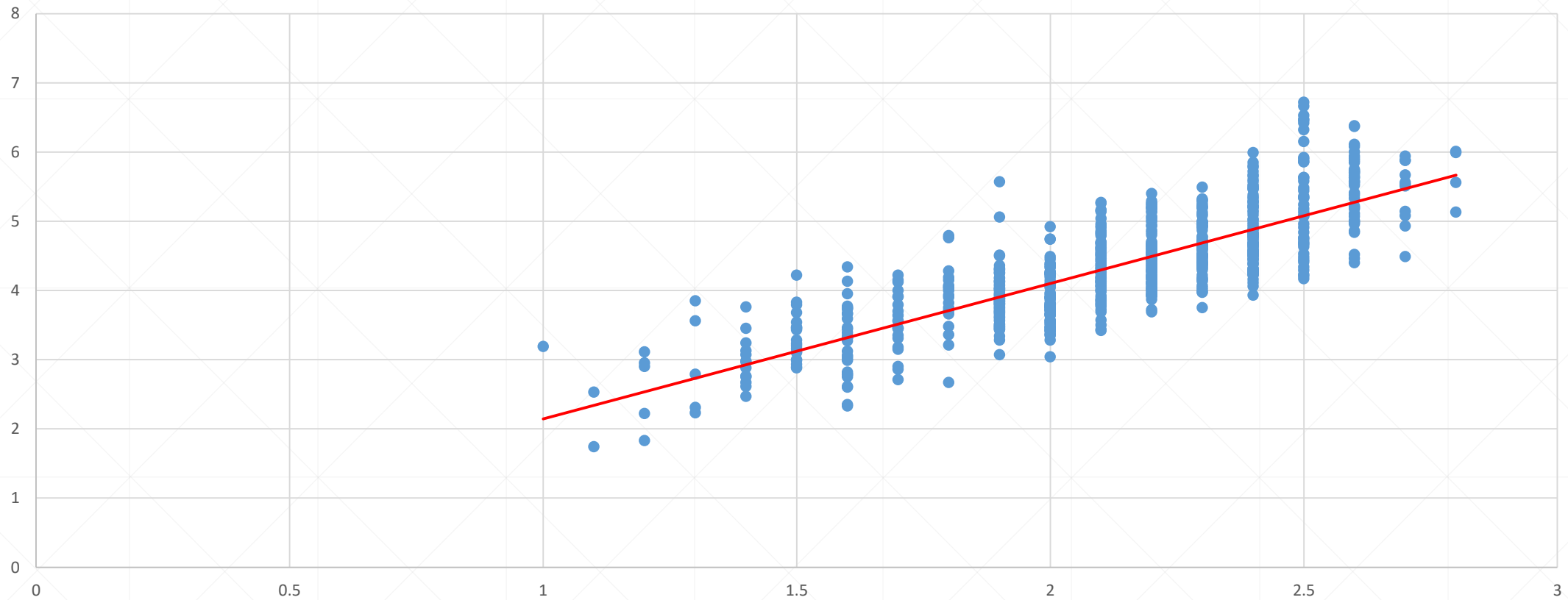
What the data shows

July Data



What the data shows

Differential versus Insitu TDL



Conclusions

- Correlation – statistically, $r = 0.80$
 - Need some more information from the site (stack testing, etc.)
 - Going to continue to look at data from site
 - Want to look at Startup data more closely
 - Want to see if a new NH₃ to NO converter changes the data
 - Hope to put together a formal presentation by EPRI 2017
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What's Next

- CeDAR Updates

