

26th CRC Workshop

26 years later Newport CRC.

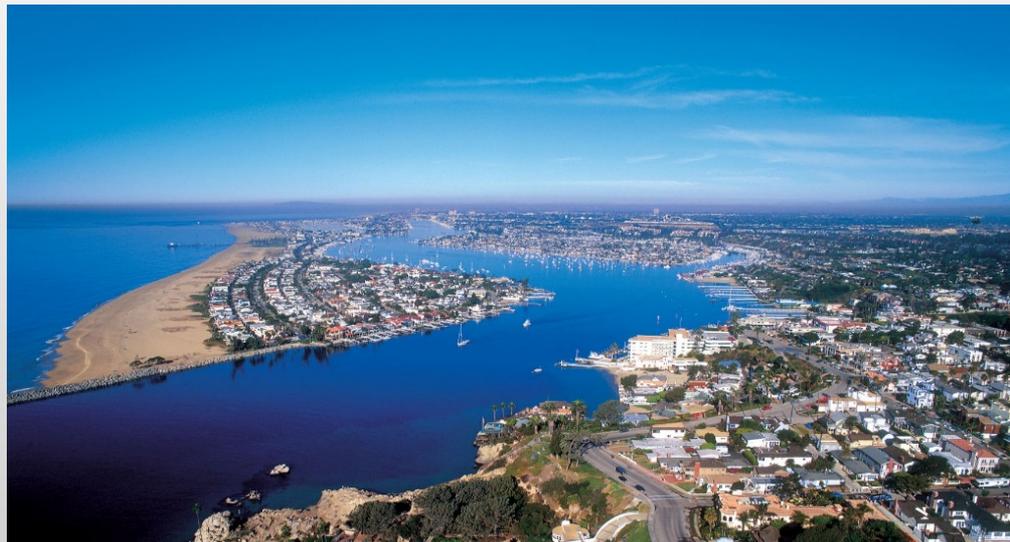
Some old guys remaining, one of whom is me!

To clean the world collaborate.

Scott for fuel, Dominic for cars, and the sponsors we appreciate.

Last minute Miyasato, optimistic to the most.

Not yet fired from the South Coast.



Emission Rates and Inventories

Despite certification, 80 g/mi HC is not an LEV.

Gary says we must go there to reduce O_3 .

Eakle gave Henry's sales pitch for SWRI's dedicated EGR with GDI.

Chris and Tom came along, "Give the posters your eye!"

Warila's like Fulper at EPA. They love their logarithmic display;

Which go into a model where Choi did say, We will soon all be OK.

If your SCR's cold you get NOx high as we see at the POLA
Kanok from CE-CERT said he sees that every day.

If you care about on-road emissions, 500 valid readings/hr is a
reasonable trick.

PEMS is so much slower.

“500 readings per year” is quite OK said Nick.

Off Road

Robert's 27 diggers – PEMS data look nice fuel based.

Jonas from Volvo's a PEMS user too. Hard to use in haste.

Browning's back on boilers again. The more you look, the more you see.

Yu Jiang's gotten a lower emissions tugboat. Probably not for free.

Kent is straightening out B.C. Thanks for using gm/kg of fuel as a screen.

Sherry from CARB's on a dirt bike kick with stickers of red and green.

Particle Emissions: Real World Measurements

Molly measured more than 5000 HDDV. PN up at POLA and at Cottonwood down.

CARB is polluting California's air by bringing WVU out from their town.

Khalek is really cranking out PN. Lower with heavier fuel surprise.

Aaron's retrofits are really working. Retrofits on the rise?

The devil's whisper is a legal cleat on FTP. Patrick exceeds the speed limit to shake particles free.

Shiyan has one GDI it seems to work quite well but why care about 10mg/mile.

When Chris cooks DPFs in an oven to make you smile.

Sunset over Newport Bay

Quite a way to end the day.

Thank you “Endless Dreams” we say.



Particle Emissions Measurement Techniques

Kent again; goes through the pain to measure nanosoot.

The health effects (if any) of Matti's acronyms may be moot.

Ville has a new trick for sale. Does not even have an acronym yet!

I heard Kittleson say, "Look at LDSA. It might help our needs to be met."

Marc Besch has a tiny Pegasor. Don't believe his results he's wearing a tie.

Finally SPLAT's got to car exhaust. Alla's particles one by one on the fly.

California's Hu's dreaming of PM improvements more.

Add a single smoking driver and increase PM by 10^4 .

Emissions Measurements: Laboratory

N.G. motors chuck out “natural” gas, best measured by Barbara’s MKS.

SVOCs are hard. Butler’s naphthalene contributes to the mess.

Jacques, thank you for telling us its time to measure NO₂

Dirk gave his CPK sales pitch for an iNOx which will not do.

Mercifully we survived a day before we got a drive cycle new.

But that is what we would expect from Pragalath and Saroj at WVU.

Fuel Effects and Efficiency

Unless you want fixing with formaldehyde Georgios' biodiesel looks rather blue.

But better than censored results from Peter Morgan's E94-2.

Late for lunch, Chris Frey's data look OK from pseudo-FTP

Matt's hybridized his linen trucks. Fuel economy is good but NO_x increase we see.

CARB's Na is looking at diesel bus and CNG.

Look at all that emitted methane and chucking out NH_3 .

Maryam for Frey. Hybrid fuel economy is better or worse did she say?

Emission Control Measures, I/M and OBD

Pull over Smog checks get a failing score.

Use RSD up front Frank and you will fail even more.

Carl Fulper finds 4 million trips. Differ from MOVES by more than “ignore.”

Gurdas has a couple dozen trucks - cold SCR not neat.

Jorn has a few more trucks – cold SCR repeat.

Yoon can get below 0.02 but look like the devil to maintain
I speculate.

Just look at the 5000 trucks Molly has seen to date.

Saroj Pradhan’s on deck again;

To remove the LNG ammonia we disclosed at CRC in 2010!

Emissions Modeling

Darrell didn't move MOVES very far to 2014A.

Kanok again, new speed corrections. At 90 mph his drivers play.

Carol, many PEMS, uses RSD data too, and speeds for H.K. today.

A new model shootout. Why? The gun is carried by John K. Roger wants detailed fuel in MOVES. Effects tiny compared to breakage by far

US surplus corn used to feed the world. Now we starve them for our car!

John's SUV came from CARB at a slow rate to tell us that PHEVs are great.

Emission Measurements In-Field

Kotz has one good 2015 bus. Gets about 5 mpg.

Yoon has four more good trucks for NO_x control on HDD.

Arvind has more authors than trucks and graphs no one can see.

Jesse Tu has three more trucks. How bored can I get with NTE?

Only six authors and seven trucks new. But Berk's wearing a tie too.

We hear the pleads by Karl from Leeds

That an efficient PEMS can meet our needs.

Boies I may be biased but I can see

That the best use of PEMS is to check your RSD.

“Every kind of PEMS,” says Carol Wong,
“We use to find polluters in Hong Kong.”
She has real world data from RSD,
Which I one day hope to see
“Cold start” Chris is a hard rhyme to try.
should Frey rhyme with day or fly.

Brent and Chris hold CRC,
Dominic and Scott the chair.
But really thanks from you and me
Go to Debbie, Jan and Betty to be fair.