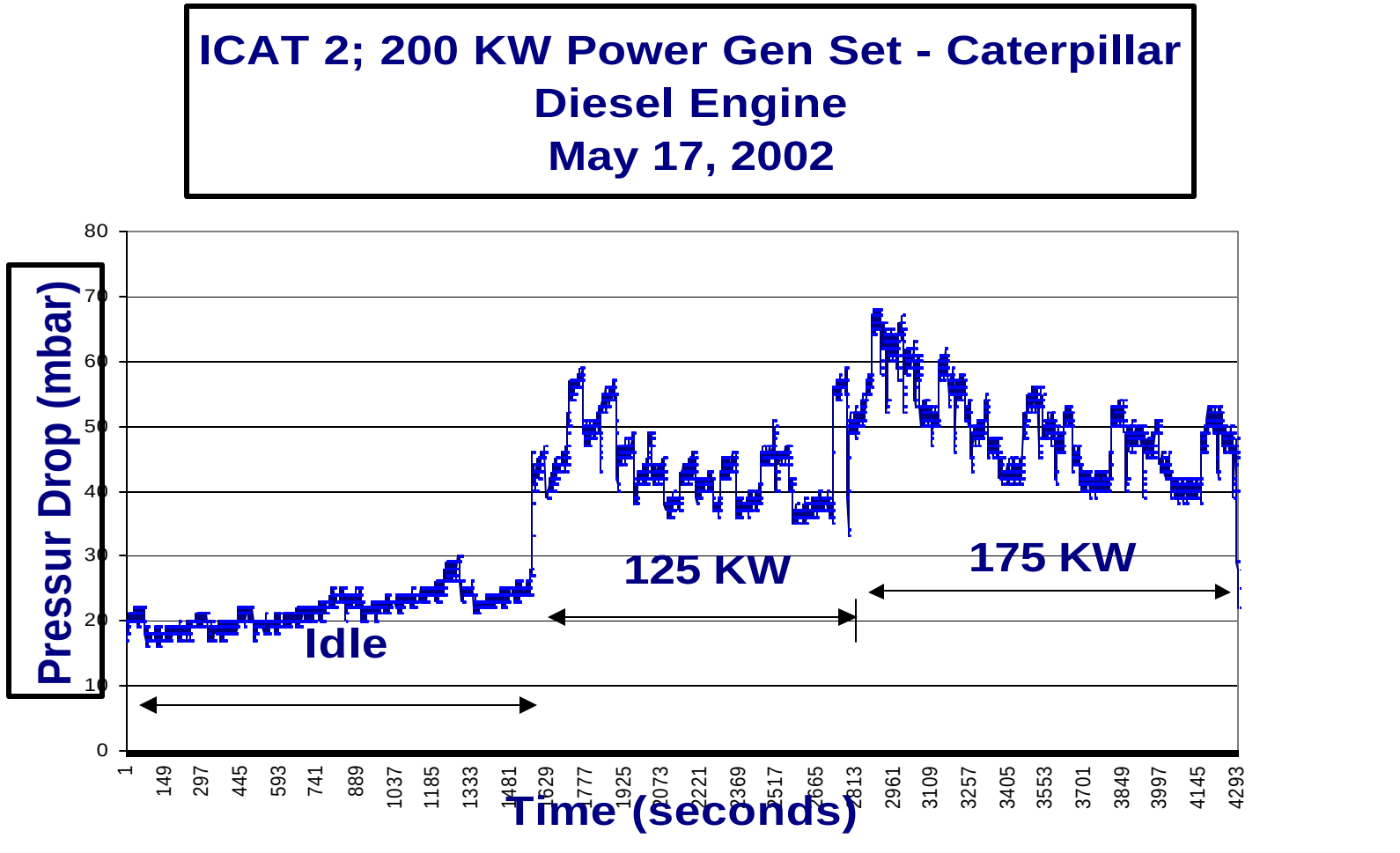
ICAT PROGRAM: 200kW Diesel Generator Riverside, California



ICAT PROGRAM: 200kW Diesel Generator Riverside, California

Load	Efficiency (TPM) Just after installation	Efficiency (TPM) Just before uninstallation
Idle	52%	85%
125 kW	95%	86%
175 kW	97%	91%

ICAT PROGRAM: 350kW Diesel Generator Riverside, California

75kW Diesel Generator
Edwards AFB, California

75kW Diesel Generator
Edwards AFB, California

75kW Diesel Generator Edwards AFB: Particulate Sampling

Particulate sampling

Particulate sampling was conducted by the University of Utah Department of Chemical and Fuels Engineering.

Instruments used for real-time samples

- Scanning Mobility Particle Sizer (SMPS)
- Photoelectric Aerosol Sensor
- Dust Track
- Photoacoustic Analyzer

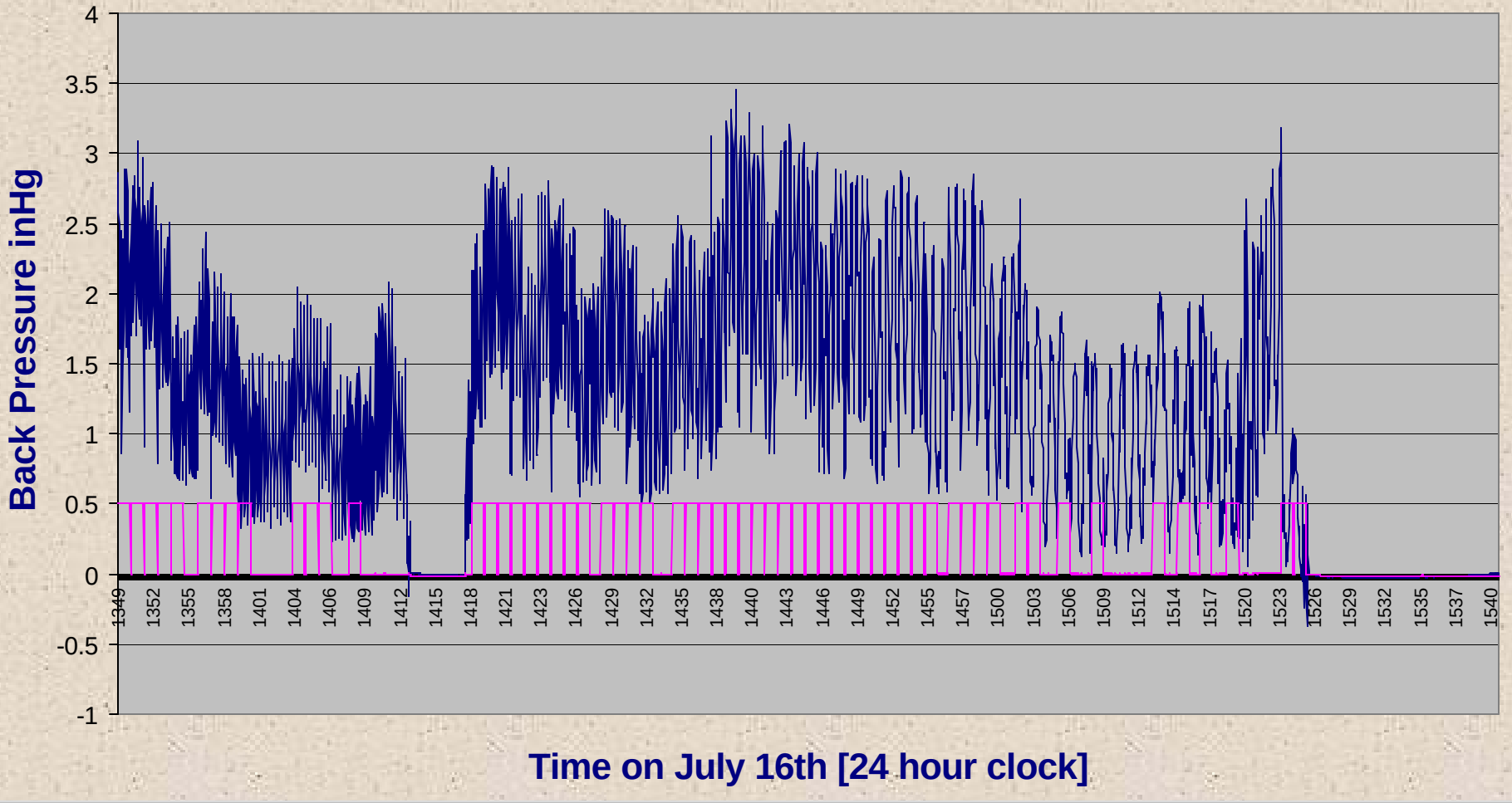
75kW Diesel Generator
Edwards AFB, California

Preliminary Results

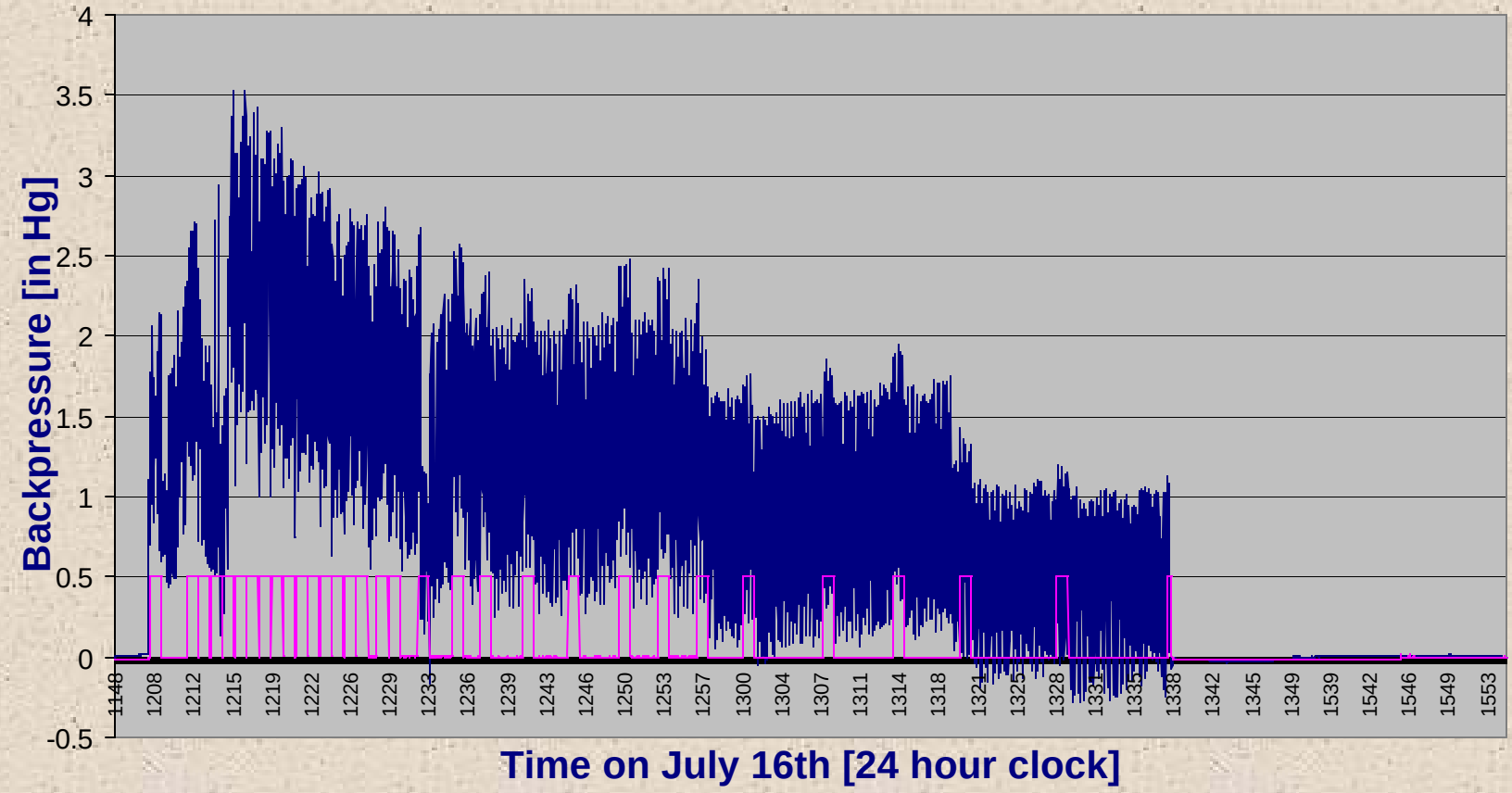
- **Low back pressure (Max. Pressure 3 inHg, 100mbar, 40 inH2O)**
- **Systems regenerated more than necessary**
- **Results below are from Utah's Scanning Mobility Particle Sizer**

Load	Efficiency (TPM) Tactical generator DX-02	Efficiency (TPM) Tactical generator DX-04
Idle	59.0%	65.0%
9 kW	46.3%	67.0%
19.2 kW	44.2%	46.9%

75kW Diesel Generator
Edwards AFB, California

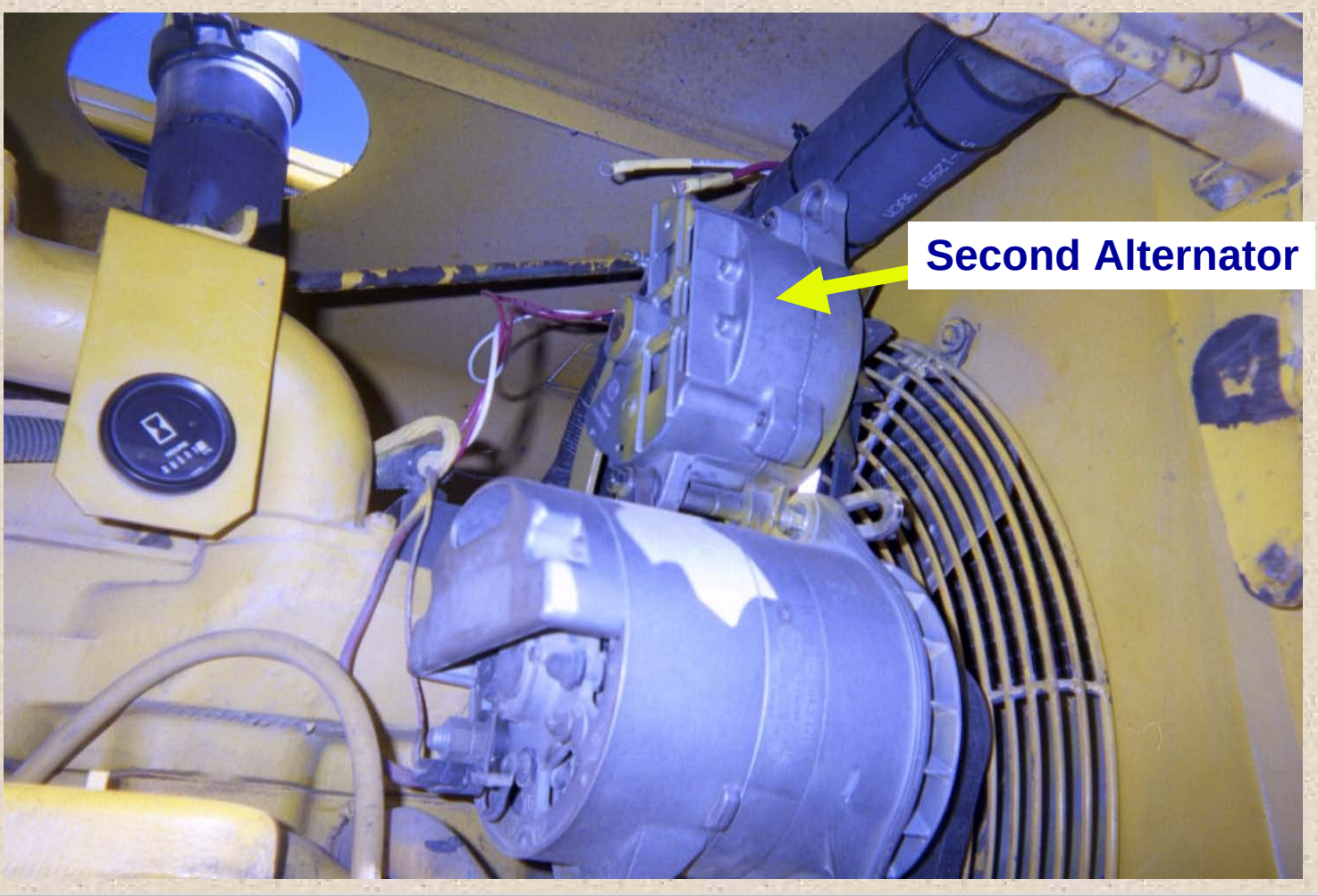


75kW Diesel Generator
Edwards AFB, California



Riverside County: Grader
Riverside, California

Riverside County: Grader
Riverside, California



CONCLUSIONS

Positive Results

- Reliable regeneration independent of exhaust temperature
- Consistency in maintaining low engine back pressure

Feedback

- Reduce size and weight
- Refine regeneration strategy
- Improve filtration efficiency