



FunnyTech21

FunnyTech21 i-DMS

Redefining In-Cabin Safety with Vision Intelligence.



www.funnytech21.com

The Unforgiving Environment of a Moving Vehicle



Constant Vibration &
Motion Artifacts



Shifting Light & Shadow
(Sunlight, tunnels, glare)



Natural Driver Movements
(Head turns, adjustments)

Standard remote photoplethysmography (rPPG) fails here.
We engineered i-DMS to succeed.

Validating Performance: Real-World vs. Reference

Reference Standard: Polar H10



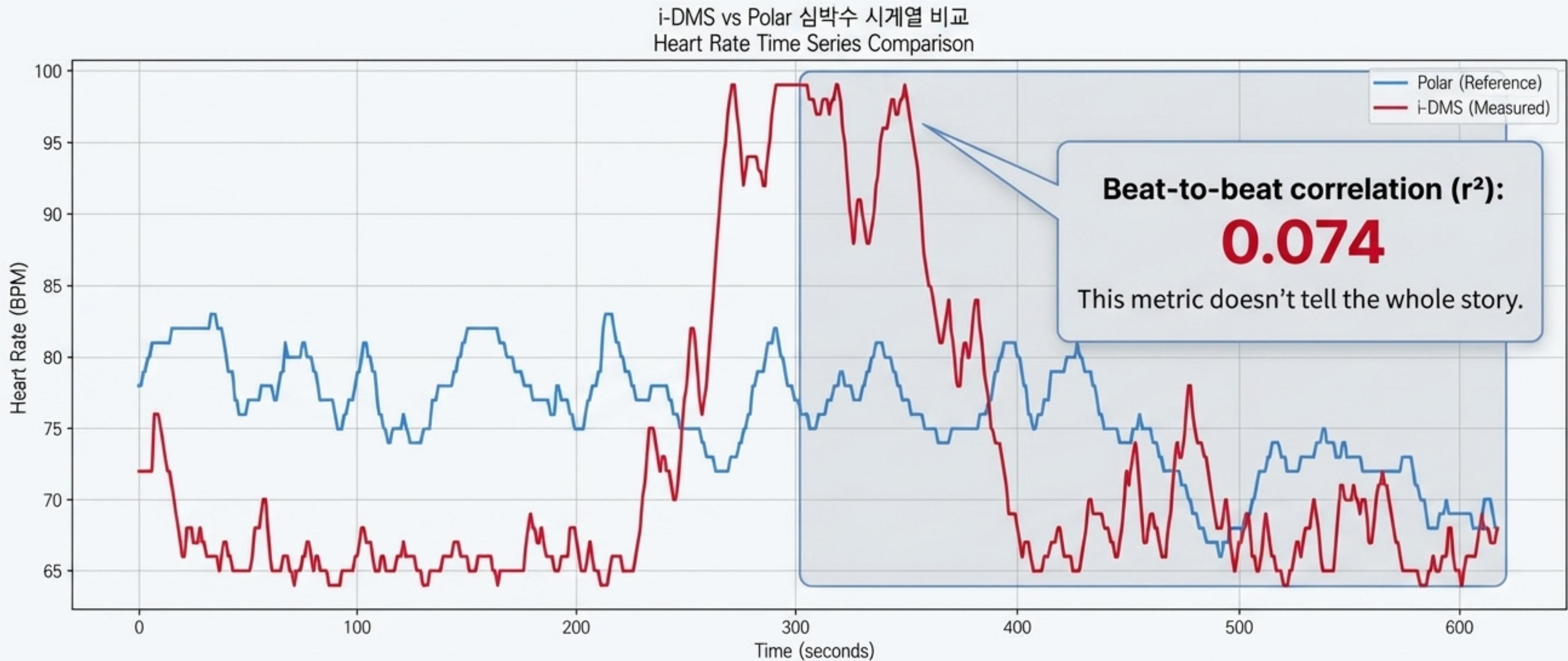
Test Device: i-DMS



- Contact-based ECG
- Clinical-grade accuracy
- The established benchmark

- Non-contact rPPG (camera)
- Engineered for in-vehicle reality
- Measures facial blood flow changes

A First Glance at the Data Can Be Misleading



We're Asking the Wrong Question.

The Academic Question

“Is the camera a perfect replica of an ECG chest strap?”



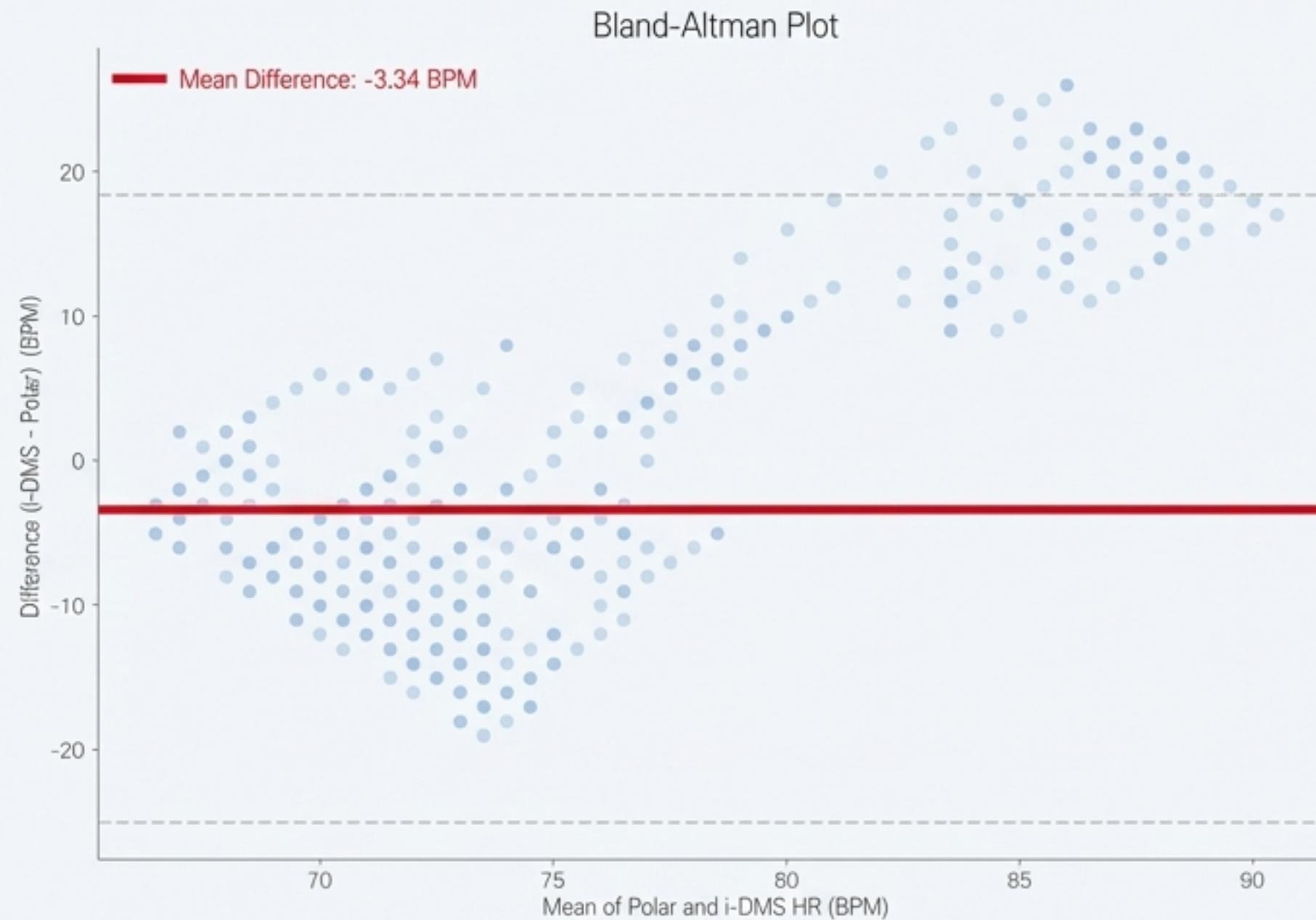
The Engineering Question

Does it reliably detect physiological changes that indicate driver risk?



For driver safety, the trend is more important than the beat.

The Foundation: Exceptional Long-Term Trend Accuracy



-3.34 BPM
Mean Error (i-DMS vs. Polar)

An average difference of only 4.4%. Ideal for monitoring sustained changes in driver state like drowsiness or stress.

Meeting and Exceeding the Industry's Toughest Standards

10.09 BPM

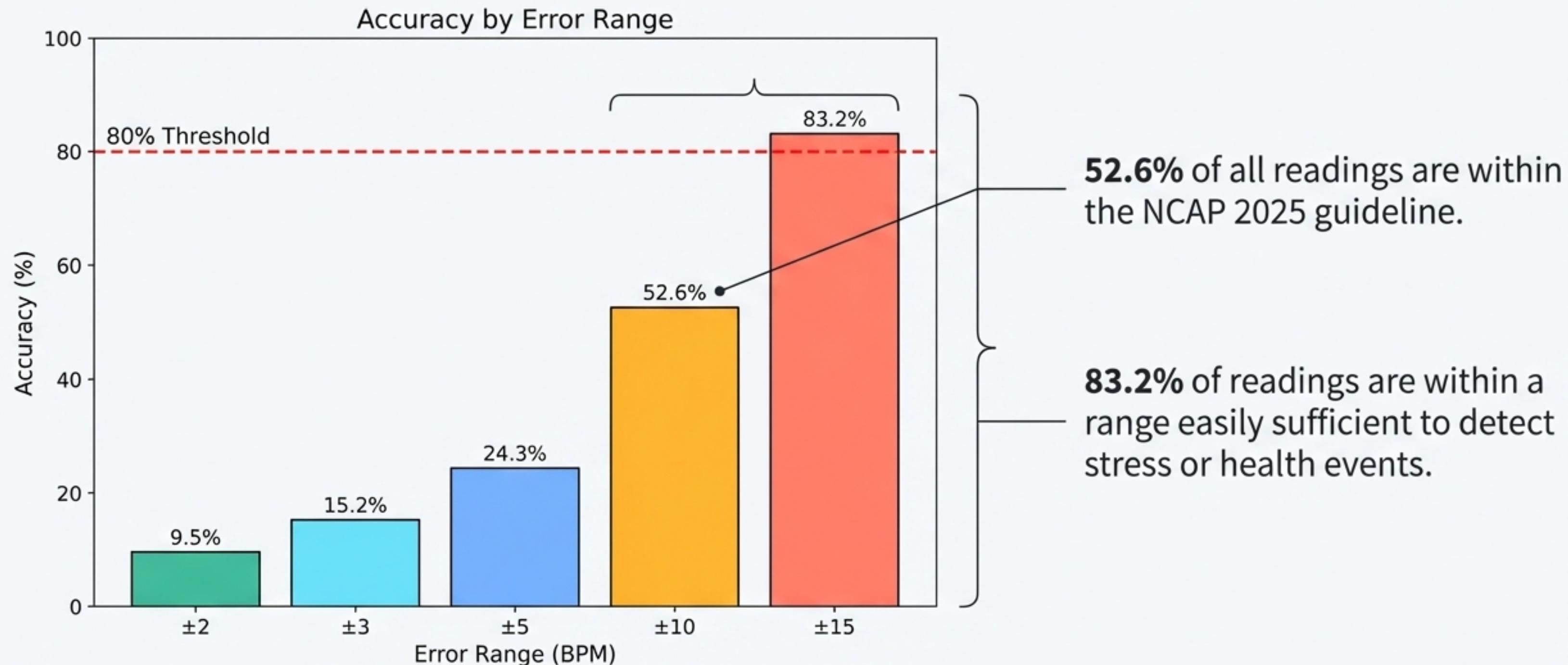
Mean Absolute Error (MAE)

In-Vehicle Academic Research Benchmark: 8-15 BPM MAE

FunnyTech21 i-DMS: 10.09 BPM MAE

NCAP 2025 Guideline: ±10 BPM Acceptable 

Accuracy Where It Counts: Detecting Significant Change



From Data to Detection: A Real Microsleep Event Captured



The i-DMS Advantage: Seamless, Smart, and Safe



Non-Invasive

Zero driver effort. No wearables, no pairing. Just drive.



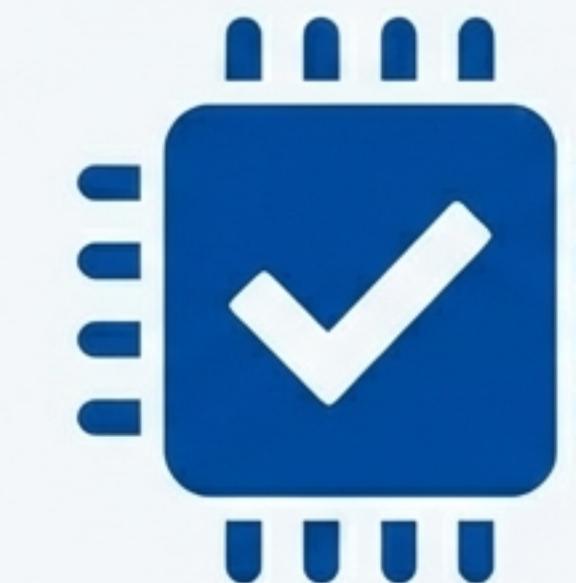
Real-Time

Instant-on monitoring from the moment the vehicle starts.



Multi-Signal Fusion

A holistic view of driver state, combining Heart Rate, PERCLOS, Gaze Tracking, and more.



OEM-Ready

A robust, practical, and validated solution engineered for simple integration.



Engineering for Reality.

The i-DMS delivers the validated, reliable, and practical performance required to power the next generation of driver safety.