

*News Release*  
*Communiqué de Presse*  
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**For Immediate Release**

**May 17, 2007**

## **General Motors Orders KRONOS-V™- The Industry's First Real-time Knock Analysis System**

**Fremont, CA** – The Advanced Research Products Group (ARPG) of Spectral Dynamics, Inc., today announced booking the first order for their new KRONOS-V System to General Motors. The facility is Powertrain & Advanced Engineering Group located in Wixom, Michigan.

KRONOS-V is a dedicated turn-key system for true spectral content-based, objective real-time engine knock analysis.

Gary Patterson, Staff Combustion Engineer for General Motors, well known and respected for his contributions to new engine design and combustion analysis, stated "After seeing the advanced knock detection and analysis system in operation I had to have one!"

Patterson went on to say, "The real-time spectral display of knocking engine cycles is visually stunning! Its instant response and analysis gives me the real-time feedback I need. KRONOS-V is the first product which allows me to selectively remove non-combustion spectral content. It provides both visual results and control outputs in real-time."

The KRONOS-V Knock Analysis tool is an add-on for most combustion analysis and charge amp-based systems. It offers a range of channel counts and capabilities including: Engine Knock and Pre-Ignition, Closed-Loop Lights-Out Engine Mapping, Diesel Noise, and Transfer Function Analysis for Star Modal™.



# News Release

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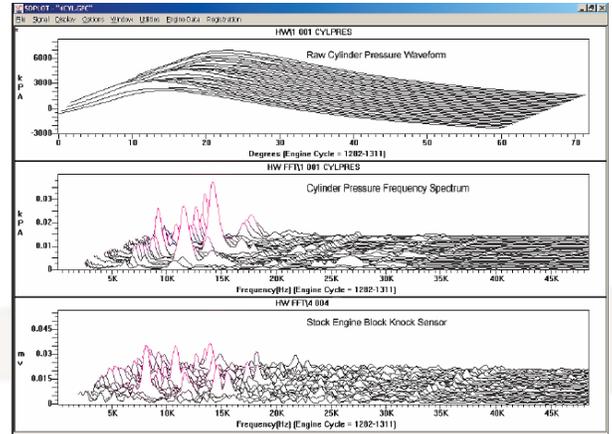
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KRONOS-V is an Automated Knock Detection/Calibrator Feedback System for multi-cylinder measurement & recording. KRONOS-V allows real-time spectral analysis of multiple knock events contained in cylinder pressure data or block mounted acoustic transducer data, with automated quantification of the signal contents for generation of triggers to external devices or programs. The data system uses broadband amplifiers and synchronously clocked high-resolution digitizers with auto tracking Nyquist anti-alias filters to provide spectral purity and prevent digital smearing of critical frequency domain data.



**Top Graph:** High-resolution raw cylinder pressure data, with a 50 degree viewing window.

**Middle Graph:** Spectral content of that 50 degree data set.

**Bottom Graph:** Data from engine block-mounted acoustic pickup.

Mark Remelman, the ARPG Product Line Manager, and inventor of KRONOS, stated, "This revolutionary system significantly reduces the overhead and time to map an engine from weeks to hours using unattended "lights out" operation. Our patented Knock Detection capability will also significantly reduce the loss of engines during testing. "

**Spectral Dynamics, Inc.** is a leading worldwide supplier of real-time systems and software for advanced computer-automated data acquisition, vibration testing, structural dynamics, explosive shock, high-speed transient capture, acoustic analysis, monitoring, measurement, control and backup. Spectral Dynamics' products are used for research, design verification, product testing and process improvement by manufacturers of all types of electrical, electronic and mechanical products, as well as by universities and government-funded agencies.

**Advanced Research Products Group** is the newest addition to the Spectral Dynamics family. Their newest VXI data acquisition hardware pushes the envelope on capabilities and embodies the same rock solid design methodologies, which have always differentiated Spectral Dynamics from its competition. For more information visit: [www.vxiproducts.com](http://www.vxiproducts.com)

**For more information** about KRONOS-V contact Sheryl Lipari with ARPG, at 510 252-0475 - [liparis@sd-star.com](mailto:liparis@sd-star.com), or Mark Remelman at 510 252-0475 [remelmanm@sd-star.com](mailto:remelmanm@sd-star.com). For a digital version of this press release and high-resolution images, contact Douglas Schwartz with SterlingCI 408 246-3749 – [doug@sterlingci.com](mailto:doug@sterlingci.com)

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