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## **Arradiance® Receives NASA SBIR Grant**

### **Revolutionary New Technology Could Replace Conventional Sensors and Imaging Detectors in a Variety of Space Applications**

SUDBURY, Mass.--([BUSINESS WIRE](#))--Arradiance, Inc. announced today that they are the recipients of a Small Business Innovation Research (SBIR) grant from the National Aeronautics and Space Administration (NASA). The goal of the program is to develop new imaging and sensor technology using Arradiance's proprietary GEM thin film technologies to replace decades-old microchannel plate (MCP) technology currently used in space imaging and sensing applications.

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If successful, the program will allow MCPs to be manufactured on a variety of substrates that may prove more suitable to the rigors of space, while providing improved imaging resolution, lower noise, less power consumption, improved lifetime and greater flexibility in design parameters including detector size.

“ALD technology used in the proposed application could revolutionize the charged particle detector industry,” said one NASA reviewer. “NASA and others will benefit from improvements in the detector technology as outlined.”

Microchannel plates are used in numerous imaging and detection applications where high spatial and temporal resolution coupled with high signal to noise ratio are important. Example applications include: space science, biotechnology, analytical instrumentation, homeland security and night vision. One of the drawbacks of using conventional MCPs for high resolution imaging is that they have relatively high ion noise due to the manufacturing process and must be stacked in a specific manner to work around this problem. Arradiance's technology would eliminate this problem, allowing for simpler and more reliable designs.

“The conventional way to achieve the gain required for space imaging and detection has been to stack MCPs in a chevron pattern, thus getting a multiplicative effect. But, stacking MCPs for high gain has always been challenging,” explains Neal Sullivan, Arradiance Chief Technical Officer. “Matching resistance and finding the proper alignment to optimize spatial resolution makes the process difficult and expensive.

Using the GEM-D2 process can eliminate these issues by providing higher gain in a single plate without increasing damaging ion feedback.”

## **About Arradiance**

*Arradiance is enabling us to better perceive the hidden world all around us. Their functional film technologies greatly enhance the performance of imaging and detection systems, providing resolution, gain and lifetime improvements that were previously unattainable. Their enabling processes will open the door to a new world of flexible, robust, electro-optic systems that will change the way we see our world. **Learn more at [www.arradiance.com](http://www.arradiance.com).***

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