SBIR

SANTA BARBARA INFRARED, INC.

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## SPIE Technical Papers

- MIRAGE: Developments in Emitter Array Fabrication and Performance
- Designer Materials: How to Beat the Power-Speed Trade Off
- 1024x1024 Resistive Emitter Array Design and Fabrication Status
- High-end IR Imaging Sensor Evaluation System

# SPIE

The SPIE AeroSense Conference and Exhibition is soon approaching and SBIR is proudly participating once again. This year the conference is being held at the Gaylord Palms Resort & Convention Center in Orlando, Florida April 1-5. There you will find us presenting numerous technical papers, as well as a display of our IR and EO test systems at booth #407.

As a highlight to a representative display of our extensive line of standard products, we will be showcasing our MIRAGE Dynamic IR Scene Projector, the TETS multi-spectral target projector system and the modular Active Range Module (ARM) for testing laser range finders.

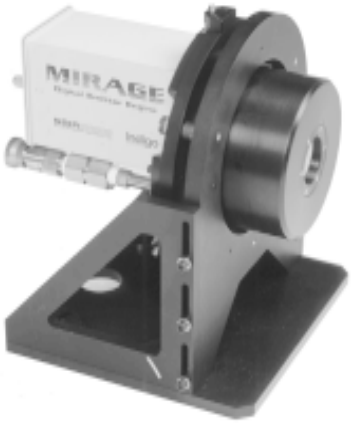
We will also be holding demonstrations of the latest version of the IRWindows™ 2001 Software System for automated testing of IR, visible and laser systems. Demonstrations will be scheduled throughout each day of the exhibition.

SBIR's technical sales staff will be available and pleased to discuss your test system needs. We look forward to seeing you there!

# MIRAGE Update

Since 1997 SBIR has been developing and delivering MIRAGE, a turn-key IR scene projection system. The latest news is that SBIR has exclusively licensed the Honeywell resistive emitter technology and will be delivering next-generation MIRAGE II systems with this technology.

We are busy transitioning the technology from Honeywell to SBIR. MCNC has been selected as the foundry for fabricating the high performance resistive arrays. MCNC was chosen by SBIR for its unique combination of technological expertise and proven track record in the areas of micro-fabrication, material science, and process development. MCNC, located in the Research Triangle in North Carolina, was founded in 1980 and has over 30 patents in MEMS, photolithography and other related technologies.




SBIR expects the first test results from the emitter transition to be available at the SPIE AeroSense Conference in Orlando. MIRAGE II systems, with 512 x 512 format arrays using the Honeywell emitter technology, will be available in the first quarter of 2003.

SBIR is also currently developing large format 1024 x 1024 and 1024 x 2048 systems for delivery to U.S. Government customers and incorporation into future MIRAGE products. Please stop by our booth at SPIE or contact us by phone or email to learn more about our MIRAGE products and plans.

Santa Barbara Infrared, Inc.
312 N. Nopal Street
Santa Barbara, CA 93103

Phone: (805) 965-3669
Fax: (805) 963-3858
sales@sbir.com
www.sbir.com

Santa Barbara Infrared, Inc.
312 N. Nopal Street
Santa Barbara, CA 93103

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## New to SBIR

Jay B. James **has joined Santa Barbara Infrared as the Director of Business Development. Jay brings with him over 15 years of experience in the defense and commercial infrared industry. Prior to joining SBIR, Jay served as Director of Marketing and Sales for Raytheon Commercial Infrared (RCI), Director of Marketing and Sales for Amber Engineering and was a Senior Scientist at Hughes SBRC.**

**Dr. James received his master's and doctorate in physics from the University of Denver.**

# New Active Range Module (ARM)

SBIR has significant experience in the design and manufacture of multi-spectral test systems for numerous DOD customers and programs. SBIR has leveraged this experience by standardizing custom sub-systems and making them available as standard products to all of our customers. The Active Range Module provides simulated laser ranging to verify and calibrate accuracy and sensitivity of laser range finders.

System features:

- Supports testing of 1.06, 1.54, and 1.57 LRF systems
- Adjustable range, 50 to 20,000 meters
- Single and dual-pulse modes
- Variable output of pulse width and amplitude
- Can be used on almost any collimator system
- Supported by IRWindows™ 2001 for automated testing
- Built-in test and safety interlock

The modular design of the ARM allows it to be easily added to any test bench. The ARM operates manually from the front panel of its controller or remotely via IEEE-488 or RS-232. For automated testing, the ARM seamlessly integrates with the IRWindows™ 2001 Software System.

## IRWorld by Alan IRWin