Engage. Explore. Empower.

Connecting Visionaries in Radiation Safety, Science and Industry

MIRION 24
Connect

Annual Users' Conference

July 29 - August 2 | Omni Dallas Hotel, Dallas, TX

MIRION TECHNOLOGIES

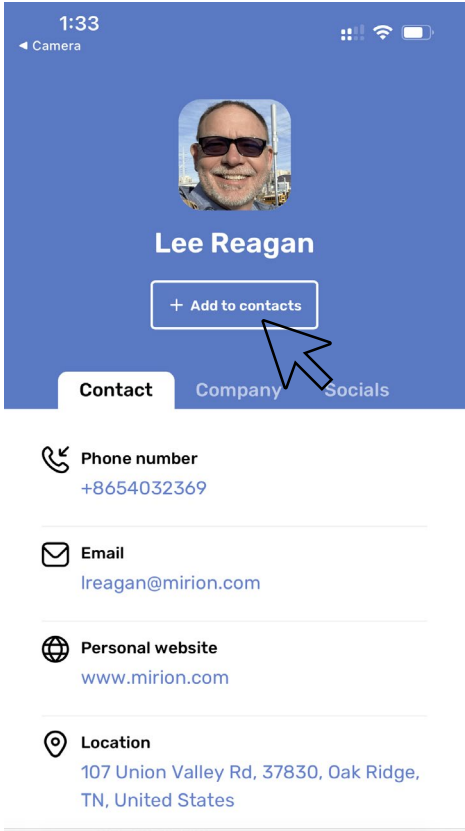# Alpha/Beta Counting and Alpha Spectroscopy Laboratory Updates

Lee Reagan

Product Line Manager

Alpha/Beta Counting & Alpha Spectroscopy

Mirion Connect | Annual Users' Conference 2024

Dallas, Texas

Contact Information

1:33
◀ Camera

Lee Reagan

+ Add to contacts

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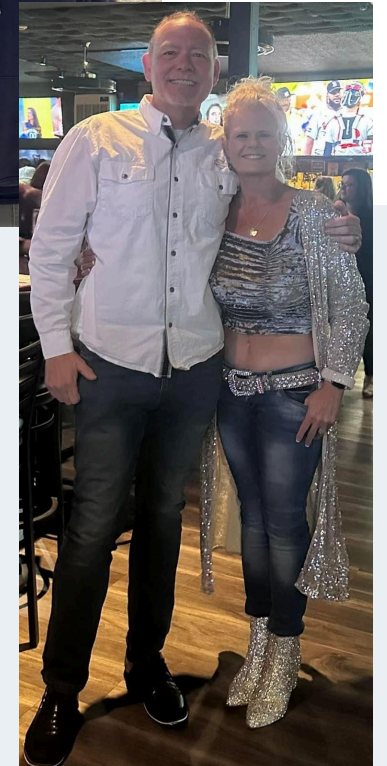
Agenda

- My Products

- Recent Improvements

- Upcoming Changes

- Expected release schedules

- Expected evolution for the alpha/beta and alpha spectroscopy product lines

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My Responsibilities

	GF Alpha/Beta	Si Alpha/Beta	Alpha Spectro
Analysis Type	Quantitative	Quantitative but exclusive	Quantitative and Qualitative
Range	25kev-high alpha	125 kev-high alpha	Alpha Only
Sample Prep	None to Extensive	None to little	Extensive
Consumables	P-10 Gas	None	Vacuum Pump Oil, Filters
Detector/Entrance Window	Fragile	Rugged	Rugged(ish)
Count Time	Short to Long	Short to Medium	Long - Extremely Long

Alpha Spectroscopy

Alpha Analyst Hardware

- Firmware Update to Improve Startup Reliability
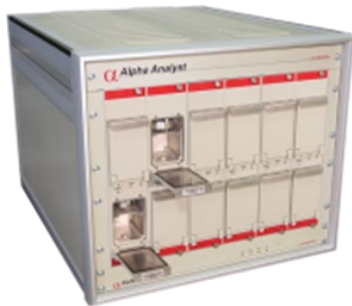
APEX-Alpha Software

- Current V1.4
  - Genie 4.x Compatible
  - Windows 11
- Working on V1.5
  - General Updates
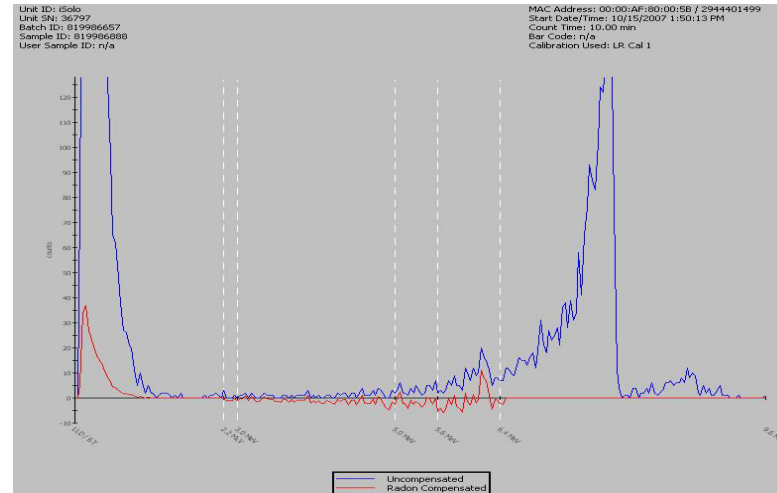 - Top DOE Requests
  - Trying to Improve Release Date

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iSeries PIPS Alpha/Beta Counters

Hardware

- **iSolo** 1.13.02 Firmware Update
- **iMatic** 1.25.02 firmware
  - ▶ USB Connectivity

Software

- **iLink** Software 2.0.4 update
  - ▶ Windows 11 Compatible

Unit ID: iSolo
Unit SN: 36797
Batch ID: 819986657
Sample ID: 819986888
User Sample ID: n/a

MAC Address: 00:00:AF:80:00:5B / 2944401499
Start Date/Time: 10/15/2007 1:50:13 PM
Count Time: 10.00 min
Bar Code: n/a
Calibration Used: LR Cal 1

Uncompensated
Radon Compensated

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LB4200

- **LB4200 Multi-Detector Gas Flow Counter** is ideal for applications requiring high sample throughput with long counting times.
- With the flexibility to accommodate 1-4 drawers and multiple detectors sizes within a system, the **LB4200** can simplify the most demanding lab operations.
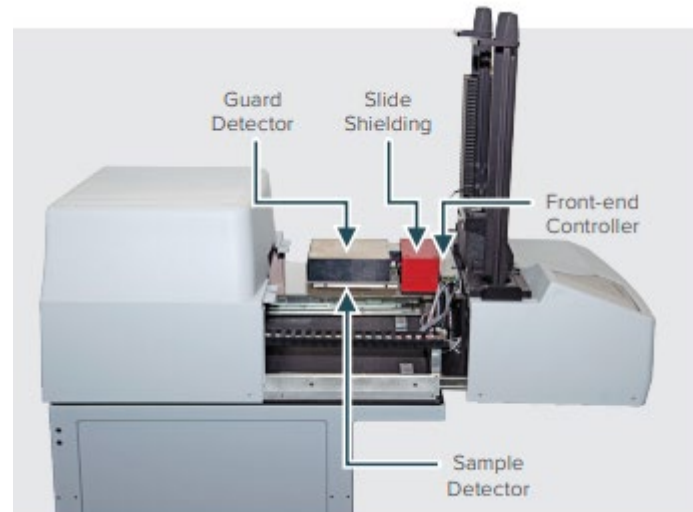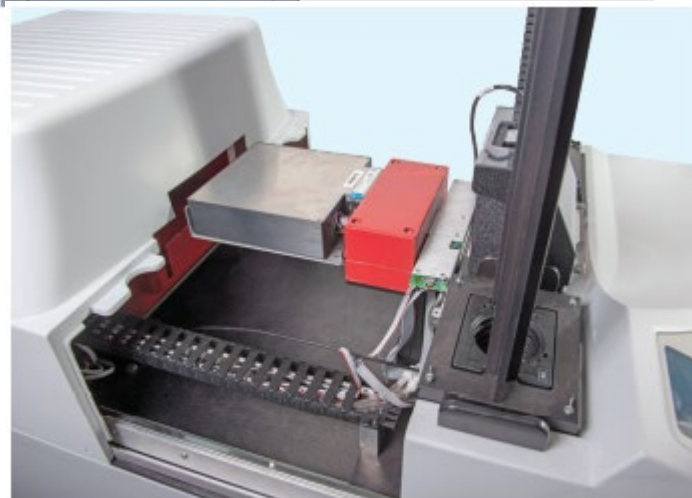
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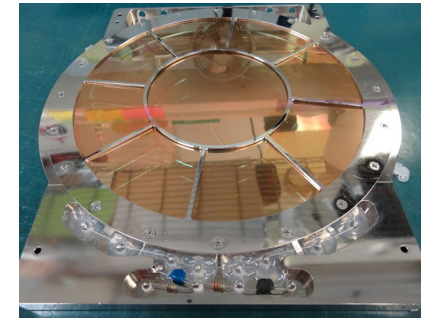
Series 5 LB5500

- Automatic single detector ultra-low background counting system

- Gas Stat digital gas conservation and monitoring system

- Fifty planchet sample changer

- Low background passive shielding

- High performance 12.7 cm (5.0 in.) gas flow detector with ultra-thin window 80 µg/cm2

- Advanced electronic diagnostics continuously monitor operating conditions

- Universal auto-sensing power supply
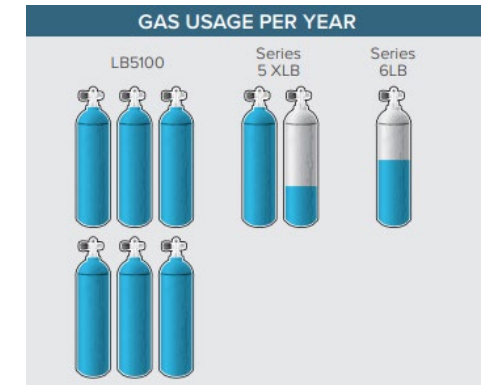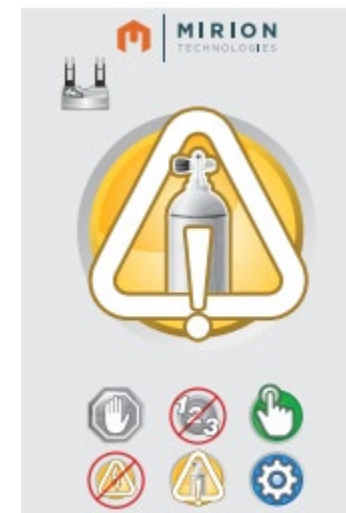
- Coded positive sample carrier identification

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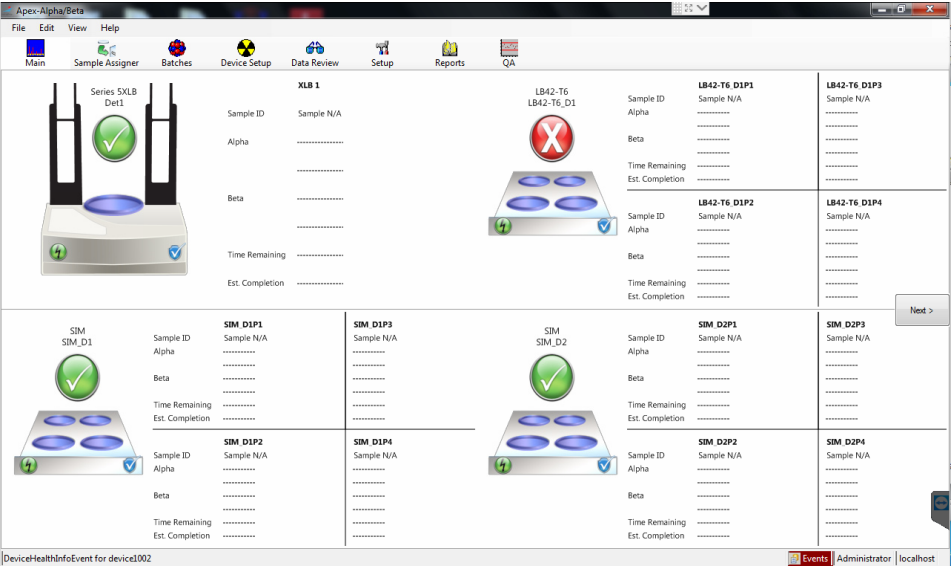Lock and load removable sample stacks

Guard Detector

Slide Shielding

Front-end Controller

Sample Detector

Door open for sample access

GAS USAGE PER YEAR

LB5100

Series 5 XLB

Series 6LB

Guard and Sample detectors easily slide out of shield for maintenance

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APEX-Alpha/Beta Features

- Automated Plateau and Region of Interest setup

- Calibration and QC Sequences

- Multiple curve-fitting models

- Integrated QA capabilities

- Custom procedure creation for sample type-specific acquisition and analysis

- Sample database tracks samples through log-in, counting and data review processes

- Simplified report customization with integrated report editor

- Common look and feel with the rest of the Mirion family of Apex® Productivity Software

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Main View

- APEX uses current counting view
  - Use Data Review and Main View vs single list
  - Shows Gas State, Status, Errors…

Drag and Drop Start

- Assign a previously created batch…

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Express Count Start

Techs never use software?

- Express and QC Checks
- Auto Approve
- AutoPrint or LIMS Transfer or…
- Custom reports to flag hot samples
- Start Sample and QC Together v2.2

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Apex-Alpha/Beta 2.2 Release

Version 2.1

- Windows 10 and 7
- 64 Bit Only Support
- Series 6LB Support
- ATB Count Times
- Express and Sequence 6LB
- Gamma Option for Series 5
- Main Screen Info Group/Carrier
- Batch Versioning
- Manual Calibration
- Calibration/Procedure Share
- Bug Fixes

Version 2.2 release Imminent

- Windows 11
- Barcode Updates
- ISO 11929 Mda Calculation Update
- Procedure + QC Sequence
- Time Delay
- Updated StimuSoft Report Engine
- SQL Server 2022

Version 2.3 in planning

- Client/Server?
- "Tennelec" Count Mode?
- UI Enhancements?

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New Series 6 ONLY Features in V2.2

- Ties QC Sequence to Sample Procedure
- QC Before, After or BOTH
- Assign Now, Start Count Automatically "later"
- Later can be a delay period or time
- Entire Batch can be repeated again with a custom delay.

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Product Updates +

- APEX-Alpha/Beta 2.2 being released now

- APEX-Alpha 1.5 In Development

- Series 6 Options

  - Fixed Stacks

  - New Cart Options

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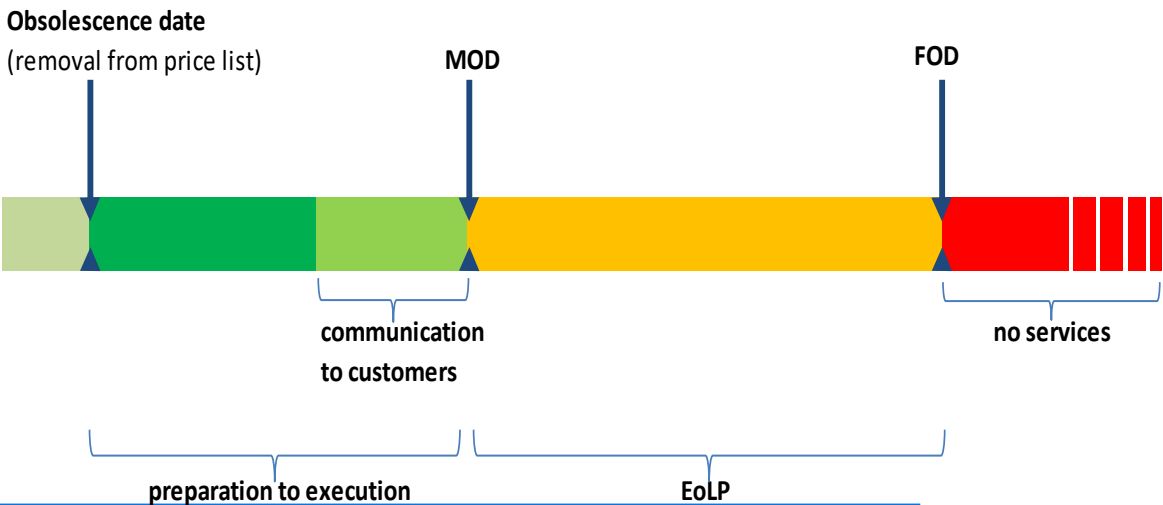**Engage. Explore. Empower.**

Software Requirements

- Fully QA Qualified

- Larger/Less Frequent Releases

- Universally Accepted

- Engineering Tested (Patch)

- More frequent, but possibly not as robust

- Limited Audience

What fits your needs?

Open Secrets

- Developing Special PIPS for Series 6, BUT…
- iSERIES REALLY needs to operate with APEX-Alpha/Beta, BUT…

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End of Life Period

Obsolescence date
(removal from price list)

MOD

FOD

communication
to customers

no services

preparation to execution

EoLP

Product	Full Obsolescence Date	Notes
LB4100	2020	LB4200 replacement, Existing Contracts Continue No Board Level Repairs Possible
Eclipse	PC OS Dependent	Limited Support
Series 5 XLB	2026*	Series 6LB replacement Full Support

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Speaking of...

I love working with the technology and YOU!
I hope to continue doing this for many years to come!

FAQ

- Frazier 55 Years
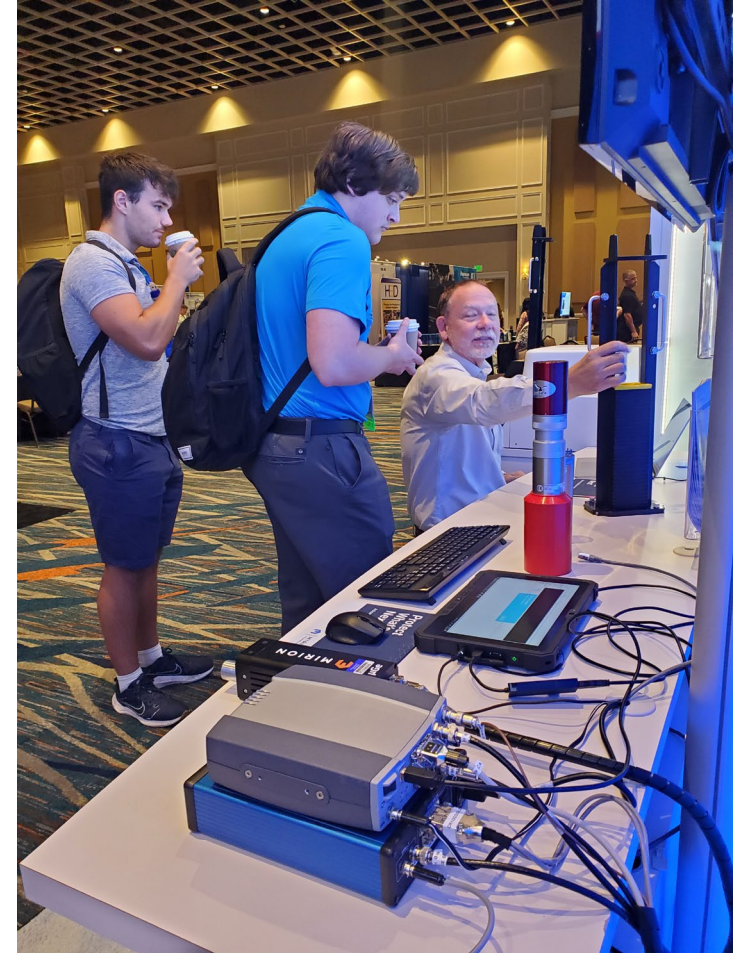- Stan 51 Years
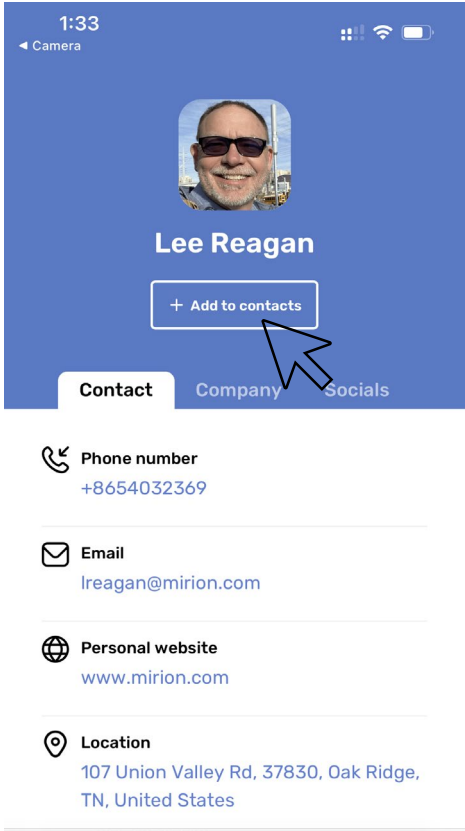- Lee ONLY 35 years

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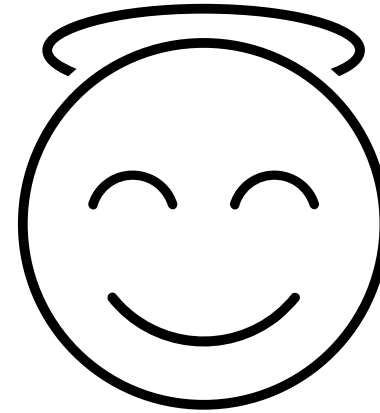
Schedule Reminders

- DEMO ROOM

- Tomorrow (Thursday)

  - Breakfast 7:30-8:30 AM

  - General Session 8:30 -11:30 AM

  - Breakouts 11:30 AM – 12:30 PM

  - Demo Room 11:00 AM – 6:30 PM

  - Group Photo 6:30

  - Group Dinner 6:45 PM – 9:30 PM

- Friday

  - Continental Breakfast in Demo Room 8:00 AM – 10:00 AM

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Contact Information

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◄ Camera

Lee Reagan

+ Add to contacts

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Thank you