

Q<sub>B</sub>

## Remote monitoring of nuclear fission events - The ultimate solution

### Key Features

- Operate alone or as an multiple unit array
- Reliable and flexible
- Cover a large geographic area
- Plug and play with deployment in 2 hours
- Ease of use - start and stop with the press of a button and automatic operation
- Small - easy to transport and install
- Low cost of ownership



Specifications	
Sample interval	12 h
Stable xenon volume per sample	1.2 ml at STP
MDC of <sup>133</sup> Xe	0.4 mBq/m <sup>3</sup>
MDC of <sup>133</sup> mXe	0.3 mBq/m <sup>3</sup>
MDC of <sup>131</sup> mXe	0.3 mBq/m <sup>3</sup>
MDC of <sup>135</sup> Xe	1.0 mBq/m <sup>3</sup>
Cross-contamination between samples	< 1 %
Carrier gas	Nitrogen
Gas consumption	200 liter/day
Mean power consumption	900 W
Peak power consumption	1400 W
Weight	360 kg
Footprint	72 cm by 108 cm

Q<sub>B</sub> is a fully automatic system for remote detection, characterization, and source localization of radioactive xenon gas in the atmosphere. Q<sub>B</sub> detects radioactive decays in sampled Xe gas by beta-gamma coincidence. The energy calibration is automatically corrected for drift during operation.

Easy installation: simply connect power and nitrogen, then press a button. Although it can operate alone, Q<sub>B</sub> is designed to operate in an array of several units spread out across a large geographic area. The array concept improves coverage and source localization compared to a single unit. Repairs are also simplified since units in the array can be replaced with spare units while they undergo maintenance at the factory.

$Q_B$ 

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