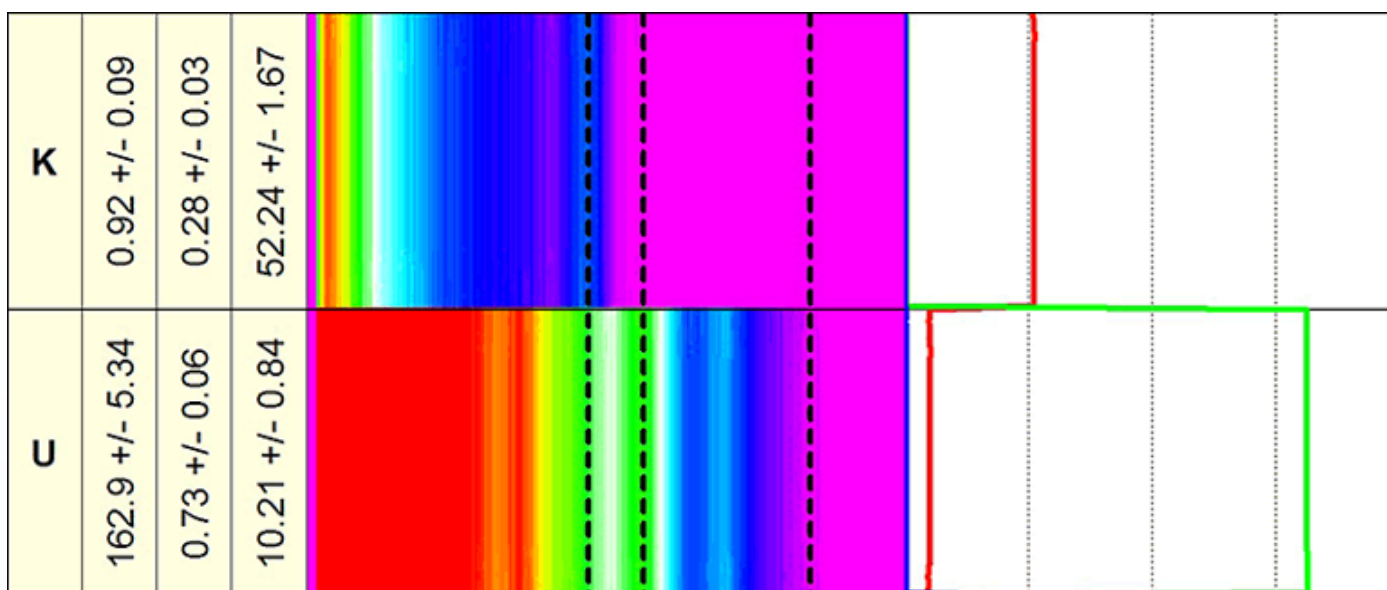


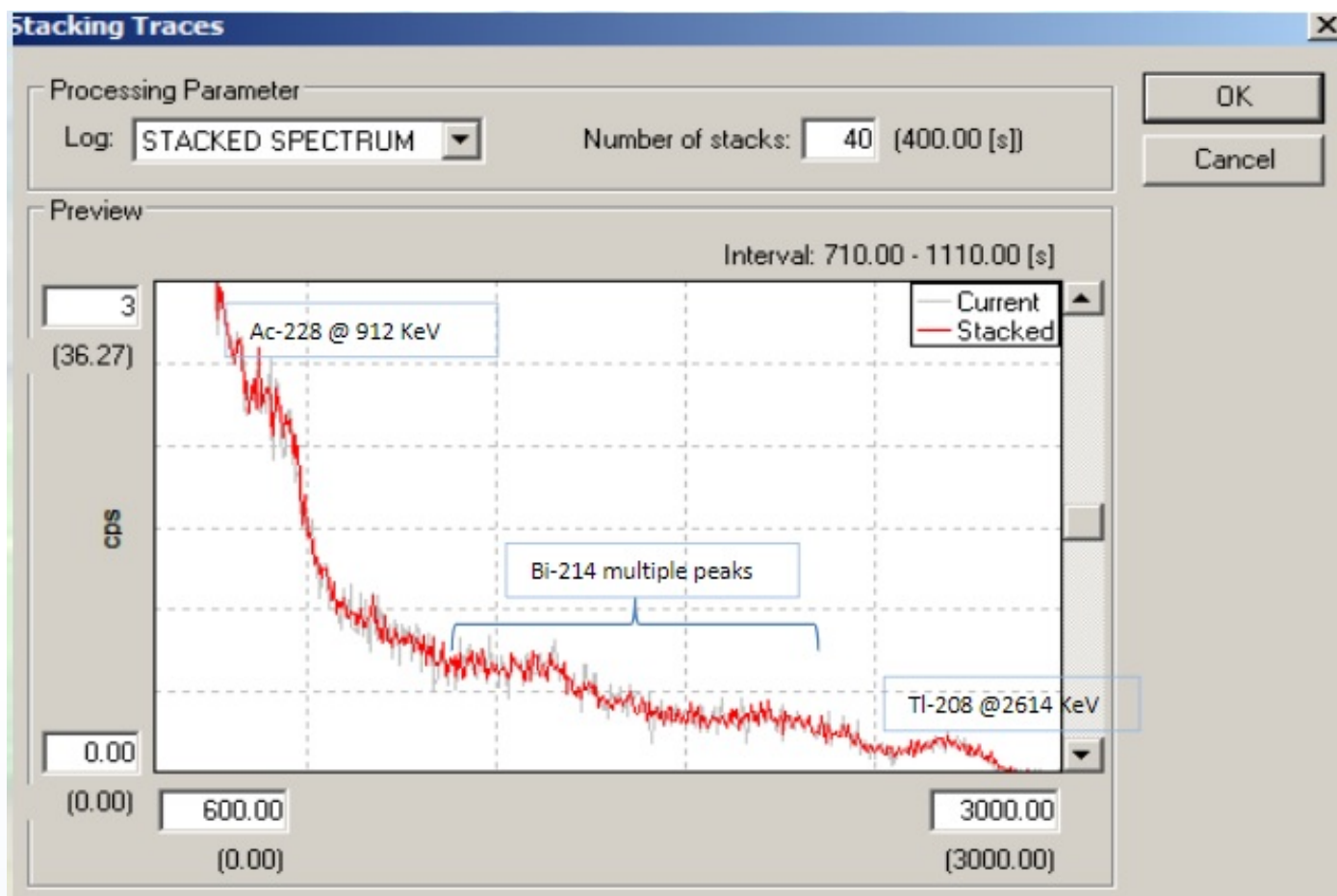
2LSA-1000 Data Sheet

Different concentrations of naturally occurring K, Th and Ur isotopes can be detected using a gamma probe such as the QL40GR. However, as these probes have limited precision and resolution, more precise radiation measurements are predominantly required, typically for projects in the mining and environmental industries.

The 2LSA-1000 Large crystal spectral Gamma probe allows the user to accurately measure and detect the radiation (up to 3000KeV) emitted from the formations within a borehole to its highest precision, as it utilizes a larger NAI(Th)I crystal. This larger (NaI, BGO or LBr) crystal improves the counting statistics and therefore the quantitative analysis in Ur, isotope and clay typing applications. The data is then displayed as a spectral gamma log as it counts the % emissions associated with each energy level.



An image which comparatively shows the spectral decay of Potassium K and Uranium Ur isotopes. Image kindly supplied by Mount Sopris.



Example dataset showing the stacked spectra gamma-emitting isotopes from Th decay. Image kindly supplied by Mount Sopris.

This adaptable probe allows the user to define the number of channels they wish to use for their project allowing them to choose between 256,512 or 1024 channels. Additional SP and SPR data can be recorded along with the gamma radiation data within 5 energy- windowed gamma logs. Uniquely, this probe allows the collection of real time temperature compensation data, which allows the response to be calculated as temperature changes. To accomplish this, the 2LSA-1000 probe stores the calibration coefficients calculated from factory tests (which used multiple sources and a swept temperature bath).

Operating Conditions

W - Water ?

M - Mud ?

D- Dry ?

S - Steel ?

P - PVC Borehole ?

UC- Uncased ?

*Centralization is not required

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	185 cm x 4.4 mm (diameter) x	7 kg

Technical Specifications

Maximum operating pressure:	200 bar or 3000 PSI
Maximum operating temperature:	70 °C (0- 60°C operational range)
Gamma Sensor Dimensions:	26.16 mm (Diameter) x 193.04 mm Na(Th)I Scintillation Crystal and PMT
Measurement resolution and range:	0.1 CPS, 0- 100,000 CPS
Natural Gamma range and energy accuracy:	0-3MeV, 2% accuracy
SPR:	0-1000 Ohms (range), 0.5 (resolution)
SP:	-2000-2000mV (range), 0.5 mV (resolution)
SPR and SP accuracy:	1%