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Radiation Safety. **Amplified.**

# COMPEX Prototype crystals

UPDATE - M. GINSZ, 13/02/2017

## COMPEX prototype crystals: characteristics and performance

	Unit	Crystal #1	Crystal #2
<b>Crystal Properties</b>			
Current Detector Location	-	Lund University	CANBERRA Lingolsheim facility
Serial Number	-	74652	74653
Sensitive crystal volume	[cm <sup>3</sup> ]	124	123
Length of detector	[mm]	50	50
Height of detector	[mm]	50	50
Hole Radius	[mm]	8	8
Hole Length	[mm]	25	<b>40</b>
Capacity Predicted / Measured	[pF]	16 / 19	25 / 29
Impurity at rear/top of detector	[at/cm <sup>3</sup> ]	1,50e10 / 0,48e10	1,60e10 / 0,56e10
Depletion voltage / Operation Voltage	[V]	1750 / 5000	1750 / 4500
<b>Spectroscopic Performance</b>			
Resolution FWHM @ 122 keV	[keV]	<b>0.81**</b>	<b>0.93 **</b>
Resolution FWHM @ 1332 keV	[keV]	<b>2.40</b>	<b>1.96</b>
Ratio FWTM / FWHM @ 1332 keV	-	<b>2.19</b>	<b>1.89</b>
Relative efficiency	[%]	32	30
Remarks	-	Resolution degradation with time**	Stable over > 2 days

\*\* Performance measured in test cryostat (improvement possible with dedicated new cryostat and designed electronics)