cansas1d SASdata

From canSAS

block diagram

Q geometry
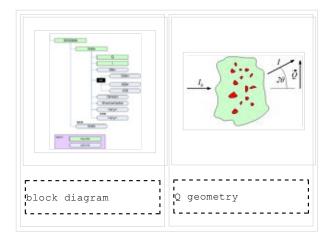
- parent: SASentry

SASdata

Name	Type	occurrence	Description	Attributes
Idata	container	[1..unbounded]	Idata describes a single SAS data point.	

Idata

Name	Type	occurrence	Description	Attributes
Q	floating-point number	[1..1]	$Q=(4\,\pi\,/\,\lambda)\,sin(\theta)$ where λ is the wavelength of the radiation and 2θ is the angle through which the detected radiation has been scattered. The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. Either *1/A* or *1/nm* are typical.	**unit**="{units}"
I	floating-point number	[1..1]	Intensity of the detected radiation. The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. One possibility might be *1/cm* for absolute units when the intensity describes a *differential cross-section per unit volume per unit solid angle*. **NOTE**: Be aware that there are different types of intensity that may be reported (see Talk:cansas1d_documentation#The_Intensity_Problem)	**unit**="{units}"

			and one should be very careful to inspect the **unit** attribute to determine how to handle subsequent data processing, especially in the area of units conversion.	
Idev	floating-point number	[0..1]	Estimated standard deviation of **I**. The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. One possibility might be *1/cm*.	**unit**=" {units}"
Qdev	floating-point number	[0..1]	Estimated standard deviation of **Q**. (optional: see note below on usage) The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. Either *1/A* or *1/nm* are typical.	**unit**=" {units}"
dQw	floating-point number	[0..1]	**Q** resolution along the axis of scanning (the high-resolution *slit width* direction). Useful for defining resolution data from slit-smearing instruments such as Bonse-Hart geometry. (optional: see note below on usage) The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. Either *1/A* or *1/nm* are typical.	**unit**=" {units}"
dQl	floating-point number	[0..1]	**Q** resolution perpendicular to the axis of scanning (the low-resolution *slit length* direction). Useful for defining resolution data from slit-smearing instruments such as Bonse-Hart geometry. (optional: see note below on usage) The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. Either *1/A* or *1/nm* are typical.	**unit**=" {units}"
Qmean	floating-point number	[0..1]	Mean value of **Q** for this datum. Useful when describing data that has been binned from higher-resolution or from area detectors. The **unit** attribute is required. See cansas1d_documentation#Rules for acceptable values. Either *1/A* or *1/nm* are typical.	**unit**=" {units}"
Shadowfactor	floating-point number	[0..1]	Describes the adjustment due to the beam stop penumbra. **(This definition needs revision. NIST?)** NOTE: There is no "unit" attribute.	

| *{any}* | container | [0..unbounded] | Any element(s) not defined in the cansas1d/1.0 standard can be placed at this point. See *{any}* for more details. | *xmlns: {foreign-prefix}*=" {foreign-namespace}" |

Notes

1. When an optional element (*Idev*, *Qdev*, ...) is used, it must be given in every **Idata** within the enclosing **SASdata**.
2. If either *dQw* or *dQl* are used, then *Qdev* is not permitted to be used.

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