

Proton and Neutron Knowledge Organisation System

IRI:

<http://www.purl.org/pankos>

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Authors:

Holly Zhen

Contributors:

Brian Matthews

Erica Yang

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Introduction

This ontology describes various neutron and synchrotron facilities from all over Europe, with information regarding their instruments and techniques used.

Classes

[back scattering spectrometer](#) [decommissioned](#) [dichroism](#) [diffraction](#)
[energy level value partition](#) [facility](#) [fluorescence](#) [luminescence](#) [free electron laser](#)
[gamma ray spectrometer](#) [high energy](#) [high pressure](#) [high resolution](#)
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[large scale diffractometer](#) [laue single diffractometer](#) [light s a l s / l s](#) [low energy](#)
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[pressure level value partition](#) [proton accelerator](#) [quasi laue diffractometer](#)

[reflectometer](#) [reflectometry](#) [resolution level value partition](#) [s a n s instrument](#)
[scanning transmission x ray microscope](#) [scattering](#) [single crystal diffractometer](#)
[small angle neutron scattering](#) [small angle x ray scattering](#) [spectrometer](#)
[spectroscopic photoemission and photoemission electron microscope](#) [spectroscopy](#)
[spin echo s a n s](#) [spin echo spectrometer](#) [status value partition](#) [synchrotron](#)
[technique](#) [test instrument](#) [three axis spectrometer](#) [time of flight spectrometer](#)
[tomography](#) [under construction](#) [under proposal](#) [x ray diffraction](#) [x ray imaging](#)
[x ray reflectometry](#) [x ray spectroscopy](#)

back scattering spectrometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#BackScatteringSpectrometer>

has super-classes

[neutron spectrometer](#)^C

has members

[i n10](#)ⁿⁱ

decommissioned^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Decommissioned>

has super-classes

[status value partition](#)^C

has members

[decommissioned](#)ⁿⁱ

is disjoint with

[operational](#)^C, [under construction](#)^C, [under proposal](#)^C

is also defined as

[named individual](#)

dichroism^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Dichroism>

has super-classes

[x ray spectroscopy](#)^C

has members

[x m l d](#)ⁿⁱ, [x mchi d](#)ⁿⁱ, [x n c d](#)ⁿⁱ, [x n l d](#)ⁿⁱ, [x ray linear dichroism](#)ⁿⁱ, [x ray magnetic linear dichroism](#)ⁿⁱ, [x ray magnetochiral dichroism](#)ⁿⁱ, [x ray natural circular dichroism](#)ⁿⁱ, [x ray natural linear dichroism](#)ⁿⁱ, [x ray magnetochiral dichroism](#)ⁿⁱ

is also defined as

[named individual](#)

diffraction^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Diffraction>

has super-classes[technique^C](#)**has sub-classes**[neutron diffraction^C](#), [x ray diffraction^C](#)**has members**[coherent imaging diffractionⁿⁱ](#), [enhanced imaging diffractionⁿⁱ](#), [imaging diffractionⁿⁱ](#), [p dⁿⁱ](#), [x p dⁿⁱ](#)**is also defined as**[named individual](#)**energy level value partition^C**[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#EnergyLevelValuePartition>**is equivalent to**[high energy^C](#) or [low energy^C](#) or [medium energy^C](#)**has super-classes**[value partition^C](#)**has sub-classes**[high energy^C](#), [low energy^C](#), [medium energy^C](#)**facility^C**[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#Facility>**has super-classes**[thing^C](#)**has sub-classes**[free electron laser^C](#), [muon source^C](#), [neutron source^C](#), [photon source^C](#), [proton accelerator^C](#), [synchrotron^C](#)**is in domain of**[has instrument^{op}](#), [uses file format^{op}](#)**is in range of**[in facility^{op}](#)**has members**[d e s yⁿⁱ](#), [elettra sincrotrone triesteⁿⁱ](#), [h z bⁿⁱ](#), [helmholtz zentrum berlinⁿⁱ](#), [p s iⁿⁱ](#)**is disjoint with**[technique^C](#)**fluorescence luminescence^C**[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#FluorescenceLuminescence>**has super-classes**[luminescence^C](#)

has members

[fluorescence spectroscopy](#)ⁿⁱ, [micro x ray fluorescence](#)ⁿⁱ, [x ray excited optical luminescence](#)ⁿⁱ, [x ray fluorescence](#)ⁿⁱ

is also defined as

[named individual](#)

free electron laser^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#FreeElectronLaser>

has super-classes

[facility](#)^C

has members

[fermi](#)ⁿⁱ, [flash](#)ⁿⁱ

gamma ray spectrometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#GammaRaySpectrometer>

has super-classes

[spectrometer](#)^C

has members

[pn3](#)ⁿⁱ

high energy^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#HighEnergy>

has super-classes

[energy level value partition](#)^C

has members

[high energy](#)ⁿⁱ

is disjoint with

[low energy](#)^C, [medium energy](#)^C

is also defined as

[named individual](#)

high pressure^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#HighPressure>

has super-classes

[pressure level value partition](#)^C

has members

[high pressure](#)ⁿⁱ

is disjoint with

[low pressure](#)^C, [medium pressure](#)^C

is also defined as
[named individual](#)

high resolution^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#HighResolution>

has super-classes

[resolution level value partition](#)^C

has members

[high resolution](#)ⁿⁱ

is disjoint with

[low resolution](#)^C, [medium resolution](#)^C

is also defined as

[named individual](#)

high resolution spectrometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#HighResolutionSpectrometer>

is equivalent to

[spectrometer](#)^C **and** ([has resolution level](#)^{op} **some** [high resolution](#)^C)

imaging^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Imaging>

has super-classes

[technique](#)^C

has sub-classes

[microscopy](#)^C, [tomography](#)^C, [x ray imaging](#)^C

has members

[absorption contrast imaging](#)ⁿⁱ, [holography](#)ⁿⁱ, [phase contrast imaging](#)ⁿⁱ, [photoemission electron microscopy](#)ⁿⁱ, [scanned probe imaging](#)ⁿⁱ

is also defined as

[named individual](#)

imaging instrument^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#ImagingInstrument>

is equivalent to

[Instrument](#)^C **and** ([supports technique](#)^{op} **some** [imaging](#)^C)

has super-classes

[Instrument](#)^C

Instrument^C

[back to ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Instrument>

is equivalent to

[in facility^{op}](#) **some** [facility^C](#)
[supports technique^{op}](#) **some** [technique^C](#)

has sub-classes

[imaging instrument^C](#), [m x instrument^C](#), [microscope^C](#), [muon spectrometer^C](#), [neutron diffractometer^C](#), [neutron interferometer^C](#), [nuclear particle physics^C](#), [reflectometer^C](#), [s a n s instrument^C](#), [spectrometer^C](#), [test instrument^C](#)

is in domain of

[in facility^{op}](#), [supports technique^{op}](#)

is in range of

[has instrument^{op}](#), [technique of^{op}](#)

has members

[P05ⁿⁱ](#), [b a mlineⁿⁱ](#), [b l beamlineⁿⁱ](#), [b m28ⁿⁱ](#), [b16ⁿⁱ](#), [b21ⁿⁱ](#), [b8ⁿⁱ](#), [ci poⁿⁱ](#), [gas phase beamlineⁿⁱ](#), [i d02ⁿⁱ](#), [i07ⁿⁱ](#), [i12ⁿⁱ](#), [i13ⁿⁱ](#), [i15ⁿⁱ](#), [i21ⁿⁱ](#), [i23ⁿⁱ](#), [l u c i aⁿⁱ](#), [p04ⁿⁱ](#), [r g b l dipoleⁿⁱ](#), [r o c kⁿⁱ](#), [reflectometerⁿⁱ](#), [s a n s iⁿⁱ](#), [s a n s instrumentⁿⁱ](#), [single crystal diffractometerⁿⁱ](#), [the high energy materials science beamline of h z gⁿⁱ](#), [three axis spectrometerⁿⁱ](#), [thz beamlineⁿⁱ](#), [time of flight spectrometerⁿⁱ](#), [v3ⁿⁱ](#), [variable polarization x u v beamlineⁿⁱ](#)

large scale diffractometer^C

[back to ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#LargeScaleDiffractometer>

has super-classes

[neutron diffractometer^C](#)

has members

[d11ⁿⁱ](#), [d16ⁿⁱ](#), [d22ⁿⁱ](#), [d33ⁿⁱ](#), [l a d i i iⁿⁱ](#)

laue single diffractometer^C

[back to ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#LaueSingleDiffractometer>

has super-classes

[neutron diffractometer^C](#)

has members

[c y c l o p sⁿⁱ](#)

light s a l s / l s^C

[back to ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#LightSALS/LS>

has super-classes

[scattering](#)^C[low energy](#)^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#LowEnergy>**has super-classes**[energy level value partition](#)^C**has members**[low energy](#)ⁿⁱ**is disjoint with**[high energy](#)^C, [medium energy](#)^C[low pressure](#)^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#LowPressure>**has super-classes**[pressure level value partition](#)^C**has members**[low pressure](#)ⁿⁱ**is disjoint with**[high pressure](#)^C, [medium pressure](#)^C**is also defined as**[named individual](#)[low resolution](#)^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#LowResolution>**has super-classes**[resolution level value partition](#)^C**has members**[low resolution](#)ⁿⁱ**is disjoint with**[high resolution](#)^C, [medium resolution](#)^C**is also defined as**[named individual](#)[luminescence](#)^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#Luminescence>**has super-classes**[technique](#)^C**has sub-classes**

[fluorescence luminescence](#)^C

has members

[fluorescence tomography](#)ⁿⁱ

is also defined as

[named individual](#)

[m x instrument](#)^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MXInstrument>

has super-classes

[Instrument](#)^C

has members

[i02](#)ⁿⁱ, [i03](#)ⁿⁱ, [i04](#)ⁿⁱ, [i04 1](#)ⁿⁱ, [i24](#)ⁿⁱ

[medium energy](#)^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MediumEnergy>

has super-classes

[energy level value partition](#)^C

has members

[medium enenergy](#)ⁿⁱ

is disjoint with

[high energy](#)^C, [low energy](#)^C

[medium pressure](#)^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MediumPressure>

has super-classes

[pressure level value partition](#)^C

has members

[medium pressure](#)ⁿⁱ

is disjoint with

[high pressure](#)^C, [low pressure](#)^C

is also defined as

[named individual](#)

[medium resolution](#)^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MediumResolution>

has super-classes

[resolution level value partition](#)^C

has members

[medium resolution](#)ⁿⁱ

is disjoint with

[high resolution](#)^c, [low resolution](#)^c

is also defined as

[named individual](#)

[microscope](#)^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Microscope>

has super-classes

[Instrument](#)^c

has sub-classes

[scanning transmission x ray microscope](#)^c, [spectroscopic photoemission and photoemission electron microscope](#)^c

has members

[scanning photoelectron microscope](#)ⁿⁱ

[microscopy](#)^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Microscopy>

has super-classes

[imaging](#)^c

has members

[electron microscopy](#)ⁿⁱ, [scanning angle resolved photoemission spectromicroscopy](#)ⁿⁱ, [scanning photoelectron microscopy](#)ⁿⁱ, [scanning transmission x ray microscopy](#)ⁿⁱ, [tomographic microscopy with c r l s](#)ⁿⁱ, [x ray microscopy](#)ⁿⁱ, [x ray photoemission microscopy](#)ⁿⁱ, [x ray scanning microscopy](#)ⁿⁱ

is also defined as

[named individual](#)

[muon source](#)^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MuonSource>

has super-classes

[facility](#)^c

has members

[su s](#)ⁿⁱ

[muon spectrometer](#)^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#MuonSpectrometer>

has super-classes

[Instrument^C](#)**has members**[argusⁿⁱ](#), [emuⁿⁱ](#), [hifiⁿⁱ](#), [musrⁿⁱ](#)[neutron diffraction^C](#)back to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronDiffraction>**has super-classes**[diffraction^C](#)**has members**[high resolution powder diffractionⁿⁱ](#), [powder diffractionⁿⁱ](#), [single crystal diffractionⁿⁱ](#), [time of flight small angle neutron diffractionⁿⁱ](#)**is also defined as**[named individual](#)[neutron diffractometer^C](#)back to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronDiffractometer>**is equivalent to**[Instrument^C](#) **and** ([supports technique^{op}](#) **some** [neutron diffraction^C](#))**has super-classes**[Instrument^C](#)**has sub-classes**[large scale diffractometer^C](#), [laue single diffractometer^C](#), [power diffractometer^C](#), [quasi laue diffractometer^C](#), [single crystal diffractometer^C](#)**has members**[BL04ⁿⁱ](#), [dmcⁿⁱ](#), [enginxⁿⁱ](#), [e2ⁿⁱ](#), [e6ⁿⁱ](#), [e9ⁿⁱ](#), [gemⁿⁱ](#), [inesⁿⁱ](#), [nimrodⁿⁱ](#), [pearlⁿⁱ](#), [pol arisⁿⁱ](#), [rotaxⁿⁱ](#), [sandalsⁿⁱ](#), [sxdⁿⁱ](#), [v1ⁿⁱ](#), [v15ⁿⁱ](#), [wishⁿⁱ](#)[neutron interferometer^C](#)back to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronInterferometer>**has super-classes**[Instrument^C](#)**has members**[s18ⁿⁱ](#)[neutron reflectometry^C](#)back to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronReflectometry>**has super-classes**[reflectometry^C](#)

has members[polarised neutron reflectivity](#)ⁿⁱ**is also defined as**[named individual](#)**neutron source**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronSource>**has super-classes**[facility](#)^C**has members**[berii](#)ⁿⁱ, [ill](#)ⁿⁱ, [isis](#)ⁿⁱ, [jcns](#)ⁿⁱ, [sing](#)ⁿⁱ**neutron spectrometer**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronSpectrometer>**has super-classes**[spectrometer](#)^C**has sub-classes**[back scattering spectrometer](#)^C, [spin echo spectrometer](#)^C, [three axis spectrometer](#)^C, [time of flight spectrometer](#)^C**has members**[in13](#)ⁿⁱ, [in16 b](#)ⁿⁱ, [iris](#)ⁿⁱ, [let](#)ⁿⁱ, [maps](#)ⁿⁱ, [mari](#)ⁿⁱ, [merlin](#)ⁿⁱ, [osiris](#)ⁿⁱ, [tosca](#)ⁿⁱ, [ves u vio](#)ⁿⁱ**neutron spectroscopy**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NeutronSpectroscopy>**has super-classes**[spectroscopy](#)^C**has members**[elastic neutron scattering spectroscopy](#)ⁿⁱ, [inelastic neutron scattering spectroscopy](#)ⁿⁱ, [mass separator spectroscopy](#)ⁿⁱ, [three axis spectroscopy](#)ⁿⁱ, [timeof flight inverted geometry crystal analyser spectroscopy](#)ⁿⁱ, [to f spectroscopy](#)ⁿⁱ**is also defined as**[named individual](#)**nuclear particle physics**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#NuclearParticlePhysics>**has super-classes**[Instrument](#)^C

has members

[cryo d e mⁿⁱ](#), [granitⁿⁱ](#), [p f1 bⁿⁱ](#), [p f2ⁿⁱ](#), [p n1ⁿⁱ](#), [p n3ⁿⁱ](#)

operational^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Operational>

has super-classes

[status value partition^C](#)

has members

[operationalⁿⁱ](#)

is disjoint with

[decommissioned^C](#), [under construction^C](#), [under proposal^C](#)

is also defined as

[named individual](#)

photon source^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#PhotonSource>

has super-classes

[facility^C](#)

has members

[b e s s y iⁿⁱ](#), [s l sⁿⁱ](#)

power diffractometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#PowerDiffractometer>

has super-classes

[neutron diffractometer^C](#)

[supports technique^{Op}](#) **value** [powder diffraction](#)

has members

[d1 bⁿⁱ](#), [d18ⁿⁱ](#), [d2 bⁿⁱ](#), [d20ⁿⁱ](#), [d4ⁿⁱ](#), [s a l s aⁿⁱ](#)

pressure level value partition^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#PressureLevelValuePartition>

is equivalent to

[high pressure^C](#) **or** [low pressure^C](#) **or** [medium pressure^C](#)

has super-classes

[value partition^C](#)

has sub-classes

[high pressure^C](#), [low pressure^C](#), [medium pressure^C](#)

is in range of

[has pressure level^{op}](#)

proton accelerator^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#ProtonAccelerator>

has super-classes

[facility^C](#)

has members

[hipaⁿⁱ](#)

quasi laue diffractometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Quasi-LaueDiffractometer>

has super-classes

[neutron diffractometer^C](#)

has members

[ladiiiⁿⁱ](#)

reflectometer^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Reflectometer>

has super-classes

[Instrument^C](#)

has members

[crispⁿⁱ](#), [d17ⁿⁱ](#), [figaroⁿⁱ](#), [interⁿⁱ](#), [offspecⁿⁱ](#), [polrefⁿⁱ](#), [surfⁿⁱ](#), [superadamⁿⁱ](#)

is also defined as

[named individual](#)

reflectometry^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Reflectometry>

has super-classes

[technique^C](#)

has sub-classes

[neutron reflectometry^C](#), [x ray reflectometry^C](#)

has members

[polarised neutron reflectometryⁿⁱ](#)

is also defined as

[named individual](#)

resolution level value partition^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#ResolutionLevelValuePartition>

is equivalent to

[high resolution](#)^C or [low resolution](#)^C or [medium resolution](#)^C

has super-classes

[value partition](#)^C

has sub-classes

[high resolution](#)^C, [low resolution](#)^C, [medium resolution](#)^C

is in range of

[has resolution level](#)^{OP}

s a n s instrument^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#SANSInstrument>

has super-classes

[Instrument](#)^C

has members

[loq](#)ⁿⁱ, [nimrod](#)ⁿⁱ, [sandals](#)ⁿⁱ, [sans2d](#)ⁿⁱ

is also defined as

[named individual](#)

scanning transmission x ray microscope^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#ScanningTransmissionX-rayMicroscope>

has super-classes

[microscope](#)^C

has members

[P11](#)ⁿⁱ

scattering^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Scattering>

has super-classes

[technique](#)^C

has sub-classes

[light s a l s / l s](#)^C, [small angle neutron scattering](#)^C, [small angle x ray scattering](#)^C

has members

[grazing small angle x ray scattering](#)ⁿⁱ, [microfocus x ray scattering](#)ⁿⁱ, [nanofocus x ray scattering](#)ⁿⁱ, [resonant scattering](#)ⁿⁱ, [resonant x ray scattering](#)ⁿⁱ, [small angle inelastic scattering](#)ⁿⁱ, [total scattering](#)ⁿⁱ, [w a x s](#)ⁿⁱ, [wide angle x ray s a x s](#)ⁿⁱ

is also defined as

[named individual](#)

single crystal diffractometer^Cback to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#SingleCrystalDiffractometer>

has super-classes

[neutron diffractometer](#)^C

has members

[cyclops](#)ⁿⁱ, [d10](#)ⁿⁱ, [d19](#)ⁿⁱ, [d23](#)ⁿⁱ, [d3](#)ⁿⁱ, [d9](#)ⁿⁱ, [orient express](#)ⁿⁱ, [sxd](#)ⁿⁱ, [vivaldi](#)ⁿⁱ

is also defined as

[named individual](#)small angle neutron scattering^Cback to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#SmallAngleNeutronScattering>

has super-classes

[scattering](#)^C

has sub-classes

[spin echo s a n s](#)^C

has members

[a s a x s](#)ⁿⁱ, [anomalous small angle x ray scattering](#)ⁿⁱ, [grazing incident s a n s](#)ⁿⁱ, [time of flight s a n s](#)ⁿⁱ, [v s a n s](#)ⁿⁱ

is also defined as

[named individual](#)small angle x ray scattering^Cback to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#SmallAngleX-RayScattering>

has super-classes

[scattering](#)^C

has members

[diffuse x ray s a x s](#)ⁿⁱ, [grazing incident x ray s a x s](#)ⁿⁱ, [inelastic x ray s a x s](#)ⁿⁱ, [s a x s](#)ⁿⁱ, [small angle x ray scattering](#)ⁿⁱ, [soft x ray s a x](#)ⁿⁱ, [ultra x ray s a x](#)ⁿⁱ

is same as

[s a x s](#)

is also defined as

[named individual](#)spectrometer^Cback to [ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#Spectrometer>

has super-classes

[Instrument](#)^C

has sub-classes

[gamma ray spectrometer^C](#), [neutron spectrometer^C](#)

has members

[p n1ⁿⁱ](#), [spectro microscopy beamlineⁿⁱ](#)

[spectroscopic photoemission and photoemission electron microscope^C](#)

back to [ToC](#) or [Class ToC](#)

IRI:

<http://www.purl.org/pankos#SpectroscopicPhotoemissionAndPhotoemissionElectronMicroscope>

has super-classes

[microscope^C](#)

has members

[NanospectroscopyBeamlineⁿⁱ](#)

[spectroscopy^C](#)

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Spectroscopy>

has super-classes

[technique^C](#)

has sub-classes

[neutron spectroscopy^C](#), [x ray spectroscopy^C](#)

has members

[absorption spectroscopyⁿⁱ](#), [electron spectroscopyⁿⁱ](#), [gamma spectroscopyⁿⁱ](#), [h r x p sⁿⁱ](#), [high resolutino photo electron spectroscopyⁿⁱ](#), [high resolution core level photoemission spectroscopyⁿⁱ](#), [infrared micro spectroscopyⁿⁱ](#), [muon spectroscopyⁿⁱ](#), [optical spectroscopyⁿⁱ](#), [u v and visible circular dichroism spectroscopyⁿⁱ](#), [uv vuv spectroscopyⁿⁱ](#), [x ray spectroscopyⁿⁱ](#)

is also defined as

[named individual](#)

[spin echo s a n s^C](#)

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#SpinEchoSANS>

has super-classes

[small angle neutron scattering^C](#)

has members

[quasi elastic neutron spin echo scatteringⁿⁱ](#), [spin echo resolved grazing incidence scatteringⁿⁱ](#), [spin echo small angle neutron scatteringⁿⁱ](#)

is also defined as

[named individual](#)

[spin echo spectrometer^C](#)

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Spin-echoSpectrometer>

has super-classes[neutron spectrometer](#)^C**has members**[i n11](#)ⁿⁱ, [i n15](#)ⁿⁱ**status value partition**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#StatusValuePartition>**is equivalent to**[decommissioned](#)^C or [operational](#)^C or [under construction](#)^C or [under proposal](#)^C**has super-classes**[value partition](#)^C**has sub-classes**[decommissioned](#)^C, [operational](#)^C, [under construction](#)^C, [under proposal](#)^C**is in range of**[has operation status](#)^{op}**synchrotron**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#Synchrotron>**has super-classes**[facility](#)^C**has members**[alba](#)ⁿⁱ, [diamond](#)ⁿⁱ, [dls](#)ⁿⁱ, [esrf](#)ⁿⁱ, [elettra](#)ⁿⁱ, [petraiii](#)ⁿⁱ, [sls](#)ⁿⁱ, [soleil](#)ⁿⁱ**technique**^C[back to ToC](#) or [Class ToC](#)IRI: <http://www.purl.org/pankos#Technique>**has super-classes**[in facility](#)^{op} **some** [facility](#)^C[supports technique](#)^{op} **some** [technique](#)^C**has sub-classes**[diffraction](#)^C, [imaging](#)^C, [luminescence](#)^C, [reflectometry](#)^C, [scattering](#)^C, [spectroscopy](#)^C**is in domain of**[technique of](#)^{op}**is in range of**[supports technique](#)^{op}**has members**[a r p e s](#)ⁿⁱ, [angular dispersive x ray diffraction](#)ⁿⁱ, [anomalous diffraction](#)ⁿⁱ, [anomalous scattering](#)ⁿⁱ, [anomalous surface x ray scattering](#)ⁿⁱ, [back scattering spectroscopy](#)ⁿⁱ, [c d i](#)ⁿⁱ, [c i x](#)ⁿⁱ, [c t r](#)ⁿⁱ, [coherent diffraction imaging](#)ⁿⁱ, [coherent imaging](#)ⁿⁱ, [coherent radiation](#)ⁿⁱ, [coherent scattering imaging](#)ⁿⁱ, [coherent small angle x ray scattering](#)ⁿⁱ, [compton](#)

[scatteringⁿⁱ](#), [cosmic neutron radiationⁿⁱ](#), [crystal truncation rodsⁿⁱ](#), [d a f sⁿⁱ](#), [d e iⁿⁱ](#), [d s cⁿⁱ](#),
[deep x ray lithographyⁿⁱ](#), [dichroismⁿⁱ](#), [differential scanning calorimetryⁿⁱ](#), [diffractionⁿⁱ](#),
[diffraction anomalous fine structureⁿⁱ](#), [diffraction contrast tomographyⁿⁱ](#), [diffraction
enhanced imagingⁿⁱ](#), [diffraction imagingⁿⁱ](#), [diffuse x ray scatteringⁿⁱ](#), [dispersive x ray
diffractionⁿⁱ](#), [e d d iⁿⁱ](#), [e u v i lⁿⁱ](#), [e x a f sⁿⁱ](#), [elastic scatteringⁿⁱ](#), [energy dispersive
diffractionⁿⁱ](#), [extended x ray absorption fine structureⁿⁱ](#), [extreme ultraviolet interference
lithographyⁿⁱ](#), [f t hⁿⁱ](#), [f t i rⁿⁱ](#), [fermi surface mappingⁿⁱ](#), [fluorescence luminescenceⁿⁱ](#), [fourier
transform holographyⁿⁱ](#), [fourier transform infrared microscopyⁿⁱ](#), [fourier transform
infrared spectroscopyⁿⁱ](#), [full field x ray imagingⁿⁱ](#), [g i dⁿⁱ](#), [g i s a x sⁿⁱ](#), [g i x dⁿⁱ](#), [grazing
incidence diffractionⁿⁱ](#), [grazing incidence small angle scatteringⁿⁱ](#), [h a x p e sⁿⁱ](#), [h e r f dⁿⁱ](#),
[h i k eⁿⁱ](#), [high angular and high spatial resolution diffractionⁿⁱ](#), [high energy resolution
fluorescence detectionⁿⁱ](#), [high kinetic energy photoelectron spectroscopyⁿⁱ](#), [humidity
controlⁿⁱ](#), [i r microscopyⁿⁱ](#), [i r spectroscopyⁿⁱ](#), [i x sⁿⁱ](#), [imagingⁿⁱ](#), [imaging x ray
photoelectron spectroscopyⁿⁱ](#), [in situ magnetron sputteringⁿⁱ](#), [in situ spectroscopyⁿⁱ](#), [in
situ surface diffractionⁿⁱ](#), [in situ x ray diffractionⁿⁱ](#), [inelastic neutron scattering
spectroscopyⁿⁱ](#), [inelastic x ray s a x sⁿⁱ](#), [inelastic x ray scatteringⁿⁱ](#), [infra red
spectroscopyⁿⁱ](#), [infraredⁿⁱ](#), [infrared absorption spectroscopyⁿⁱ](#), [k edge subtraction
imagingⁿⁱ](#), [laminographyⁿⁱ](#), [laue diffractionⁿⁱ](#), [litho e u vⁿⁱ](#), [luminescenceⁿⁱ](#), [m a dⁿⁱ](#), [m o k
eⁿⁱ](#), [macromolecular crystallographyⁿⁱ](#), [magnetic optical kerr effectⁿⁱ](#), [magnetic
spectroscopyⁿⁱ](#), [mass spectrometryⁿⁱ](#), [micro beamⁿⁱ](#), [micro powder diffractionⁿⁱ](#), [micro
tomographyⁿⁱ](#), [micro x a n e sⁿⁱ](#), [micro x a sⁿⁱ](#), [micro x r fⁿⁱ](#), [micro x ray absorption near
edge structureⁿⁱ](#), [micro x ray fluorescenceⁿⁱ](#), [microbeam radiation therapyⁿⁱ](#),
[microcrystallographyⁿⁱ](#), [microfocus spectroscopyⁿⁱ](#), [microscopyⁿⁱ](#), [monochromatic
imagingⁿⁱ](#), [multi wavelength anomalous dispersionⁿⁱ](#), [muon spin spectroscopyⁿⁱ](#), [n e x a f
sⁿⁱ](#), [n i x sⁿⁱ](#), [n r sⁿⁱ](#), [nano a r p e sⁿⁱ](#), [near edge x ray absorption fine structure
spectroscopyⁿⁱ](#), [neutron autoradiographyⁿⁱ](#), [neutron depolarisationⁿⁱ](#), [neutron
diffractionⁿⁱ](#), [neutron interferometryⁿⁱ](#), [neutron reflectometryⁿⁱ](#), [neutron scatteringⁿⁱ](#),
[neutron spectroscopyⁿⁱ](#), [neutron transmission radiographyⁿⁱ](#), [non crystalline diffractionⁿⁱ](#),
[non resonantinelastic x ray scatteringⁿⁱ](#), [nuclear resonanceⁿⁱ](#), [nuclear resonant
scatteringⁿⁱ](#), [p e e mⁿⁱ](#), [pair distribution functionⁿⁱ](#), [pair distribution function analysisⁿⁱ](#),
[photo electron spectroscopyⁿⁱ](#), [photoemission spectroscopyⁿⁱ](#), [pink beam imagingⁿⁱ](#),
[polarisation analysisⁿⁱ](#), [quasielastic scatteringⁿⁱ](#), [r e s p e sⁿⁱ](#), [r f m s rⁿⁱ](#), [r i x sⁿⁱ](#), [radio
frequency muon spin resonanceⁿⁱ](#), [radiographyⁿⁱ](#), [raman spectroscopyⁿⁱ](#), [reflectometryⁿⁱ](#),
[resonant absorptionⁿⁱ](#), [resonant inelastic soft x ray scatteringⁿⁱ](#), [resonant
photoemissionⁿⁱ](#), [resonant spectroscopyⁿⁱ](#), [s a r p e sⁿⁱ](#), [s dⁿⁱ](#), [s p mⁿⁱ](#), [s t mⁿⁱ](#), [s t x mⁿⁱ](#), [s
x r dⁿⁱ](#), [scanned energyand angular photoelectron diffractionⁿⁱ](#), [scanning angle resolved
photoemission spectromicroscopyⁿⁱ](#), [scanning probe microscopyⁿⁱ](#), [scanning
transmission x ray microscopyⁿⁱ](#), [scanning tunnelling microscopyⁿⁱ](#), [scanning x ray
fluorescenceⁿⁱ](#), [scatteringⁿⁱ](#), [single crystal neutron diffractionⁿⁱ](#), [small angle neutron
scatteringⁿⁱ](#), [small angle x ray scatteringⁿⁱ](#), [small molecule diffractionⁿⁱ](#), [soft x ray
diffractionⁿⁱ](#), [soft x ray resonant scatteringⁿⁱ](#), [spectromicroscopyⁿⁱ](#), [spectronanoscopyⁿⁱ](#),
[spectroscopyⁿⁱ](#), [spin and angle resolved photoelectron spectroscopyⁿⁱ](#), [spin echo s a n
sⁿⁱ](#), [spin echo spectroscopyⁿⁱ](#), [spin resolved photoemissionⁿⁱ](#), [stereotaxic synchrotron
radiation therapyⁿⁱ](#), [strain analysisⁿⁱ](#), [surface x ray diffractionⁿⁱ](#), [time of flight diffractionⁿⁱ](#),
[time of flight spectroscopyⁿⁱ](#), [t o f spectroscopyⁿⁱ](#), [tomographic microscopy with c r l sⁿⁱ](#),
[tomographyⁿⁱ](#), [topographyⁿⁱ](#), [triple axis spectroscopyⁿⁱ](#), [u s a n sⁿⁱ](#), [u s a x sⁿⁱ](#), [u v soft x](#)

[rayⁿⁱ](#), [u v visible spectroscopyⁿⁱ](#), [ultra high resolution small angle neutron scatteringⁿⁱ](#), [ultra small angle scatteringⁿⁱ](#), [ultra small angle x ray scatteringⁿⁱ](#), [v s a n sⁿⁱ](#), [v u v photoemissionⁿⁱ](#), [v u v spectroscopyⁿⁱ](#), [vacuum ultraviolet radiationⁿⁱ](#), [very small angle neutron scatteringⁿⁱ](#), [wide angle scatteringⁿⁱ](#), [wide angle x ray scatteringⁿⁱ](#), [x a f sⁿⁱ](#), [x a n e sⁿⁱ](#), [x a sⁿⁱ](#), [x d mⁿⁱ](#), [x e sⁿⁱ](#), [x m c dⁿⁱ](#), [x m l dⁿⁱ](#), [x m c h i dⁿⁱ](#), [x n c dⁿⁱ](#), [x n l dⁿⁱ](#), [x p c sⁿⁱ](#), [x p sⁿⁱ](#), [x r dⁿⁱ](#), [x r fⁿⁱ](#), [x r rⁿⁱ](#), [x ray absorption fine structureⁿⁱ](#), [x ray absorption near edge structureⁿⁱ](#), [x ray detected magnetic resonanceⁿⁱ](#), [x ray diffractionⁿⁱ](#), [x ray emission spectroscopyⁿⁱ](#), [x ray imagingⁿⁱ](#), [x ray lithographyⁿⁱ](#), [x ray magnetic circular dichroismⁿⁱ](#), [x ray photoemission microscopyⁿⁱ](#), [x ray photon correlation spectroscopyⁿⁱ](#), [x ray raman scatteringⁿⁱ](#), [x ray reflectometryⁿⁱ](#), [x ray scanning microscopyⁿⁱ](#), [x ray scatteringⁿⁱ](#)

is disjoint with

[facility^c](#)

test instrument^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#TestInstrument>

has super-classes

[Instrument^c](#)

has members

[i n3ⁿⁱ](#)

three axis spectrometer^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#ThreeAxisSpectrometer>

has super-classes

[neutron spectrometer^c](#)

has members

[i n1ⁿⁱ](#), [i n12ⁿⁱ](#), [i n14ⁿⁱ](#), [i n20ⁿⁱ](#), [i n22ⁿⁱ](#), [i n8ⁿⁱ](#)

is also defined as

[named individual](#)

time of flight spectrometer^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Time-of-flightSpectrometer>

has super-classes

[neutron spectrometer^c](#)

has members

[b r i s pⁿⁱ](#), [d7ⁿⁱ](#), [f i g a r oⁿⁱ](#), [i n4 cⁿⁱ](#), [i n5ⁿⁱ](#), [i n6ⁿⁱ](#)

is also defined as

[named individual](#)

tomography^c

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#Tomography>

has super-classes

[imaging^C](#)

has members

[fluorescence tomographyⁿⁱ](#)

is also defined as

[named individual](#)

under construction^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#UnderConstruction>

has super-classes

[status value partition^C](#)

has members

[under constructionⁿⁱ](#)

is disjoint with

[decommissioned^C](#), [operational^C](#), [under proposal^C](#)

is also defined as

[named individual](#)

under proposal^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#UnderProposal>

has super-classes

[status value partition^C](#)

has members

[under proposalⁿⁱ](#)

is disjoint with

[decommissioned^C](#), [operational^C](#), [under construction^C](#)

is also defined as

[named individual](#)

x ray diffraction^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#X-RayDiffraction>

has super-classes

[diffraction^C](#)

has members

[grazing incidence x ray diffractionⁿⁱ](#), [photoelectron diffractionⁿⁱ](#), [powder diffractionⁿⁱ](#), [resonant diffractionⁿⁱ](#), [single crystal diffractionⁿⁱ](#), [small angle diffractionⁿⁱ](#), [soft diffractionⁿⁱ](#), [surface diffractionⁿⁱ](#), [x ray photoelectron diffractionⁿⁱ](#), [x ray powder diffractionⁿⁱ](#)

is also defined as
[named individual](#)

x ray imaging^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#X-RayImaging>

has super-classes

[imaging^C](#)

has members

[micro g i s a x s tomographyⁿⁱ](#), [micro s a x s tomographyⁿⁱ](#), [scanning x ray fluorescenceⁿⁱ](#), [soft x ray imagingⁿⁱ](#), [x ray diffraction imagingⁿⁱ](#)

is also defined as
[named individual](#)

x ray reflectometry^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#X-RayReflectometry>

has super-classes

[reflectometry^C](#)

has members

[x r r x ray reflectivityⁿⁱ](#), [x ray reflectivityⁿⁱ](#)

is also defined as
[named individual](#)

x ray spectroscopy^C

back to [ToC](#) or [Class ToC](#)

IRI: <http://www.purl.org/pankos#X-RaySpectroscopy>

has super-classes

[spectroscopy^C](#)

has sub-classes

[dichroism^C](#)

has members

[emmission x ray spectroscopyⁿⁱ](#), [extended x ray absorption fine structureⁿⁱ](#), [hard x ray photoelectron spectroscopyⁿⁱ](#), [photon correlation x ray spectroscopyⁿⁱ](#), [x ray absorption spectroscopyⁿⁱ](#), [x ray magnetic circular dichroismⁿⁱ](#), [x ray photon correlation spectroscopyⁿⁱ](#)

is also defined as
[named individual](#)

Object Properties

[has instrument](#) [has operation status](#) [has pressure level](#) [has resolution level](#)

[in facility](#) [supports technique](#) [technique of](#) [uses file format](#)

has instrument^{op}

back to [ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#hasInstrument>

has characteristics: asymmetric

has super-properties

[top object property](#)

has domain

[facility](#)^c

has range

[Instrument](#)^c

is inverse of

[in facility](#)^{op}

has operation status^{op}

back to [ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#hasOperationStatus>

has characteristics: functional

has super-properties

[top object property](#)

has range

[status value partition](#)^c

has pressure level^{op}

back to [ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#hasPressureLevel>

has super-properties

[top object property](#)

has range

[pressure level value partition](#)^c

has resolution level^{op}

back to [ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#hasResolutionLevel>

has characteristics: functional

has range

[resolution level value partition](#)^c

in facility^{op}

[back to ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#inFacility>

has characteristics: asymmetric

has domain

[Instrument](#)^c

has range

[facility](#)^c

is inverse of

[has instrument](#)^{op}

supports technique^{op}

[back to ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#supportsTechnique>

has characteristics: asymmetric

has domain

[Instrument](#)^c

has range

[technique](#)^c

is inverse of

[technique of](#)^{op}

technique of^{op}

[back to ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#techniqueOf>

has characteristics: asymmetric

has domain

[technique](#)^c

has range

[Instrument](#)^c

is inverse of

[supports technique](#)^{op}

uses file format^{op}

[back to ToC](#) or [Object Property ToC](#)

IRI: <http://www.purl.org/pankos#usesFileFormat>

has domain

[facility](#)^c

Annotation Properties

[description](#) [note](#) [preferred name](#)

[description](#)^{ap}

back to [ToC](#) or [Annotation Property ToC](#)

IRI: <http://purl.org/dc/elements/1.1/description>

[note](#)^{ap}

back to [ToC](#) or [Annotation Property ToC](#)

IRI: <http://www.w3.org/2004/02/skos/core#note>

[preferred name](#)^{ap}

back to [ToC](#) or [Annotation Property ToC](#)

IRI: <http://www.purl.org/pankos#preferredName>

General Axioms

All Disjoint Classes

back to [ToC](#)

[high energy](#)^c, [low energy](#)^c, [medium energy](#)^c

All Disjoint Classes

back to [ToC](#)

[high resolution](#)^c, [low resolution](#)^c, [medium resolution](#)^c

All Disjoint Classes

back to [ToC](#)

[high pressure](#)^c, [low pressure](#)^c, [medium pressure](#)^c

All Disjoint Classes

back to [ToC](#)

[decommissioned](#)^c, [operational](#)^c, [under construction](#)^c, [under proposal](#)^c

Namespace Declarations

[back to ToC](#)**default namespace**

<http://www.purl.org/pankos#>

dc

<http://purl.org/dc/elements/1.1/>

owl

<http://www.w3.org/2002/07/owl#>

pankos

<http://www.purl.org/pankos#>

rdf

<http://www.w3.org/1999/02/22-rdf-syntax-ns#>

rdfs

<http://www.w3.org/2000/01/rdf-schema#>

skos

<http://www.w3.org/2004/02/skos/core#>

www-purl-org

<http://www.purl.org/>

xsd

<http://www.w3.org/2001/XMLSchema#>

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