Beamline Status

As of August 2005, NSRRC has a total of twenty-seven beamlines in operation/commission and five beamlines under construction. Table 1 lists the status of the NSRRC beamlines. As for quality measurement, five additional beamlines are dedicated to diagnosis. The spokespersons for these opened beamline/end-stations are shown in Table 2. A blueprint of the beamline layout is illustrated below. The details of all beamlines in operation can be found at the NSRRC Beamline and End-station home page at http://www.nsrrc.org.tw

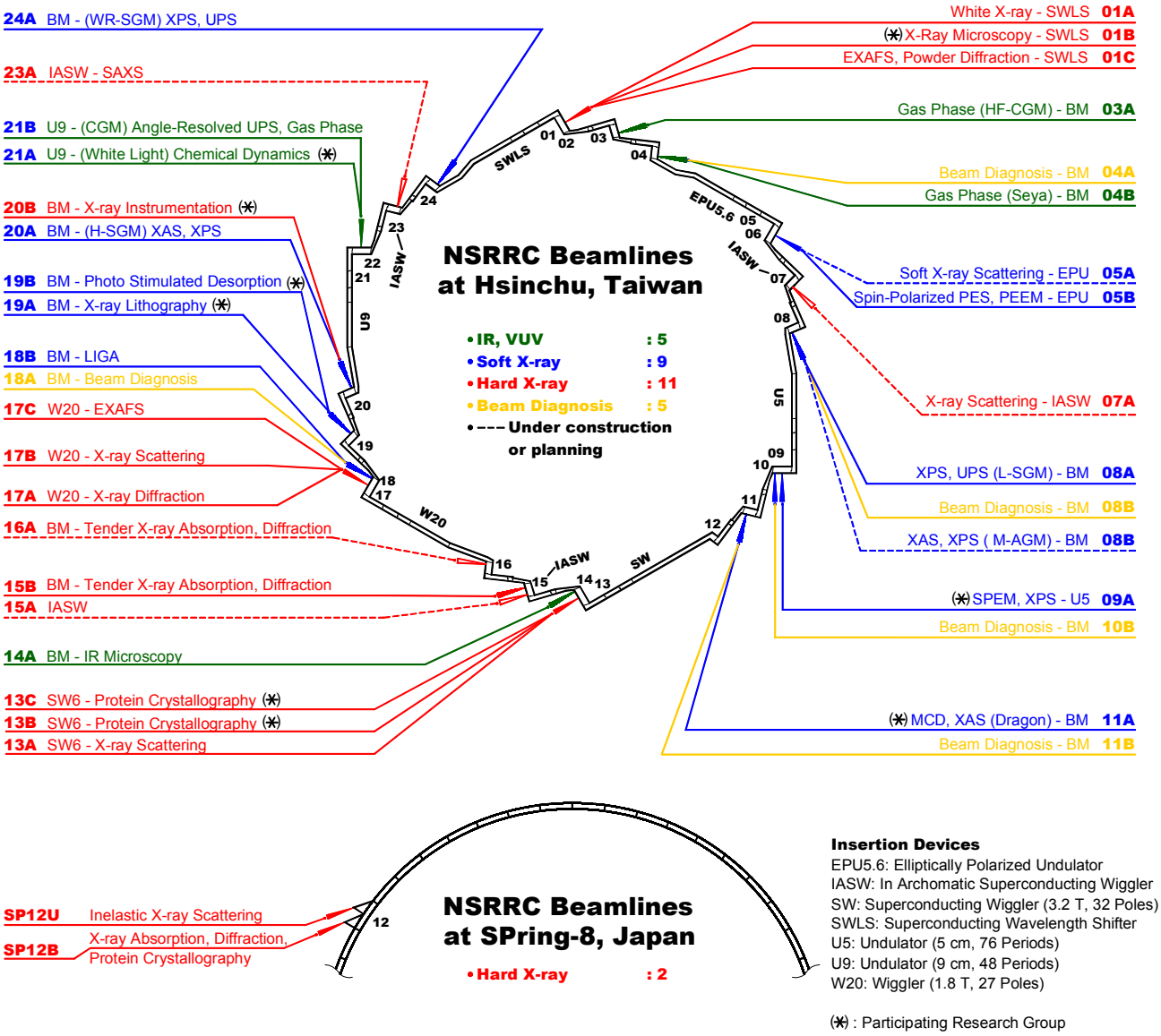

Table 1: NSRRC Beamlines

No.	Source	Mono. Type	Energy Range (eV)	Res. Power (E/ΔE)	Experiments
Beamlines in Operation/Commission					
01A	SWLS	none	> 5 k		X-ray Imaging
01B	SWLS	DCM	8 k – 11 k	1000	X-ray Microscopy & Tomography
01C	SWLS	DCM	6 k – 33 k	7000	EXAFS, Powder Diffraction
03A	BM	CGM	4 – 40	50000	Spectroscopy: PES, PAS
04B	BM	SNM	4 – 40	5000	Spectroscopy: PES, PAS
05B	EPU	SGM	60 – 1.5 k	20000	Magnetic Studies: MCD, SRPES, PEEM
08A	BM	SGM	15 – 200	20000	Spectroscopy: PES, XPS, PAS
09A	U5	SGM	60 – 1.5 k	15000	Spectro/Microscopy: XPS, XAS, SPEM
11A	BM	SGM	8 – 1.5 k	15000	Spectroscopy: MCD, PES, XPS, XAS
13A	SW6	ACCM	12 k – 14 k	1000	X-ray Scattering
13B	SW6	DCM	5 k – 20 k	7000	Protein Crystallography
13C	SW6	ACCM	12 k – 14 k	1000	Protein Crystallography
14A	BM	FTIR	1 – 25 μm		IR Microscopy
15B	BM	DCM	1 k – 9 k	7000	Spectroscopy: (N)EXAFS
17A	W20	ACCM	8 k – 12 k	1000	Diffraction, Scattering
17B	W20	DCM	4 k – 15 k	7000	Diffraction, Scattering, PX
17C	W20	DCM	4 k – 15 k	7000	Spectroscopy: (N)EXAFS
18B	BM	none	> 500		Micro-machining
19A	BM	none	800 – 1.8 k		X-ray Lithography
19B	BM	none	White Light		Photo Stimulated Desorption
20A	BM	SGM	70 – 1.2 k	10000	Spectroscopy: XAS, XPS, MCD
20B	BM	DCM	4 k – 12 k	5000	PRT (NCHU/TKU): (N)EXAFS, SAS
21A	U9	none	4 – 500	50	Chemical Dynamics
21B	U9	CGM	4 – 100	100000	Atomic Molecular: PAS, PES, XPS
24A	BM	SGM	10 – 1.5 k	30000	Spectroscopy: PES, XAS, MCD
SP12B*	BM	DCM	5 k – 100 k	7000	Diffraction, Scattering, PX, EXAFS
SP12U*	U3.2	DCM/HRM	5 k – 30 k	1000000	Inelastic X-ray Scattering
Beamlines under Construction/in Planning					
05A	EPU	AGM	400 – 1.5 k	20000	Inelastic Soft X-ray Scattering
08B	BM	AGM	300 – 1 k	10000	Spectroscopy, PES, XAS, MCD
23A	IASW	DCM	5 k – 23 k	7000	X-ray Scattering
07A	IASW	DCM	5 k – 23 k	7000	Diffraction, Scattering
15A	IASW	DCM	5 k – 23 k	7000	DX, Medical Image

ACCM: Asymmetrically-cut Curved Crystal Monochromator
AGM: Active Grating Monochromator
BM: Bending Magnet
BTCM: Bending Triangular Crystal Monochromator
CGM: Cylindrical Grating Monochromator
DCM: Double Crystal Monochromator
EPBM: Elliptical Polarized Bending Magnet
EPU: Elliptical Polarized Undulator
EXAFS: Extended X-ray Absorption Fine Structure
(N)EXAFS: (Near) Extended X-ray Absorption Fine Structure
MCD: Magnetic Circular Dichroism
PAS: Photoabsorption Spectroscopy
PES: Photoelectron Spectroscopy
PEEM: Photo-Emission Electron Microscope
SGM: Spherical Grating Monochromator
SNM: Seya-Namioka Monochromator
SPEM: Scanning Photoemission Electron Microscope
SRPES: Spin-Resolved Photoelectron Spectroscopy
SW: Superconducting Multi-pole Wiggler
SWLS: Superconducting Wavelength Shifter
W20: Wiggler with 20 cm period magnets
XAS: X-ray Absorption Spectroscopy
XPS: X-ray Photoelectron Spectroscopy
XRD: X-Ray Diffraction
SP12B(U)*: Beamlines Located at SPring-8, Japan

Table 2: Spokespersons for Beamlines/End Stations

No.	Beamline	Spokesperson	Beamline Ext. (Tel:+886-3-578-0281)	Email
01A1	SWLS/White X-ray	Yeu-Kuang Hwu	1011	phhwu@sinica.edu.tw
01B1	SWLS/X-ray Microscopy	Yen-Fang Song	1012	song@nsrrc.org.tw
01C1	SWLS/EXAFS	Jyh-Fu Lee	1013	jflee@nsrrc.org.tw
01C2	SWLS/X-ray Powder Diffraction	Hwo-Shuenn Sheu	1013	hsheu@nsrrc.org.tw
03A1	Gas Phase/Photoluminescence	Bing-Ming Cheng	1031	bmcheng@nsrrc.org.tw
04B1	Seya/Gas Phase	Su-Yu Chiang	1042	schiang@nsrrc.org.tw
05B1	EPU/Spin-polarized PES	Di-Jing Huang	1051	djhuang@nsrrc.org.tw
05B2	EPU/PEEM	Der-Hsin Wei	1052	dhw@nsrrc.org.tw
05B3	EPU/Soft X-ray Scattering	Hong-Ji Lin	1053	hjlin@nsrrc.org.tw
07A1	IASW/X-ray Scattering	Chia-Hung Hsu	NA	chsu@nsrrc.org.tw
08A1	Low Energy SGM	Tun-Wen Pi	1081	pi@nsrrc.org.tw
08B1	VUV BM – AGM	NA	NA	NA
09A1	U5 – SPEM (PRT)	Chia-Hao Chen	1101	chchen@nsrrc.org.tw
09A2	U5 – Spectroscopy	Kai-Dee Lee	1101	lee@nsrrc.org.tw
11A1	Dragon (PRT)	Hong-Ji Lin	1111	hjlin@nsrrc.org.tw
13A1	X-ray Scattering	Yu-Shan Huang	1131	jade@nsrrc.org.tw
13B1	Protein Crystallography	Yuch-Cheng Jean	1132	ycjean@nsrrc.org.tw
13C1	Protein Crystallography	Yuch-Cheng Jean	1133	ycjean@nsrrc.org.tw
14A1	IR Microscopy	Yao-Chang Lee	1141	yclee@nsrrc.org.tw
15A1	Protein Crystallography	Chun-Jung Chen	NA	cjchen@nsrrc.org.tw
15B1	Tender X-ray Absorption	Ling-Yun Jang	1152	lyjang@nsrrc.org.tw
17A1	W20/Powder Diffraction	Jey-Jau Lee	1171	jjlee@nsrrc.org.tw
17B1	W20/X-ray Scattering	Hsin-Yi Lee	1172	hylee@nsrrc.org.tw
17B3	Small Angle X-ray Scattering	U-Ser Jeng	1172	usjeng@nsrrc.org.tw
17C1	W20/EXAFS	Jyh-Fu Lee	1173	jflee@nsrrc.org.tw
18B1	LIGA	Bor-Yuan Shew	1182	yuan@nsrrc.org.tw
19A1	X-ray Lithography (PRT)	Bor-Yuan Shew	1191	yuan@nsrrc.org.tw
20A1	High Energy SGM	Jin-Ming Chen	1201	jmchen@nsrrc.org.tw
20B1	X-ray Instrumentation (PRT)	Poh-Kun Tseng	1202	pktseng@nsrrc.org.tw
21A1	U9/Chemical Dynamics (PRT)	Shih-Huang Lee	1211	shlee@nsrrc.org.tw
21B1	U9/Angle-Resolved UPS	Ku-Ding Tsuei	1212	tsuei@nsrrc.org.tw
21B2	U9/Gas Phase	Yin-Yu Lee	1212	yylee@nsrrc.org.tw
23A1	IASW X-ray Scattering	U-Ser Jeng	NA	usjeng@nsrrc.org.tw
24A1	Wide Range SGM	Yaw-Wen Yang	1241	yang@nsrrc.org.tw
SP12B1	Materials X-ray Study	Hsueh-Hsing Hung	7116	hhh@nsrrc.org.tw
SP12B2	Protein X-ray Crystallography	Chun-Jung Chen	7330	cjchen@nsrrc.org.tw
SP12U1	Inelastic X-ray Scattering	Yong Cai	(SPring-8) +81-791-58-0802#3156	cai@nsrrc.org.tw

PRT: Participating Research Team
SPXXX: SPring-8 Beamline
NA: Not applicable