

Service SIG Survey, 2007

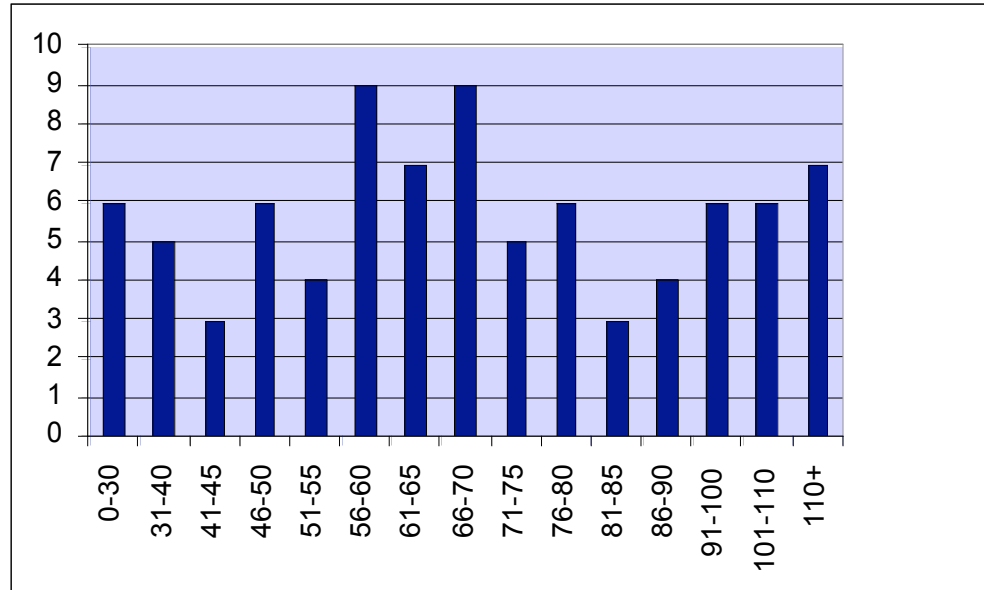
There were a total of 86 respondents to the 2007 Service SIG Survey. In several cases not all of the questions were answered. These are represented in the data as: Not Answered.

The representations and information presented have not been interpreted. Salaries are presented as ranges.

Section 1: Salary, Services and Affiliations

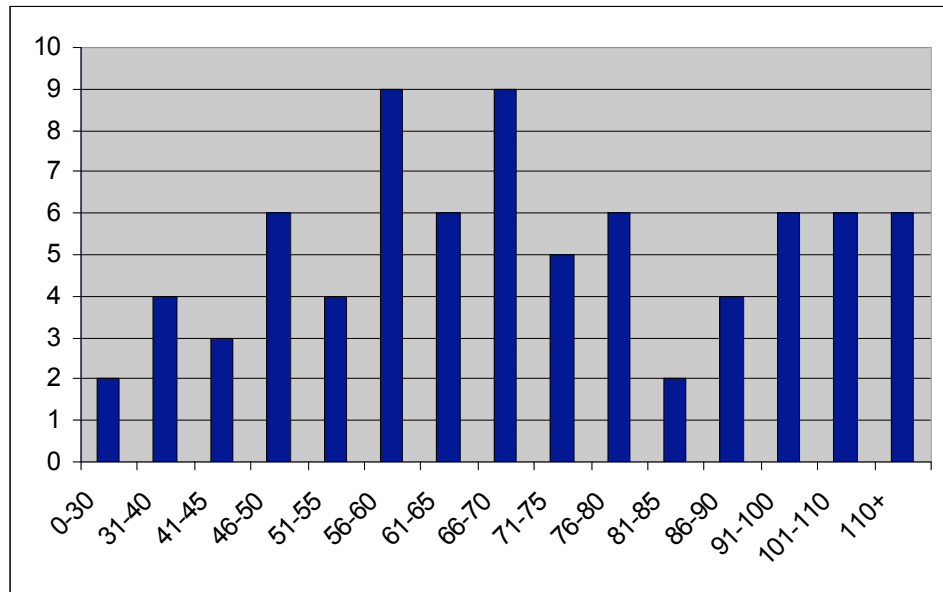
1. What is your current **salary** (\$1,000's)?

0-30	6	
31-40	5	
41-45	3	
46-50	6	
51-55	4	L.Q.
56-60	9	
61-65	7	
66-70	9	Median
71-75	5	
76-80	6	
81-85	3	
86-90	4	
91-100	6	
101-110	6	
110+	7	



Distribution removing out of Canada/U.S. respondents

0-30	2	
31-40	4	
41-45	3	
46-50	6	
51-55	4	L.Q.
56-60	9	
61-65	6	
66-70	9	Median
71-75	5	
76-80	6	
81-85	2	
86-90	4	
91-100	6	
101-110	6	
110+	6	



2. What **services** are you expected to provide (in the context of your laboratory, not extra-curricular work)?

Crystal Growth	31
Data Collection	81
Structure Solution and Refinement	79
Graphics/Diagrams (additional beyond normal numbering scheme)	64
Publication Preparation	66
Instrument Maintenance	75
Programming	21
Teaching: formal class	36
Teaching: one-on-one instruction (informal)	59
Other	
Crystallographic database searches/maintenance	4
Project Management	1
Consultation on structural and diffraction studies	3
Laboratory management / supply orders	4
Synchrotron data collecton	2
Crystal Growth Advice	2
General Chemistry teaching	4
Grant writing	1
Journal Reviews	1

3. Does your job include **tasks not connected** with crystallography (for example: attending group meetings, seeking/collaborating on grants, departmental committees, secretarial work, chemical store management)?

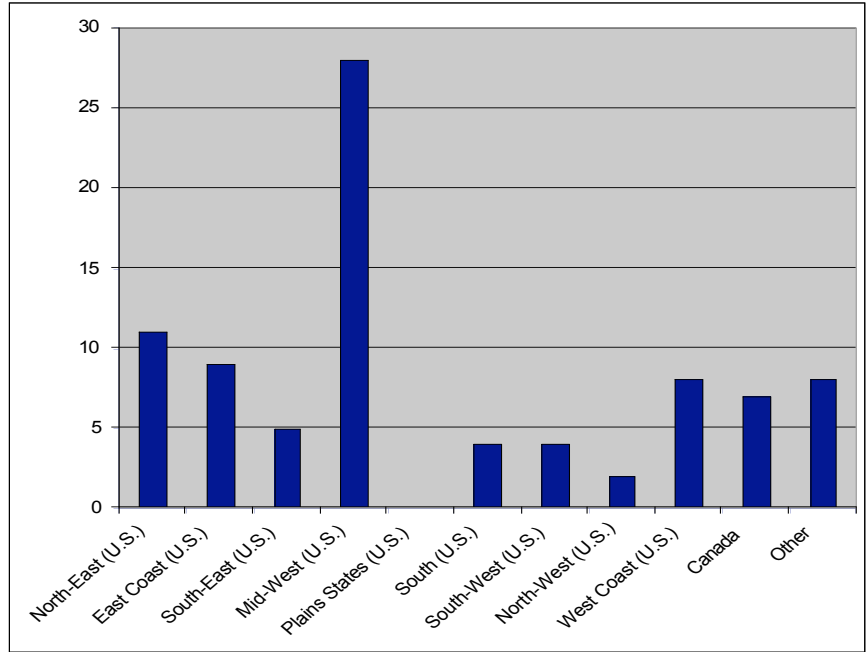
No 21
Yes 65

Additional duties include:

Task	Number	percentage of time (range)
Group Meetings	16	5-15
Grant Applications	17	1-10
Teaching (non X-ray)	9	10-40
Departmental/University Committees	11	1-25
Secretarial Work	2	5-15
Synthetic Work (research)	6	10
Computer Support (IT)	7	5-10
Workshop/conference preparation	2	5
Instrument support (non X-ray)	2	10-30
Laboratory Support (non X-ray)	2	10-20
Extracirricular work	3	5
Administrative work	9	5-30
Manuscript preparation	1	25
Dealing with parasitic, schmoozing ass-kissers	1	5

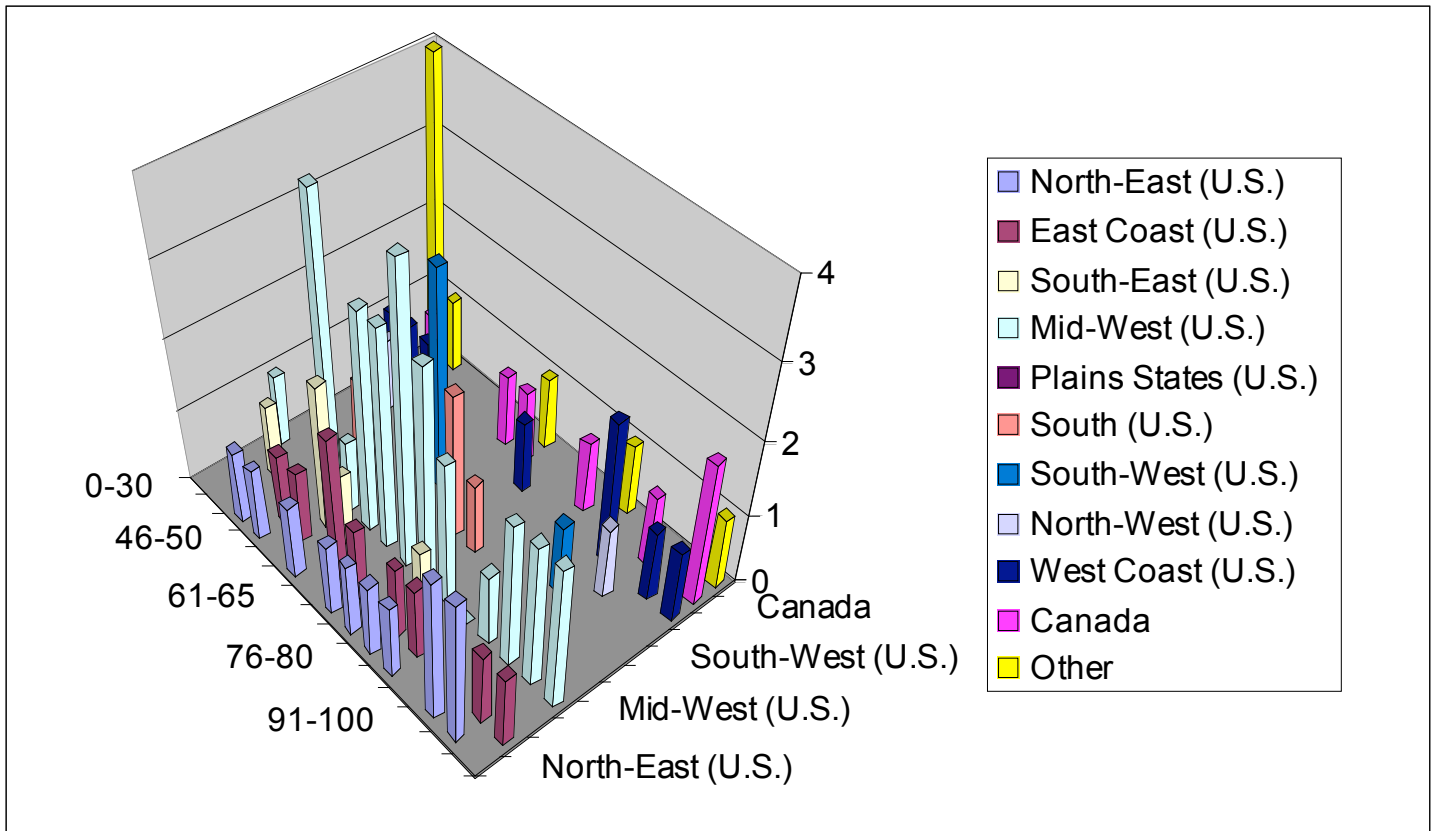
4. What is your **geographic** location?

North-East (U.S.)	11
East Coast (U.S.)	9
South-East (U.S.)	5
Mid-West (U.S.)	28
Plains States (U.S.)	0
South (U.S.)	4
South-West (U.S.)	4
North-West (U.S.)	2
West Coast (U.S.)	8
Canada	7
Switzerland	1
Hawai'i	1
Argentina	2
Spain	1
Brazil	3



Combined Salary and geographic location data

	0-30	31-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-100	101-110	110+
North-East (U.S.)			1	1		1		1	1	1	1		2	2	
East Coast (U.S.)				1	1		2	1		1	1				1
South-East (U.S.)		1			2	1				1					
Mid-West (U.S.)	1			4	1	3	3	4	3	2		1	2	2	
Plains States (U.S.)															
South (U.S.)			1					2	1						
South-West (U.S.)						3						1			
North-West (U.S.)		1												1	
West Coast (U.S.)	1	1	1					1				2			1
Canada			1			1	1			1				1	
Other	4	1					1				1				



5. Are you expected to **supplement/recover your salary** from recharge?

Yes, my salary is supported fully by recharge only	8
Yes, >50% of my salary is from recharge	3
Yes, 1-50% of my salary is from recharge	6
No, my salary is state/department funded	55
No, my salary is sourced by a commercial enterprise	11
Other -- Grant	0
Not Answered	3

6A. Do you have an **assistant/co-worker** within your lab? (Faculty member, post-doc, staff member)

No	39
Yes (please answer 6B below)	36
No, but one is needed (please answer 6B below)	11

6B. If you have/will soon have an assistant, **are they/would they be paid from:**

Recharge	9
Departmental Funds	16
Grant (research or personal)	15
State funded (FTE)	5
Commercial position	6
Not Answered	35

7. Which **Special Interest Groups**, within the ACA, are you a member of?

Service	9
Small Molecule	15
General	6
Service, Small Molecule	18
Small Molecule, General	4
Service, General	1
Service, Small Molecule, Powder	1
Small Molecule, General, Macromolecular	1
Service, Small Molecule, General	11
Service, Small Molecule, General, Macromolecular	1
Service, Small Molecule, Neutron	1
Service, Small Molecule, Neutron, powder, Synchro	1
Macromolecular	1
Small Molecule, Macromolecular	1
Service, Small Molecule, General, Powder	1
General, Macromolecular	2
Service, Small Molecule, General, Synchrotron	1
Service, Small Molecule, General, Synchrotron, Macromolecular	1
General, Macromolecular, Young Scientist	1
Not Answered	9

8. To which other **professional organizations** do you belong?

None	26
American Chemical Society	32
American Association for the Advancement of Science	10
Chemical Institute of Canada	0
Sigma Xi	4
GDCh (Gesellschaft Deutscher Chemiker)	3
DGK (Deutsche Gesellschaft für Kristallographie)	1
IUCr (International Union of Crystallography)	1
Biophysical Soc.	1
VDI (Verein Deutscher Ingenieure)	1
PDS (Pittsburgh Diffraction Soc.)	3
Swiss Physical Soc.	1
Swiss Crystallographic Soc.	1
BCA (British Crystallographic Assoc.)	2
RSC (Royal Society of Chemistry)	2
Indian Assoc. of Solid State Chem.	1
Int. Zeolite Assoc.	1
Indian Crystallographic Assoc.	1
Protein Soc.	2
Min. Soc. America	3
Min. Soc. Great Britain	3
Min. Soc. Germany	1
American Geophys. Union	1
Canadian Assoc. of Physicists	1
American Soc. for Quality	1
Min. Assoc. Canada	1
Min Soc. Italy	2
Argentinian Cryst. Soc. (AACr)	1
ICDD (International Centre for Diffraction Data)	1
Brazilian Chem. Soc.	2
Council on Undergrad. Research	1
Nat'l Science Teachers Assoc.	1
American Peptide Soc.	1
Geological Assoc. Canada	1
Geological Soc. America	1
Geochemical Soc.	1
Grupo ESPA&N	1
OL DE CRISTALOGRAFIA	1
Eur. Cryst. Assoc.	1
Spanish Tennis Federation	1
Not Answered	1

9. What type of **institution** are you primarily associated with?

Commercial (e.g. X-ray vendor)	0
Industrial (e.g. Pharmaceutical industry)	12
Graduate-level University	58
Undergraduate-level University	5
Government Research Lab	4
National Laboratory	1
General Hospital	1
Neutron Scattering Assoc. of America	1
Atomic Energy Commission	1
Grad. Level - terminal Masters	1
Medical Research	1
Not Answered	1

Section 2: Travel Support

10A. From 2004 to the present, **institutional support** for travel has paid:

All expenses	33
Almost all expenses	13
A majority of the expenses	6
A few expenses	11
Nothing	11
Have not attempted to obtain support	9
Not Answered	3

10B. Prior to 2004, **institutional support** for travel has paid:

All expenses	31
Almost all expenses	12
A majority of the expenses	6
A few expenses	14
Nothing	10
Have not attempted to obtain University support	7
Not Answered	6

11. Institutional support has **allowed** you to:

Attend any scientific meeting	5
Attend two or more meetings a year	18
Attend one meeting a year	44
Not attend meetings	11
Have never attended meetings	2
Not Answered	6

12. Financial **support for travel** has come from:

Comes from a yearly budget/recharge under your control	32
Is provided as need from the department/school	29
Comes from external grants	24
Comes from internal grants	6
Professional body support	4
Personal funds	4
Industrial sponsor	2
Commercial sponsor	1

Section 3: Laboratory Space

13. **Office space** provided to you is:

An office external from the X-ray Laboratory	66
An office enclosed within the X-ray Laboratory	16
An open space within the X-ray Laboratory	4

14. With regards to the **size** of the X-ray facility:

Sufficient space exists for now and future growth	41
Sufficient space exists for now; there is no room for growth	26
The current space is marginal for the current needs	14
The current space is inadequate for the current needs	3
Not Answered	2

15. With regards to the **appearance and condition** of the X-ray Facility compared with other research facilities in your department/institution:

It is in excellent condition -- a real show place	24
It is as good as other, similar facilities and laboratories	38
It is OK, but not as good as other labs and instrument facilities	16
It is barely functional	6
It is a disgrace	2
Not Answered	1

16. Is the space for the X-ray facility **shared** with other research facilities?

No	59
Yes	24
Not Answered	3

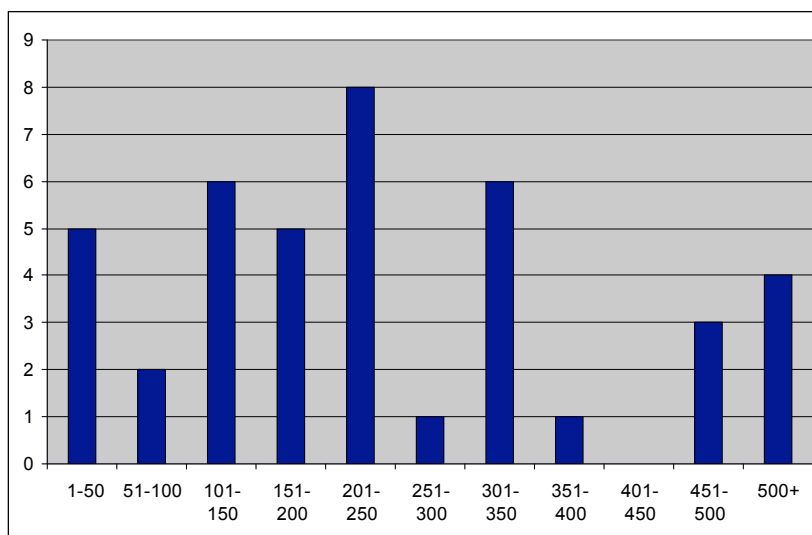
Section 4: Facility Operations and Revenue

17. Do you have, and how do you apply, your **charging scheme**?

Charge an hourly rate	12
Charge by type of collection (matrix, full data, complete work-up)	23
Charge by a unit-type (for example: per reflection)	2
Charge a flat fee up to a certain amount of data collected, then an additional amount thereafter	8
Do not charge; operating costs are subsumed by the department/institution	35
Not Answered	6

18. What is the **charge** (\$) for a Complete Data Set (full structural work-up, in-house) within your facility?

0, We do not charge for usage/data collection	34
1-50	5
51-100	2
101-150	6
151-200	5
201-250	8
251-300	1
301-350	6
351-400	1
401-450	0
451-500	3
500+	4
Not Answered	11



19. Do you charge **non-affiliated non-academic (commercial)** users more?

Yes	46
No	10
Not Applicable / No outside use	23
Not answered	7

20. Please briefly describe the **basis for your fees charged**.

There were a wide variety of answers and descriptions provided for this question. Fundamentally they devolved into several broad categories:

The facility is required to be self-supporting. A cost analysis yielded the dollar amount based on a per sample or per hour basis. This is further sub-divided into charges are per sample, per hour, per reflection, or per “type” of data collection (e.g. matrix, full dataset); often it is a combination of several of these models.

Data are categorized by tiers and charged accordingly.

There was a historical precedent for the fees that are charged.

The laboratory is supported by the department and does not charge for in-house structure analysis.

A flat fee is imposed upon users.

21. What **instrumentation** does your facility contain?

4-circle Area Detector	33
3-circle Area Detector	32
Powder Diffraction	32
4-circle Point Detector	19
3-circle Point Detector	1
Synchrotron Diffraction	5
Neutron Diffraction	1
Gunier Camera	1
Single axis detector	5
Image Plate System	3
SAXS	1
Area detector/Point detector combination	1
PX Scanner	1
Wesisenberg camera	1
Other analytical instruments	3
None (all defunct or use nearby facilities)	2
Not Answered	6

22. Do you purchase a **service contract** for your instrumentation?

No	44
Parts only	5
Parts and Service/Maintenance	20
Full contract, all the bells and whistles	6
Instrument is still under warranty	2
Commercial vendor	1
Not Answered	8

23. How many **single-crystal instruments** do you have in your laboratory?

1	38
2	22
3	7
4+	8
0	1
Not Answered	10

Section 5: Personal Information and Laboratory through-put

24. What is your **highest degree**?

PhD	78
MS/MSc	4
BS/BSc	3
Other (please specify)	0
Not Answered	1

25. What is the **subject** of your highest degree?

Chemistry	64
Physics	10
Biology	4
Mathematics/Computer Science	0
Geology/Earth Science	3
Unstated	2
Crystallography	2
Biochemistry and Biophysics	1

26. How many **structures** are determined in your lab each year (average)?

1-50	28
51-100	7
101-150	17
151-200	7
201-250	7
251-300	6
301-350	3
351-400	2
401-450	0
451-500	2
501+	2
Not Answered	5

27. In terms of **publications**, are you generally considered:

A collaborator with co-authorship rights	76
A collaborator with an acknowledgment	3
Simply acknowledged	3
Unrecognized for work	3
Not Answered	1

Generic Job Description

There were a wide variety of answers to question 28, regarding the job description. The job descriptions ranged from professorial status to post-doctoral scholar to research chemist. There are as many job descriptions as there are crystallographers. Based on a composite of answers given and data gathered within this survey a distillation of a job description can be developed.

The essence of the Facilities Manager job description is below:

The primary function of the X-ray Facility Manager is to maintain and operate the X-ray diffraction instrumentation. Operation of the X-ray diffraction equipment includes sample examination and preparation for data collection, collection of crystallographic data, structure solution and refinement. Subsequently the manager should be prepared to generate files and tables of crystallographic data and diagrams representing molecular and crystal structure suitable for publication in peer-reviewed journals.

Instrument maintenance involves general, daily observations of the instruments performance, this includes support for peripheral equipment (e.g. liquid nitrogen, water filters). Where necessary trouble-shooting and if available, part replacement or liaising with a vendor for a timely maintenance or repair as necessary, to the instrument.

The crystallographer shall also advise researchers on crystal growth techniques, structural discussion, and crystallographic database analysis and research. This may involve a formal X-ray crystallographic course or more informal one-on-one discussion.

The crystallographer shall maintain the computer infrastructure within the facility. As necessary, this will include data archival, crystallographic database management and searches and software for structural elucidation and presentation.

Additional duties may include: teaching courses not directly related to X-ray crystallography, independent and collaborative research, departmental administrative work, collaboration on grant proposals (both departmental and facility).

The crystallographer is expected to stay current with techniques, software and hardware related to their field.