

Survey of Magnetic Observatory Charging Practices

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A b s t r a c t

A survey of institutes operating magnetic observatories reveals that many are dependent or somewhat dependent on revenue received for data and services. Although policies vary from institute to institute, the practice of charging for data applies only to commercial users. Other services for which charges are normally applied include calibration services, instrument development and specialized surveys. Although most institutes are not dependent on revenue for their core activities, they rely on revenue to finance many non-essential operations.

1. Introduction

Magnetic observatory data have many direct and indirect commercial applications in addition to the traditional scientific use. Many observatories also offer a range of related services to clients. The decision to charge for data and/or services rests with the individual observatory or institute. Nevertheless, it is useful for an observatory to set its pricing policy with some knowledge of what others are doing. At the INTERMAGNET meeting held in 2005 I was asked to conduct a survey of magnetic observatories or the institutes that operate them to determine current pricing practices. The results of the survey were presented at the 2006 INTERMAGNET meeting, which was held in Warsaw immediately after the XII IAGA Workshop on Geomagnetic Observatory Instruments, Data Acquisition and Processing.

2. Survey Questionnaire

The questionnaire was sent to all observatories or institutes on the “worldobs” mailing list. The list has 177 entries and is believed to include almost all operating observatories, of which there are approximately 155. The recipients were asked to respond to the following questions:

(1) Do you charge for magnetic observatory data, products or services?

- (a) never
- (b) sometimes
- (c) always

(2) Does your charging policy have to conform to a broader institutional or government policy?

- (a) yes
- (b) no
- (c) partially

If you do not charge for data you can stop now; otherwise, carry on.

(3) For which of the following do you charge?

- (a) definitive observatory minute data
- (b) provisional minute data
- (c) provisional fast sample (1-sec, 5-sec)
- (d) real-time data
- (e) compass calibrations
- (f) magnetometer calibrations
- (g) instrument repair and development
- (h) special magnetic surveys
- (i) magnetic charts and models
- (j) magnetic and space weather forecasts
- (k) other

(4) Please list the charges for each item ticked in the previous question.

(5) Is your observatory dependent on revenue to cover operating costs?

- (a) highly dependent
- (b) somewhat dependent
- (c) not dependent

Usable responses were received from 23 institutes responsible for 88 observatories in 19 countries.

3. Survey Results

The major results of the survey are given in the following tables. They exclude three responses that could not be used. Two were returned blank. The third gave contradictory responses, claiming that the institute never charged but that it was highly dependent on revenue.

Table 1 shows that very few observatories charge for all products and services all the time. In the majority of cases the observatory or institute does not have complete freedom to set prices but must work within guidelines imposed at a higher level.

Table 1
Responses to question 1 and question 2

	Charge			Conform to policy			
	Always	Sometimes	Never	Yes	Partially	No	Unknown
Countries	2	13	6	7	6	6	2
Institutes	2	15	6	7	6	8	2
Observatories	5	61	22	33	24	18	13

Table 2
Responses to question 3 and question 4

Product	Number of institutes	Charges (US\$)
Def. 1-min data	7	Typically \$100 to \$200 per day with discounts for large requests. May be as little as \$15 per day or as much as \$40,000 per year. For directional drilling, charges may be on a per borehole basis. No charges to academic users.
Prov 1-min data	8	
Prov 1-sec 5-sec data	6	
Real-time data	7	
Compass calibrations	9	Typically \$200 to \$300. May be as low as \$150 or as high as \$3500. Some institutes charge an hourly rate (\$60 to \$130); sometimes charges are job specific.
Magnetometer calibrations	10	
Instrument repair and development	6	Very dependent on the specific job. Charges range from \$400 to \$60000.
Special magnetic surveys	12	Typically \$1000 per day plus expenses. Some institutes charge an equipment rental fee (~\$500).
Magnetic charts and models	10	Quite variable; may depend on client usage. Small requests may be charged a per value (e.g. \$15) or per file (e.g. \$500) fee. Service may be provided on an annual basis (\$1000 to \$10000)
Forecasts	1	\$1000 per year
Others	2	e.g., consultations, training

Table 2 lists the number of institutes that charge for the different data products. Comments added to the questionnaire indicate that when an institute says that it charges for a product or service this does not mean that it charges every client every time. Institutes seldom charge academic users, for example. Charges may be waived for small requests.

The final question dealt with the dependency of the institute on the revenue it generated. The results are given in Table 3.

Table 3
Response to question 5

Number of observatories		
Highly dependent	Somewhat dependent	Not dependent
3	9	11

Written comments were supplied by approximately one third of the respondents. These greatly aided the interpretation of the survey results.

4. Discussion

It became apparent when reading the responses that the questionnaire should have included a definition of the word “revenue”. Typically an institute that operates observatories receives its core funding from its host organization, such as a government department. However, some institutes supply services to other government departments; this often involves a transfer of funds from the client department to the institute. I do not consider this to be revenue; it is just a case of core funding coming from multiple sources.

Charging practices vary greatly from institute to institute. However, virtually all institutes have adopted a policy of not charging for data that is to be used only for research purposes. Practices regarding the charging of commercial users of data also differ. Some institutes charge what the market will bear. At the other extreme is the attitude that companies are tax payers and they should “...not to pay two times (sic). It will be different if they ask for something specific, but standard products are free of charge...” Variable pricing is also common. Users of large volumes of data will often receive a reduction in the unit price. Very small requests are sometimes answered free of charge since it is too much trouble to invoice the client.

Charges for services such as calibrations, instrument development and repair, and surveys are also highly variable. Some institutes charge a flat rate; others work on an hourly rate; others choose one or the other depending on the nature of the job. Some institutes waive the charges for work done for other government agencies.

Although ten institutes claim to charge for providing declination values from reference field models, most of these institutes do not produce models themselves. Presumably they are providing value-added service by eliminating the need for the client to become familiar with the software. A couple of the institutes that actually produce models consider that the models constitute only one part of a much broader service that they provide to clients.

Only one respondent charged for forecasts. The attitude among most institutes that provide forecasts was expressed by one respondent as follows: “...made the decision not to charge for forecasts because of the danger of having ...to try to justify the charge against forecast failures.” However, some institutes conduct research related to space weather for which they receive revenue.

Finally, although only three institutes said that they were highly dependent on revenue, nine said they were somewhat dependent. The revenue provides a buffer against unforeseen expenses and enables the institute to engage in activities outside the set of core activities for which they are funded.

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