

# The Astronomy & Astrophysics Library

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## Summary

**The library should help to increase scholarship in the department. In its present form, it does this. Our main suggestion for improving it is to have the lounge be next to the library, so that there is more use of and interaction with the library and the librarian. Space could be made by removing paper copies of those journals that are available electronically.**

## Other recommendations

- The library should remain in the department (and close to CITA).
- In order of most to least accessible, the library should contain books, paper copies of journals not electronically available, and paper copies of journals that are accessible electronically.
- Paper copies of journals *not* available electronically should be easily available, though not necessarily in the main library space.
- The collection of atlases, sky survey copies, etc., should be re-evaluated critically.
- The library would be a logical place to store an archive of the Department's history and scholarly work.
- The catalogue serves its purpose very well, but should be checked with the shelves.
- The library pages are helpful for a newcomer. A review of departmental needs (or lack thereof) for the library's web presence should be carried out.
- The library should be available to all who do research benefitting the department. Undergraduates that are vouched for by departmental staff should be allowed to borrow books.
- To access electronic journals, a computer with a large screen should be available.
- The interaction between the librarian and the department should be increased, to maximise the usefulness of the library and the librarian's time in increasing scholarship.
- To maintain the library (i.e., this excludes the DAA web site), we recommend hiring a full-time librarian upon retirement of Marlene, but to have library assistance only on a part-time basis.

# 1 Introduction

The committee was charged with thinking about the future of the library. We divided this task in two. First, we considered what would be the ideal situation, focusing on how the library and the librarian can help improve scholarship in the department. This is described in Sections 2 and 3; our recommendations are summarised above.

As our recommendations all involve fairly small changes to the current situation, we next considered more drastic measures (cuts), which might free resources for other uses. We discuss the degree to which such measures would affect the quality of the library in Section 4.

*Note: this document was written as an internal document, and it assumes implicitly the current situation, in which the library is a great asset to the department, with an excellent collection (in contrast to, e.g., the book collection of the physics library). We do not discuss this in detail, but hope it will be obvious from our last section, where we describe the effects of drastic cuts.*

## 2 The ideal library

*The library should help increase scholarship in the department. Our main suggestion for improving it is to have the lounge be next to the library.*

Secondary goals are to be a resource for all of astronomy in Canada (our library being second to none, possibly equaled only by HIA), and to help undergraduate students.

Specific questions we addressed were: What should it contain? Where should the library be located? How should it function? Who should it serve? What electronic content and services should be offered?

### 2.1 Content

*In order of most to least accessible, the library should contain books, paper copies of journals not electronically available, and paper copies of journals that are accessible electronically*

The most important way in which the library improves scholarship, is the obvious one: in having an excellent, well-catalogued collection of books and journals. We considered books, journals, and other items such as astronomical plates and catalogues. (The library catalogue is discussed in §2.2.1). Also discussed was whether the library should archive departmental minutes/reports.

#### 2.1.1 Books

*The current selection of books, as well as the way they are chosen, is excellent.*

Also in the future, the library should contain monographs, standard research-level textbooks, reference books, and annual reviews. Conference proceedings might become more and more electronic, but this has not happened yet. It remains good to have the “important ones” in hand.

The only small suggestion we had is that a slight increase of the collection in astronomy-related physics monographs and textbooks (such as GR) would be useful. The present mechanism for selecting books, however, is up to that task.

We briefly discussed electronic books. These should be treated as normal books as far as possible (e.g., be in the catalogue). A problem is links that change or disappear. This is an issue that is being addressed by librarians worldwide.

### 2.1.2 Journals

*Paper copies of journals on ADS do not need to be kept readily available. The remainder should be easily available, though not necessarily in the main library space.*

Our consensus is that with the major astronomical journals being available electronically via the publishers and ADS, the need to have them in the main room of the library has disappeared. Those not available are much less frequently needed, but should still be accessible (e.g., Soviet journals, observatory publications).

**Journals available electronically.** The main issue is whether or not to keep the paper copies. In terms of increasing scholarship, the main use would be to have them for a month or two after they come in, preferably in a lounge or reading room (see §2.4). Afterwards, there seems to be little reason to keep them; it would mostly be a backup in case the electronic net breaks down. In order to save money and time (which might be used for other purposes; see §4), one could therefore consider not checking in paper journals, but just displaying them for a while and then discarding them.<sup>1</sup> Following similar reasoning, one might want to discard the older, bound copies.

In terms of the goal of being a resource for all of astronomy in Canada, however, the time is perhaps not quite ripe to junk the paper copies, and thus have none anywhere in UofT (or even Canada). Ideally, we would still save space, by having new paper copies in a reading room for a while, and then have them bound and moved to another place where also the older bound copies are stored (e.g., physical sciences library). It is not clear whether this is possible.<sup>2</sup>

Storage out of the main library room is another option, but one that will not save any money/time.

In the longer term, perhaps it would be best to have an electronic archive at UofT. This, like electronic books, is an issue that is being addressed by librarians worldwide. It is quite likely this would be as time-intensive as the current checking in of paper copies.

**Journals not available electronically.** The paper copies should be kept. If the main library space is tight, however, these journals would have lower priority than books, since they are consulted relatively infrequently. It would be far preferable, however, to have them close by than in some off-site storage. On the other hand, one would like to keep all paper copies of journals in one place. Thus, if the paper copies of electronically available journals are accessible in another library (e.g., physical sciences library), it would be most logical to have the journals that are not electronically available be there too.

### 2.1.3 Other items

*The collection of atlases, sky survey copies, etc., should be re-evaluated critically.*

The library has a substantial collection of copies of sky surveys, etc., many of which are now available much more conveniently in digital form. It seems that material for which the library holds a digital copy should be considered duplication, and should be treated in the same way as journals available electronically. The arrival of a new librarian would be a good opportunity to weed the collection.

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<sup>1</sup>The paper copies are UTL's, since the subscriptions are University-wide. Thus, this decision would have to be discussed with them.

<sup>2</sup>The following recent statement by UTL's head librarian is hopeful: "UTL has been planning for a high density remote shelving facility for about five years and now there seems to be a very real possibility that this may come to fruition, possibly within the next year. The facility would be available to all campus libraries."

#### 2.1.4 Departmental archive

*The library would be a logical place to store an archive of the Department's history and scholarly work.*

Currently, the library contains PhD theses. It would seem logical for it also to contain annual reports, departmental plans and perhaps even minutes and other types of reports. Currently, it is unclear how this is organised. A related item that might logically reside in the library is the list of previous astronomy graduates currently kept as part of the astrograd network.

As regards to annual reports, a huge side benefit is that they allow prospective students and faculty to judge what type of place the department is. Parts of the current web site are out of date and non-representative (squarely the fault of the faculty).

### 2.2 Electronic content

The electronic content of the library consists of the catalogue for books and journals and a set of library web pages. We discuss these in turn.

#### 2.2.1 Catalogue

*The catalogue serves its purpose very well, but should be checked with the shelves.*

The current catalogue is good, and serves its purpose very well. The main issue is that there has been no time to check with the actual books on the shelves. This needs to be done.

A smaller issue is that the system used is different from that of UTL. However, the latter changed a number of times, is in relatively sorry state, and does not have the option for inserting comments. The cost for the current software is relatively small, and it is not more work to keep up.

#### 2.2.2 Library web pages

*The library pages are helpful for a newcomer. A review of departmental needs (or lack thereof) for the library's web presence should be carried out.*

The library's web presence consists of two parts. The first is a collection of pages describing the library and giving a carefully selected set of links to the literature, observatories, etc. These are of particular use for visitors and new arrivals at the department, and perhaps should be more clearly advertised as such (as part of a more general 'guide for visitors'?). It is not clear, however, how much they are used otherwise (among the small sample of committee members, the only page frequented was the catalogue). It would be good to have a better idea what the department would like to have. (For instance, for graduate recruitment a complete list of universities granting physics and astronomy undergraduate degrees is very useful. However, one needs to avoid duplication. Much of the present list was copied from a nice list available on the web pages of the IoA.)

The second part of the library's web presence concerns special projects, such as the astronomy book and software review, and the pages on Helen Sawyer Hogg and on UofT asteroids. The latter two are part of departmental history, and might indeed be advertised as such if our recommendation of using the library for a departmental archive is followed up. Also for these items it would be good to have a better idea about what the department would like to have.

## 2.3 Location

*The library should remain in the department (and close to CITA).*

The main reason is that for the library to be useful, ease of access, at all times, is vital. Other benefits are that by having the library in-house, we will be able to control what is in it, and that remaining independent makes it much easier to move to possible new CITA/DAA/future-DDI building.

The above implies we believe it would not be a good idea to join the physical sciences library (if it were to be created). This is true in particular for books; for journals, a case could be made that having all paper copies of journals in the physical sciences together in a single library might be useful (see §2.1.2).

We note that even aside from the practical points raised above, we did not see any financial benefit of merging the library. In our opinion, larger structures just lead to more administration, higher costs, and less accountability.

## 2.4 Environment

*To increase interaction in and with the library, the lounge should be moved next to it.*

The library is not used as much as it could be, and we believe in part this is due to the environment, the library being rather closed off from the department, and the arrangement not being conducive to browsing. The departmental consensus seems to be that an excellent way to improve this would be to have the lounge be next to or even joined with the library, with much more inviting access to the library. Benefits would be: (i) to have more interaction with the librarian; (ii) to be able to have a somewhat bigger lounge, which combines with a reading room, where one automatically sees new journals and books; and, most importantly but only indirectly related to the library, (iii) to have more scholarship in the interaction room (typical scribbles on the interaction room blackboard indicate the current situation is pathetic).

The main issue is one of space, but it seems possible if we were to remove the paper copies of journals that are available in electronic form (see above). Constraints are that the library should remain quiet and it should be possible to lock it independently of the interaction room. It might be good to have access to the library be via the interaction room, but not the reverse. Possible solutions would be (i) a simple reorganisation of space, with the only new structure being a (glass?) partition wall; (ii) same, but including the South corridor into the library/lounge space. It would be well worth trying to make it such that the library doors could remain open whenever library staff were present.

## 2.5 For whom

*The library should be available to all who do research benefitting the department. Undergraduates that are vouched for by departmental staff should be allowed to borrow books.*

Currently, the library is accessible for all, but no undergraduates are allowed to borrow books. We suggest a minor modification of this policy, in allowing undergraduates to borrow too, if a departmental staff member is willing to vouch for them. In practice, this would be mostly for undergraduates and summer students doing research projects, although we do not feel it necessary to exclude library use for other types of projects related to astronomy courses. One could either have the guarantor be financially responsible for any books that are not returned, or make completion of a course or summer job be contingent upon returning all borrowed books to the library. This will need an explicit policy.

For completeness, we note that we recommend keeping the focus on the library strictly on research. In our opinion, offering full undergraduate services would give very little benefit at great cost.

## 2.6 Tools

*To access electronic journals, a computer with a large screen should be available.*

It should be possible in the library to access the main astronomical journals, in particular if the paper copies are removed. This requires a computer with a screen big enough to read articles in some comfort, at least to the level at which a decision can be made whether or not to print it.

If our suggestions above help to increase library usage, acquiring a better copier (double sided, able to copy facing pages of a book on two sides, etc.), better printer, and better scanner are options to be considered seriously. A better printer would also benefit department members on the 13th floor, and might increase interaction further (as in CITA).

## 3 Ideal librarian

### 3.1 Services and Interaction

*The interaction between the librarian and the department should be increased, to maximise the usefulness of the library and the librarian's time in increasing scholarship.*

The qualifications required from the ideal librarian are not much in doubt: good library skills, web-literate (for library pages at least), interactive, and interested in the department and in helping research. The present situation is good, with the library selection being kept top-notch, help being available to find materials, and useful information being passed to the department by e-mail (such as the monthly list of web sites of interest, but also automatic routing of IAU Circulars, etc.).

The one part that could be improved is the interaction between the librarian and the department. For example, in the course of our deliberations, it became clear that while notices of acquisitions of new books were greatly appreciated, those of recent journals were felt to be less useful (after department-wide consultation, these have now been discontinued). Joining the library with the lounge would be an efficient way to remedy this situation.

### 3.2 Manpower

*To maintain the library (i.e., this excludes the DAA web site), we recommend hiring a full-time librarian upon retirement of Marlene, but to have library assistance only on a part-time basis.*

Attached is a summary of tasks and services done by the librarian and library technician. In total, the time spent on the library is about 1.5 FTE (0.9 FTE library, minus about 0.2 FTE for the departmental web pages, plus 1.0 FTE library technician, minus about 0.2 FTE for general administrative tasks).

The attached note also provides a summary of tasks for which at present there is no time, big projects on the horizon, and tasks that will disappear. A major uncertainty is what will happen to DDO: if it becomes the DDI and merges into a single building with DAA, a big project will be the merging of the libraries, and a task that will disappear afterwards is taking care of the DDO library. Thus, the total amount of manpower required in the near future is uncertain, but in the long run it seems likely it will decrease somewhat.

In order to be sufficiently flexible, we recommend to attract a full-time librarian upon retirement of Marlene, but not to have a full-time assistant. Instead, we feel the department would be best served with a person who would help out with the library as well as with, e.g., departmental web pages, classes, etc. (see §4). We note, though, that it would be advantageous to have two people have their offices in the library, so that help is available as much as possible.

## 4 Drastic Measures

In weighing the options, one has to keep in mind alternative uses of space and manpower. In particular,

- If we can free the storage space on the 15th floor, we could have an additional class room.
- If we can decrease the workload, e.g., by removing the need to take care of paper copies of electronically available journals and of the DDO library, the resulting manpower could be used elsewhere. For instance, one can increase scholarship by simply increasing the number of faculty, or by having a software person taking over the tasks of keeping our departmental web pages in (even) better order, making electronic versions of the financial forms, helping the computer manager in installing software, helping faculty with electronic components of their teaching, etc.

Below, we discuss the consequences of a number of drastic measures that would free resources.

### 4.1 No library

Starting at the most extreme, one can consider doing without the physical library altogether (as well as the librarian), keeping only the electronic subscriptions to journals. This would free maximum resources, both in terms of space and funds. It is not departmental suicide to the extent it would have been ten years ago, as most material necessary for most research is in journals that are available on-line. In the future it may even make sense. At the present time, however, it would decrease scholarship greatly. Parts of the departmental research still rely on the library, especially those spanning fields or having a broader context (e.g., Percy's). Furthermore, lack of access to research-level text books means ideas will not be followed up or time will be wasted finding and ordering the books; lack of access to conference proceedings, which often provide the best overviews of whole fields, means it will be much harder to start in a new subject; lack of access to journals not electronically available means a subset of results and ideas cannot be accessed; etc.; etc. (The above assumes the contents of the library are jettisoned. If they were put somewhere else instead, the same would happen, but after some delay; see also below.)

It goes without saying that in this case, DAA would no longer be a Canadian repository, nor much use for undergraduates who wish to work on projects not completely in line with the specialities of their supervisors. Furthermore, no library-related research would be done, thus diminishing the amount of scholarship that way.

### 4.2 No library staff

One could also envisage doing without any library staff, with department members replacing borrowed books themselves, ordering new ones whenever deemed necessary, and entering those in the catalogue. In the beginning, this may not be very bad, as our present collection is very good. Over time, however, books will get lost, and new acquisitions will be made haphazardly, so that one

ends up with a library that is disorganised and incomplete, and, therewith, of little use. This could perhaps be avoided if all department members spent a fraction of their time keeping up the library (in addition to the time required to update the catalogue), but this would simply be an inefficient way of spending the money that would be gained by not having a librarian.

Obviously, also in this scheme the ‘Canadian repository’ and ‘help for undergraduate astronomy research’ would suffer. Again, also the library-related scholarship would disappear.

### 4.3 Only a library technician

One could avoid some of the problems of the previous section by having only a library technician. This would be cheaper than a librarian. In our opinion, however, this would help only partly; in the long run the collection would likely become much more random. A library technician would likely be little good in doing more than preserving the status quo. But the status quo will not be good enough, and a librarian would be much better able to adapt to changing situations; e.g., the ties the present librarian has with other astronomy libraries means that ideas on new initiatives, services, and technologies get implemented efficiently (an example where Toronto led the way was SIMBAD). More importantly, for a new initiative like the DDI, a well thought-out acquisition plan is required, for which a librarian would be much more useful if not essential.

Again, in this scheme the ‘Canadian repository’ and ‘help for undergraduate astronomy research’ would suffer, while the library-related scholarship would disappear.

### 4.4 Only a librarian

Another option would be to have only a librarian. At present, it seems the workload would be too high, but it may be possible to optimise the work, or judiciously discard some tasks. Especially after the possible DDO to DDI transition, there might also be fewer big projects. This thinking underlies our recommendation above.

### 4.5 Merging the library (revisited)

We recommended above that the library be kept in the department. One might argue that merging it with, e.g., a future physical sciences library, would free space and funds. It would, however, make the library much less useful, as proximity is a major factor in deciding whether or not to look up something. In this respect, a library is no different than another institute. One could easily argue that it matters little whether CITA and DAA are very close together. In practice, even the one floor in between lessens interaction, and separate buildings would likely kill it (as is obvious in, e.g., Caltech, where observers and theorists in buildings separated by less than 100 meters have little interaction – and interaction with IPAC (at 300 m) and JPL (at a few km) is essentially zero).

But perhaps more importantly, as mentioned in §2.3, this committee does not believe there would be any net savings. On the scale of the University, there would obviously be no savings in space, and the at best slight savings in money would be offset completely by having a much less used and, from lack of care, slowly deteriorating collection.

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