Small-Scale: Using a Regional Pilot Project to Explore the Potential of Shared Print

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Small-Scale: Using a Regional Pilot Project to Explore the Potential of Shared Print

Abstract
The long-standing cooperative culture within the research library community should serve as a useful foundation for building regional cooperative agreements to support repositories of print journal backfiles. Serious storage constraints facing Iowa State University, the University of Iowa, and the University of Wisconsin–Madison mandated an effort to tackle this problem in a deliberative and coordinated way. An inter-institutional Task Force was formed to design and implement a process with a selected group of titles as a pilot project. The immediate goal was to liberate shelf space with an eye toward the future development of a consortial collection management plan for the storage of print journals among the three institutions.

Keywords
print repositories, collection retention, collection management, collective management, regional repositories, Iowa State University, University of Iowa, University of Wisconsin–Madison

Disciplines
Library and Information Science

Comments
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ABSTRACT: The long-standing cooperative culture within the research library community should serve as a useful foundation for building regional cooperative agreements to support repositories of print journal backfiles. Serious storage constraints facing Iowa State University, the University of Iowa, and the University of Wisconsin-Madison mandated an effort to tackle this problem in a deliberative and coordinated way. An inter-institutional Task Force was formed to design and implement a process with a selected group of titles as a pilot project. The immediate goal was to liberate shelf space with an eye toward the future development of a consortial collection management plan for the storage of print journals among the three institutions.

INTRODUCTION

Over the past several years, libraries and consortia have made considerable progress in planning for shared print repositories, not only as a means to reduce the cost of managing lesser-used printed material, but also to conserve much-needed space in overcrowded facilities. In 2009, the libraries of Iowa State University (ISU), the University of Iowa (UI) and the University of Wisconsin-Madison (UW) formed a Centralized Repository Task Force (CRTF) to explore the potential for cooperative management of selected print journal archives across the three institutions. The main goal of the pilot project was to make the best possible use of limited storage space and to liberate large amounts of library shelf space as quickly as possible—with minimal effort, and without compromising the responsible stewardship of our collections. This article describes the project and concludes with a number of recommendations regarding final implementation of project goals (collection retention, withdrawal, and loan activities).

Though the task force was viewed as temporary and exploratory, it was understood at the outset that, if the Deans/Directors of the three partner libraries found that initial project goals were met, a more systematic Distributed Print Repository (DPR) program would be implemented by the three institutions. The four-member Task Force was appointed in August 2009 and began meeting in September 2009, conducting its business via email and regular conference calls. CRTF members spent time in fall 2009 sharing background information regarding collection development policies, physical collection management, and space utilization in their respective library systems.
Despite the fact that all three partner libraries are Midwestern, are members of the Association of Research Libraries (ARL), and have annual materials expenditures in the range of $10-15 million, differences that surfaced among the three libraries were significant and occasionally surprising. Collection sizes varied considerably (from 2.6 million at ISU to 8.4 million at UW); as did the degree to which collections were centralized—the latter in turn influencing the presence of duplicate serial subscriptions on a single campus. There was wide variation in the percentage of the materials budget spent on electronic resources in each of these libraries (ranging from 55-85%), and in the number of journal backfiles that had been purchased (and which ones). The libraries faced differing crises with regard to overcrowding in their stacks and the availability or even the prospect of remote storage. One of the most glaring differences, though, was the degree to which campus stakeholders, both within and outside the library, seemed willing to withdraw printed volumes of journals that were available electronically through publisher backfiles or through collections like JSTOR. Any plan or future memorandum of understanding would need to be flexible enough to accommodate these institutional and cultural differences.

During 2010 through early 2011, CRTF designed the steps involved in the pilot project: establishing subject areas for the pilot; identifying publishers; compiling a master list of journals for each publisher; rating titles for local retention (with input from collection development colleagues); assigning tentative retention responsibility (based on institutional ratings and parity); conducting a shelf audit to verify holdings and assess condition; assigning final retention responsibility; drafting a memorandum of understanding; determining how retention decisions were to be documented in local/shared systems (using MARC 583); and developing a concise tool for documenting title-level data related to the pilot. A final report for the Deans/Directors of the three institutions was issued in July 2011. Although an impressive amount of shelf space (totaling 1,456 linear feet across the three libraries) was liberated in the pilot project, it was apparent to all involved that the true value of the pilot lay in the foundation it prepared for an ongoing program of collaborative collection management.

One important distinction made in the early days of the project was between the term “archives” and the term “repository.” This became a defining issue for the project. In the original language of Task Force charge, there was wording about a “comprehensive cooperation collection management plan for the storage of our print journal archives among our three institutions.” Because the term “archives” has a very precise meaning in the area of library conservation and preservation, the Task Force clarified that, despite the language in the charge, the Deans and Directors saw our goal as “sharing a single copy in a working research collection” (versus preserving an archival copy). The final Memorandum of Understanding would reflect that the retaining library would not withdraw the copy, would house the copy in an environment with reasonable (if not optimal) environmental controls, and would advise partner libraries of any major change in completeness or physical condition (extensive damage, theft, etc.).
The topic of shared print storage continues to receive growing attention. Certain developments in particular were considered likely to influence planning for collaborative management of legacy print collections at our three institutions. Plans/projects/reports emanating from various groups were considered. In a seminal study, the Council on Library and Information Resources (CLIR) commissioned the Center for Research Libraries (CRL) to investigate existing models of repositories organized along geographical lines for consortial use as well as models of some archival repositories. In the resulting study, Reilly and DesRosiers (2003) examined and described existing regional and national repositories. Howard (2008) and Stambaugh (2011) describe the Western Regional Storage Trust (WEST) distributed retrospective print journal repository program. The Task Force also consulted the WEST “collections model” documentation (WEST 2010). The Center for Research Libraries (CRL) is working with the California Digital Library to develop a Print Archives Preservation Registry (PAPR) system that CRTF consulted to determine standards for the project. Schonfeld and Housewright (2009), in their research for Ithaka S + R analyze which types of journals can be withdrawn responsibly today and how that set of materials can be expanded to allow libraries the maximum possible flexibility and savings in the future. In July 2011, OCLC launched the OCLC Research Library partnership, which has identified as one of its strategic areas of focus “facilitating (both technically and operationally) the wide use of shared print repositories” (OCLC eNEWS 2011). The ORBIS/Cascade Alliance has archived the American Chemical Society (ACS) journals, along with JSTOR titles (Di Biase and Watson 2009). Penn State has recently committed to the role of a dark archive for ACS journals within the Pennsylvania Academic Library Consortium (PALCI). Through institutional memberships in either the Committee on Institutional Cooperation (CIC) or the Greater Western Library Alliance (GWLA), CRTF members are also aware of shared repository efforts being undertaken by those consortia.

The proliferation of shared print repositories will undoubtedly cause overlap between institutional and consortial projects. CRTF members agreed that overlapping projects could contain degrees of complexity that we might wish to avoid, and this in turn influenced our final selection of publishers and titles—avoiding those that were under consideration by our respective consortia. On the other hand, CRTF members agreed that proposals and projects emanating from CIC, GWLA, or other consortia in no way undermine our current interinstitutional project. Indeed, it appears likely that, over the next few years, practical, small-scale partnerships such as ours will help to inform consortial and national-level agreements and encourage network-level support for cooperative management of print journals. This appears to be corroborated by at least two recent reports from the OCLC/RLG Partnership’s Shared Print Collections Working Group:

“...relatively lightweight agreements appear adequate to support collection-sharing initiatives in groups of 10 or fewer institutions. An implication of this is that motivated libraries, especially those with existing consortium agreements, need not dwell on formulating comprehensive joint preservation policy statements; indeed, it would appear that pragmatic agreements that leverage existing collection strengths of contributors,
and allow for flexibility in implementation (for example, allowing specific exemptions to the policy) are most likely to succeed in attracting and retaining participants." (Payne 2007)

“...by incorporating key elements from existing policies, libraries interested in developing shared print agreements can move forward in this direction without undue delay or hesitation, confident in the knowledge that other research institutions have embraced and successfully enacted cooperative management schemes.” (Malpas 2009)

DESIGNING, IMPLEMENTING, AND DOCUMENTING THE PILOT PROJECT

The following steps were involved in the CRTF-based pilot project:

Establishment of subject areas:

The group agreed to focus principally on science, technology, engineering and medicine (STEM) areas, with a preference for chemistry and physics. We focused on STEM because these are the disciplines in which publishers seem to have moved most aggressively in the direction of electronic publishing. However, members also expressed an interest in dealing with at least one publisher that would give us experience with titles in the social sciences and/or humanities—a role eventually assigned to the publisher, Annual Reviews. Although the technical challenges of shared print management are unlikely to differ by discipline, the reaction of stakeholders (including collection development librarians and faculty researchers) may indeed vary by subject, so it seemed prudent to create at least some topical variety within the pilot.

Identification of publishers:

Projects of this type tend to focus on the journal output of one or more specific publishers. Organizing a shared-print agreement based on publisher (rather than subject, for example) establishes a finite universe of titles to be considered, and should simplify the drafting of memoranda of understanding (MOUs). To start, Task Force members shared lists of major e-journal backfiles held by partner libraries (organized by publisher). To identify publishers for the pilot project, CRTF members established basic criteria to be met by publishers:

- CRTF libraries must have perpetual access to publisher’s e-journal content
- Publisher has placed some/all e-journal archives in a trusted digital repository, such as PORTICO
- Preference for society/nonprofit publishers versus commercial publishers
  [A preliminary review of collections indicated that our three institutions had relatively complete holdings of society publications, suggesting a correspondingly high degree of print duplication across our campuses. The same did not appear to be true for the backfiles of major commercial publishers such as Elsevier, Springer, or Wiley.]
- Preference for publishers covering STEM disciplines
Task Force members then agreed to sample the journal holdings of at least one partner library to understand the potential degree of duplication between print and e-holdings for selected publishers. Staff at ISU volunteered to do this using the Ex Libris link resolver software, SFX, to generate lists of e-holdings (by publisher) and comparing them with print holdings in the Library Catalog. The resulting spreadsheet showed, for each of 27 publishers (see Appendix A), the following data:

- Total number of electronic titles
- Number of titles for which ISU had pre-1990 electronic holdings
- Number of titles for which ISU had some print volumes duplicating the electronic
- Total number of years of electronic holdings for each title
- Total number of years of duplicating print holdings at ISU for each title
- Duplicating print coverage as a percentage of electronic holdings at ISU
- Number of titles with near-100% print/electronic duplication at ISU

Based on the preceding criteria and exercises, CRTF members selected three publishers—American Chemical Society (ACS), Annual Reviews (AR), and the Institute of Physics (IOP)—for the pilot. All three publishers participate in PORTICO, which was recently certified by the CRL Certification Advisory Panel as a reliable, digital preservation solution.

**Compilation of master list of e-journals for each selected publisher:**

At the same time this list was prepared, the status of individual titles in PORTICO (i.e., preserved, queued for preservation, or not [yet] preserved) was noted. The lists for ACS, AR, and IOP originally included 58, 54, and 104 titles respectively, for a potential total of 216 titles in the pilot project. Titles were removed from the project for a variety of reasons, including: printed volumes were no longer held by any partner library; the electronic backfile was incomplete; or the electronic backfile was not archived in PORTICO. The latter applied to only one title, but illustrates the need to verify the preservation status of e-journal backfiles at the title level, not the publisher level. The final lists for ACS, AR, and IOP included 50, 43, and 76 titles respectively, for a total of 169 pilot project titles.

**Review and annotation of the title lists to reflect local holdings:**

Local holdings, both print and electronic, were verified and recorded at our three institutions, working strictly from catalog records or system-generated lists (i.e., at this point, holdings were not yet verified at the shelf). For each publisher, title lists were then sorted to reflect whether print volumes were held, wholly or in part, by three, two, one, or none of the partner institutions.

**Solicitation of input from collection development colleagues:**

At each partner library, CRTF members shepherded the review of title lists by colleagues in collection development. Sample instructions to those individuals (formatted, in this case, for ISU’s review of ACS titles) appear in Table 1 below.
The libraries at Iowa State University, the University of Iowa, and the University of Wisconsin-Madison are engaged in a pilot project to assess the feasibility of maintaining a single shared copy of the printed volumes of selected journals from designated publishers, when those volumes are available electronically and maintained in a trusted digital repository. The project assumes that each of the three libraries will commit to maintaining “shared print holdings” for at least one-third of the titles under consideration, thereby enabling the other two libraries to withdraw print volumes accordingly (if so desired).

Within this framework, please assign one of the following ratings to each title on the American Chemical Society list. A rating of “1” should be assigned to no more than 17 titles, i.e., roughly one-third of the total number of titles.

1. I strongly recommend that shared print holdings for this title be housed in the ISU Library system, regardless of space constraints.
2. I recommend that, if possible, shared print holdings for this title be housed in the ISU Library system, depending on space constraints.
3. I recommend that shared print holdings for this title be housed outside the ISU Library system, given local space constraints.
4. I have no recommendation regarding the location of shared print holdings for this title.

While CRTF members agreed to use this common language in their instructions to collection development colleagues, the sentence shown in italics was considered optional or subject to revision, depending on how prescriptive we wished to be (at the individual publisher level) within each of our institutions.

**Assignment of tentative retention responsibility for individual titles:**

Based on the ratings obtained in step 5 above, CRTF members assigned tentative retention responsibility for individual titles to each partner library. Our goal was to ensure that, across all 3 publishers and all 169 titles, each partner library assumed responsibility for roughly 1/3 (28-38%) of the titles.

**Use of a shelf audit workform to capture actual holdings/condition data:**

Working with the Preservation Administrators in our partner libraries, the Task Force developed a shelf audit workform (Appendix B) to verify the completeness of holdings on the shelf, at the volume/issue level, and to identify any problems related to the physical condition of this material.
Assignation of final retention responsibility for individual titles:

CRTF members reviewed and in some cases re-assigned final retention responsibility for these 169 titles across their library systems. In the process, it was resolved that repository copies of journals should be held, whenever possible, from the beginning of the publication run (e.g., vol. 1, no. 1) through calendar year 2005, or, if the title is published on a split-year cycle, the publication year 2004-2005. (By 2005, most research journal content is actually born-digital, and the printed volumes are themselves derivative or non-existent).

It was agreed that, whenever possible, members of the same journal family (“continues” and “continued by” titles) should be kept together in a single location. If necessary, volumes should be transferred between libraries to accomplish this. Similarly, for any given title, individual volumes identified for withdrawal by a partner library should be transferred to the retaining library if those volumes filled gaps in the retaining library’s holdings. To avoid the legal complexities of transferring ownership, these transactions would be considered permanent loans.

Creation of a suitable memorandum of understanding (MOU):

A draft MOU was reviewed and approved by the library directors in August 2010. The MOU establishes the general terms of an ongoing Distributed Print Repository program. Each individual project covered by this program, beginning with the pilot project, will be documented in a separate appendix to the MOU.

Determination of how retention decisions are documented in local/shared systems:

In consultation with the heads of cataloging departments at the three partner libraries, we developed the following proposal for documenting retention decisions in a manner that will prevent libraries from inadvertently withdrawing protected titles. Each partner library will use the MARC 583 field (information about processing, reference, and preservation actions) in local holdings records with a minimal level of subfields. Partners can elect to use an expanded level, following the models below.

- **Minimal:** 583 1 $a committed to retain $c 20110815 $d 20360815 $f DPR project (IaAS-laU-WU) $2 pda $5 IaAS

- **Expanded (with optional subfields $3 and $z):** 583 1 $3 v.3-15, 18-21 $a committed to retain $c 20110815 $d 20360815 $f DPR project (IaAS-laU-WU) $2 25-year retention of circulating volumes $2 pda $5 IaAS

When a single title is held in multiple formats and represented by multiple catalog records, each partner library can decide whether to use the 583 field in multiple records for the same title.
As national standards or best practices emerge for the MARC 583 field, each partner library will look to adopting them. The use of the MARC 561 (information concerning the ownership and custodial history of the described materials) is an example of this.

**Development of a tool for documenting all title-level data related to the pilot project:**

Once final retention responsibility had been assigned for each title in the pilot project, we needed a more flexible tool for documenting recommendations and decisions regarding withdrawals and transfers. The fact that one library was responsible for retaining a given title did not obligate the two remaining libraries to withdraw this title. An Excel spreadsheet was created for each publisher’s collection, to track the following on a title-by-title basis:

- Assigned retention responsibility
- Options to withdraw/transfer (based on holdings)
- Final decisions to withdraw/transfer
- Withdrawal/transfer measurements

In each spreadsheet, the first worksheet served as a summary and “Key,” i.e., an alphabetical listing of the publisher’s titles, their unique project ID numbers, the assignment of retention responsibility, and a tabular snapshot of withdrawal/transfer decisions and measurements. Each remaining worksheet, labeled with a project ID number, provided detail for an individual title.

**STATISTICAL SUMMARY OF PILOT PROJECT**

In brief, the libraries at UI, ISU, and UW have committed to retaining 57, 48, and 64 titles respectively. Based on the assurance of shared print retention, and with feedback from local collection development staff, the libraries have targeted material for withdrawal: 638.7 linear feet for UI; 664.4 linear feet for ISU; and 153 linear feet for UW.

To fill gaps in holdings, and to keep journal families together (“continues” and “continued by” titles), the libraries have targeted the following volume of material to be transferred (as permanent loans) to a designated retaining library: 25.3 linear feet to be transferred by UI; 7.2 linear feet by ISU; 1.1 linear feet by UW.

**RECOMMENDATIONS**

The consensus of CRTF members was that the pilot project, though time-consuming, has successfully demonstrated the potential of a trilateral Distributed Print Repository program. The program can grow incrementally, as time and resources permit, building on the processes and tools that were developed to support the pilot. Specifically, CRTF members recommended that the partner library directors take the following actions:
1. Have appropriate campus authority sign the Memorandum of Understanding (MOU) creating an ongoing Distributed Print Repository program for our three partner libraries.

2. Authorize staff in the partner libraries to bring the CRTF pilot project to a close, by documenting retention agreements in MARC 583 fields, withdrawing titles as recommended, and transferring titles as recommended.

3. Authorize staff in the partner libraries to plan the transition from project to ongoing program, by identifying cross-institutional support issues (e.g., SharePoint and/or shared use of a centralized Access database), identifying institution-specific support issues (staffing, IT and other systems, etc.), and identifying next and future projects.

4. Initiate a dialogue, within each partner library, on the relationship between this trilateral agreement and other regional, consortial, and national-level activities to which we’ve committed or will commit. How can we best avoid duplication, achieve synergies, and establish clear priorities?

CONCLUSION

As a result of the pilot project, the libraries at UI, ISU, and UW will assume retention responsibility for 57, 48, and 64 titles respectively, for a 25 year period. Twenty-five years is also the term for both the CIC and WEST projects. Before the end of that time period, the agreement will be reviewed.

Our e-journal licenses, for both one-time backfiles and ongoing subscriptions, are sometimes unclear or inconsistent with regard to perpetual access. For shared archival or repository plans to succeed, it will be necessary for publishers and libraries to clarify these.

Different types of publishers may provide different challenges for shared archival or repository projects among libraries. Beyond the society/non-profit publishers represented in our pilot, there are numerous large, commercial publishers providing extensive backfiles (such as Elsevier, SAGE, Springer, Wiley/Blackwell, and Taylor & Francis). Some journal backfiles are also available freely from sources such as the SAO/NASA Astrophysics Data System.

Even within our small pilot, the complexity of serial title relationships (title changes, splits, mergers, etc.) has been a challenge. Variations in cataloging practice (through time and across institutions) add to this complexity. Successful projects/programs in print journal management will require both the effective use of automated systems and a fair amount of human oversight/cleanup.

There are different approaches to identifying “candidate” titles that should be explored. For example, we might consider single titles (versus publisher packages) for which we have electronic backfiles. We could likewise identify, measure, and create an inventory of “visibly extensive” titles on the shelf. Varying approaches could complement the current approach based on review of catalog holdings and publisher lists.
There is clear need for a better system of storing, managing, and reporting project data. The pilot project made creative use of Excel spreadsheets, but over time these became cumbersome and inefficient. The data management for any future projects should occur in a relational database—ideally one that supports interinstitutional collaboration and requires minimal support from our local IT offices. One example would be a Microsoft Access database, managed by one partner library but accessible to the others in a collaborative workspace such as SharePoint. Hopefully, national developments and network-level tools such as the CRL PAPR system will greatly improve the efficiency of even small-scale collaborative projects.

From planning through final implementation, the pilot project involved a wide variety of staff in each of the partner libraries. The task force responsible for planning was intentionally small and nimble, consisting solely of senior administrators in collection development or management who had ready access to the libraries’ directors. Each phase of the project, however, drew in additional staff—all of whom must be considered when one calculates the true cost (in human resources) of projects of this kind. Subject librarians and collection development staff assisted in the rating and selection of titles for retention. Preservation staff helped to develop our shelf audit tool and then conducted the title-by-title review of volumes for completeness and condition. Cataloging staff oversaw the records management, both for titles retained (adding 583 and 561 fields to local holdings records) and for those withdrawn or transferred. Staff in Stacks Management were involved in the physical handling of withdrawn titles—a step in which quality control and supervisory oversight are essential. Mailroom staff helped prepare selected volumes (outbound transfers) for shipping. As inbound transfers arrived from partner libraries, staff in Cataloging were again mobilized to deal with records management, while staff in Preservation dealt with the removal and replacement of property stamps and other markings on these volumes. Thus, even after the initial investment of high-level planning, the investment of staff in an ongoing program of collaborative collection storage is not insignificant.

**NEXT STEPS**

The CRTF report concluded with a recommendation that our three partner libraries create a more systematic Distributed Print Repository (DPR) program, and resulted in a signed Memorandum of Understanding (MOU) that describes this program in broad strokes. In fall 2011, a Distributed Print Repository Working Group was formed to continue the work of the CRTF on a scalable, ongoing basis. Currently, the group is managing the transition from pilot project to ongoing program. The group is overseeing the final stages of the pilot project, including documenting retention agreements at local and network levels and withdrawing/transferring printed volumes as recommended.

Ultimately, the group or its designees will create and maintain a list of candidates (publishers, collections, titles, etc.) for future DPR projects and select and implement individual projects as feasible. In addition to looking at our collective list of paid e-journal backfiles, we might review the major publisher collections in SFX to get ideas about next/future projects. This will call for monitoring and sharing information regarding the impact of a program on each partner library’s
operations and staffing as well as the impact of a program on researchers and their use of collections. The access/delivery provisions in the MOU may need to be revised. We will continue to monitor and share information about regional, consortial, national and international developments involving distributed print repositories (WEST, GWLA, CIC, etc.), emerging standards and support systems (MARC 583; OCLC’s Print Archive symbol; CRL’s Print Archives Preservation Registry, etc.), and professional meetings, webinars, articles, and reports. All partners agree that we should generally avoid overlap with collections targeted by CIC, including Elsevier, Springer, and Wiley. Avoiding overlap with WEST may be more challenging.

Next steps will also involve exploring, with Information Technology staff in our partner libraries, the infrastructure requirements for the DPR program. Specific needs include assistance with collection analysis and data gathering and the creation or adoption of a web-based platform to support the program’s collaborative activities and shared file management.

The long-standing cooperative culture within the research library community could serve as a useful foundation for constructing regional cooperative agreements to support consortial repository projects. To date, the task of coordinating these efforts has been sufficiently formidable to prevent much real progress from occurring. However, serious storage constraints facing all three of our institutions mandate new efforts to tackle this problem in a more deliberative and coordinated way. Our group was able to design a sustainable process and implement that process with a selective but sufficiently large group of titles as a pilot project, with the potential for a longer term goal of a comprehensive cooperative collection management plan for the storage of our print journal repository among our three institutions. By maintaining an ongoing dialogue, within and among our partner libraries, we can determine how best to avoid duplication, achieve synergies, share best practices, and establish clear priorities.
REFERENCES


## APPENDIX A

### Analysis of potential duplication between print & electronic journals, by publisher, at ISU (12/13/09)

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Total # of electronic titles</th>
<th># titles with pre-1990 electronic holdings</th>
<th># of titles where ISU has some (dup) print volumes</th>
<th>Total # years electronic, per-SFX</th>
<th>Total # years (dup) print coverage at ISU</th>
<th>ISU print (dup) as % of electronic</th>
<th># ISU titles with 100% print/electronic duplication</th>
<th># ISU titles lacking only latest years</th>
<th># ISU titles with near-100% P/E duplication</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACM Digital Library</td>
<td>487</td>
<td>28</td>
<td>17</td>
<td>570</td>
<td>373</td>
<td>65%</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>AIP Scitation</td>
<td>96</td>
<td>646</td>
<td>43</td>
<td>1,640</td>
<td>1,412</td>
<td>86%</td>
<td>10</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>Allen Press</td>
<td>20</td>
<td>10</td>
<td>9</td>
<td>374</td>
<td>297</td>
<td>79%</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>American Chemical Society</td>
<td>57</td>
<td>37</td>
<td>33</td>
<td>1,362</td>
<td>1,171</td>
<td>86%</td>
<td>11</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Amer. Inst. Of Aeronautics &amp; Astronautics</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>131</td>
<td>109</td>
<td>83%</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>American Mathematical Society</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>189</td>
<td>176</td>
<td>93%</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>American Museum of Natural History</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>218</td>
<td>207</td>
<td>95%</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>American Physical Society</td>
<td>17</td>
<td>3</td>
<td>3</td>
<td>81</td>
<td>78</td>
<td>96%</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>American Phytopathological Society</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>84</td>
<td>72</td>
<td>86%</td>
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<td>3</td>
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<td>2</td>
<td>2</td>
<td>69</td>
<td>69</td>
<td>100%</td>
<td>2</td>
<td>0</td>
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<td>Annual Reviews</td>
<td>48</td>
<td>34</td>
<td>31</td>
<td>1,052</td>
<td>907</td>
<td>86%</td>
<td>5</td>
<td>19</td>
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<tr>
<td>Astrophysics Data System</td>
<td>58</td>
<td>49</td>
<td>30</td>
<td>1,723</td>
<td>1,218</td>
<td>71%</td>
<td>6</td>
<td>8</td>
<td>14</td>
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<td>Cell Press</td>
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<td>4</td>
<td>4</td>
<td>169</td>
<td>160</td>
<td>95%</td>
<td>0</td>
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<td>Crystallography Journals</td>
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**APPENDIX B**

**WORKFORM: Shelf audit of CRTF titles** *(Cooperative Repository Task Force)*

Journal title:  
Title ID#:  
ISSN:  
Completed by: [initials]  
Date:  
Total time spent (minutes):  

**COMPLETENESS:**

1. Search the title in the Library Catalog; print the record in a format that provides at least summary holdings, and ideally item-level holdings. Take this form and the catalog record to the shelf.

2. Are all VOLUMES accounted for?
   - [ ] YES  
   - [ ] NO  (note missing volumes here or on verso):  

3. Based on exterior markings/labels, are all volumes complete?
   - [ ] YES  
   - [ ] NO  (note incomplete volumes here or on verso):  

**PHYSICAL CONDITION:**

Preservation staff should routinely spend no more than 30 minutes conducting a cursory review of the title’s physical condition, looking for major problems that could influence retention decisions. For extensive titles, sampling is sufficient. If fewer than ten volumes display a specific problem, please identify the volumes in the space provided (time permitting).

4. Paper is brittle/crumbling:
   - [ ] NO  
   - [ ] YES (<10):  
   - [ ] YES (10+):  

5. Physical damage to the binding:
   - A. Spine is detached:
     - [ ] NO  
     - [ ] YES (<10):  
     - [ ] YES (10+):  
   - B. Boards are detached:
     - [ ] NO  
     - [ ] YES (<10):  
     - [ ] YES (10+):  
   - C. Text block is split/broken:
     - [ ] NO  
     - [ ] YES (<10):  
     - [ ] YES (10+):  

6. Text loss (gutter and text block edge):
   - A. Tight binding prevents text block from opening sufficiently for satisfactory scan and/or insufficient gutter margin causes text to be obscured (e.g., over-sewn bindings)
     - [ ] NO  
     - [ ] YES (<10):  
     - [ ] YES (10+):  
   - B. Text has been trimmed (look for evidence on the text block edges)
     - [ ] NO  
     - [ ] YES (<10):  
     - [ ] YES (10+):  


7. Pages are loose, torn, or missing (look for gaps, or for pages protruding from the text block edge)
   □ NO   □ YES (<10): _________________________________   □ YES (10+)

8. Other comments regarding physical condition?
   □ NO   □ YES (please note on verso)

9. Based on this cursory review, a more **thorough review** of physical condition is recommended:
   □ NO   □ YES

10. Attach the catalog record to this completed workform and submit to supervisor.