

Editorial: Impact of special collections in JGR Space Physics

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Key Points:

- JGR Space Physics published 51 special collections from 2006 – 2018, totaling 1009 papers out of 8881.
- Average citations and downloads are slightly higher for papers in special collections compared to those not in collections.
- Paper attributes thought to influence citations were analyzed, finding no statistically significant effect for special collection papers compared to others.

AGU Index Terms:

- 9815 Notices and announcements
- 2700 Magnetospheric physics
- 2400 Ionosphere
- 2100 Interplanetary physics
- 7500 Solar physics, astrophysics, and astronomy

Keywords:

Editorial, special collections, bibliometrics, citations, downloads

28 **Abstract**

29 Journals occasionally solicit manuscripts for special collections, in which all papers are focused
30 on a particular topic within the journal's scope. For the *Journal of Geophysical Research: Space*
31 *Physics*, there have been 51 special collections from 2005 through 2018, with a total of 1009
32 papers out of the 8881 total papers in the journal over those years (11%). Taken together, the
33 citations to special collection papers, as well as other metrics, are essentially the same as the non-
34 special-collection papers. Several paper characteristics were examined to assess whether they
35 could explain the higher citation and download values for SC papers, but they cannot. In
36 addition, indirect methods were conducted for assessing self-citations as an explanation for the
37 increased citations, but no evidence was found to support this hypothesis. It was found that some
38 paper types, notably Commentaries and Technical Reports, have lower average citations but
39 higher average downloads than Research Articles (the most common type of paper in this
40 journal). This implies that such paper types have a different kind of impact than "regular"
41 science-result-focused papers. In addition to having higher average citations and downloads,
42 special collections focus community attention on that particular research topic, providing a
43 deadline for manuscript submissions and a single webpage at which many related papers are
44 listed. It is concluded that special collections are worth the extra community effort in
45 organization, writing, and reviewing these papers.

46

47 **Plain Language Summary**

48 Journals sometimes focus the attention of the research community by having a special collection,
49 even an entire issue, devoted to a single topic. A reasonable question to ask is whether the extra
50 effort of organizing, promoting, and maintaining the special collection is worthwhile. This paper
51 examines paper impact in this journal, the *Journal of Geophysical Research Space Physics*,
52 separating the special collection papers from the non-special-collection papers. The short answer
53 is, on average, yes, at least based on the metric of citations. Some characteristics of the paper
54 were also assessed, such as the use of a colon in the title, the average author team size, the
55 average number of references in each paper, and the paper type of the articles. None of these
56 factors explains the higher average citations and downloads for papers in special collections. In
57 this analysis, though, it was found that several paper types have lower-than-average citations but
58 higher-than-average downloads, including Commentaries (personal perspectives articles) and
59 Technical Reports (describing new methods or data sets). This implies that such papers are being
60 read but perhaps not heavily referenced (yet). The overall conclusion is that special collections
61 are worth the extra work.

62

63 **1. Introduction**

64 The *Journal of Geophysical Research Space Physics* (JGR-SP) regularly publishes papers
65 that are part of a special collection (SC). SCs are proposed by members of the research
66 community and are focused on a particular topic within the scope of the journal. While open to
67 submissions from anyone, SC proposals include a listing of potential authors and tentative paper
68 titles, which are often presentation titles from a recent small workshop or session at a larger
69 conference. With electronic publishing, the articles in an SC are no longer gathered into a single
70 issue but rather appear online as they are accepted. They are, however, listed together on a

71 separate page within the journal website, allowing quick access for the research community to all
72 papers in that collection.

73 There are three qualitative benefits to SCs. First, they provide a deadline for submitting
74 manuscripts, which often serves as positive encouragement for researchers to finalize their study.
75 The influence of these deadlines is a sizable increase in submissions to the journal around special
76 collection deadlines. While this could be a shift of submissions that would have come in later,
77 some of this is also from researchers prioritizing manuscript preparation in their busy schedules.
78 That is, the existence of an SC likely leads to increased scientific production.

79 Second, an SC focuses community attention on a particular topic. As the organizers
80 publicize the SC to relevant researchers, they raise awareness of the topic not only among
81 potential authors but also across the broader discipline-wide community. This publicity and
82 exposure continues as the papers are accepted and eventually published. The SC topic, or
83 individual papers within it, might also receive extra promotion through an Editor's Vox,
84 Research Spotlight, Editors' Highlight, or social media post. Whether or not a particular space
85 physicist is conducting research in that focused topic of the SC, the extra contact with this topic
86 raises its familiarity within the community.

87 Third, the SC page on the journal website is a single-stop location for researchers to find
88 papers on this topic. While search engines are good at locating scholarly articles on a particular
89 topic, sometimes the search results are overwhelming or contain many papers of only marginal
90 relevance. However, finding just one paper from an SC will lead to a link to the SC's table of
91 contents, providing easy access to many related papers.

92 Given the increased promotion and discoverability of these articles, it could be the case
93 that SC papers have a higher impact, as measured by citation and download rates, than published
94 papers not part of an SC. Of course, these are not the only contributing factors to citation and
95 download rates, though. Moldwin and Liemohn (2018) conducted an assessment of citations to
96 papers published in 2012 in JGR-SP, finding several parameters that lead to a statistically
97 significant increase in citations. One of these is the use of a colon in the title, another is the
98 number of authors, and a third is the number of references.

99 Yet another factor that might be linked to impact is the paper type of the published
100 article. JGR-SP has several paper types. The most common, by far, is the Research Article,
101 which needs to have a significant original contribution to our understanding of the physics of the
102 space environment. The next most common currently active paper type is the Technical Reports:
103 Methods paper, which should describe a significant advancement in how space physics is
104 conducted with a discussion of the ways that this method could be used for scientific discovery.

105 Clark and Hanson (2017) compared the impact of several hydrology journals, finding
106 remarkable citation similarity across the discipline. The caution, however, about the usage of
107 citation data in evaluating science impact, encouraging the inclusion of other measures in making
108 such assessments. Another measure of impact that is conveniently available in the past few years,
109 as journals forego the print edition and switch to digital-only publication, is the number of full-
110 text views or article downloads from the journal website.

111 Only a few studies have examined the effectiveness of special collections. Olk and
112 Griffith (2004) assessed the impact of SCs in management research journals, finding several
113 positive effects. Most notably, papers in SCs were published faster than non-SC papers and that

114 SCs publish a high proportion of exceptional articles of high impact. Another examination of SC
115 effectiveness was conducted by Hendry and Peichel (2016), who examined papers in 7
116 collections resulting from an annual topical conference in evolutionary ecology. They found that,
117 on average, papers within the selected SCs are cited about the same as those papers on this
118 particular topic but not in SCs.

119 The effectiveness and impact of SCs for space physics has not been quantitatively
120 examined. This study assesses the impact of papers in SCs published in recent years in JGR-SP.
121 Note that SCs are sometimes called by the old names, most notably the special issue, when a
122 hardcopy issue of the journal was devoted to the papers in the special collection, and the more
123 recent special section, when the papers were scattered among several issues. The newest name,
124 special collection, includes new submissions but also could be a compilation of already-
125 published papers, or even a mixture of the two. In this paper, special collection is used,
126 abbreviated to "SC" for convenience.

127 **2. Methodology and Results**

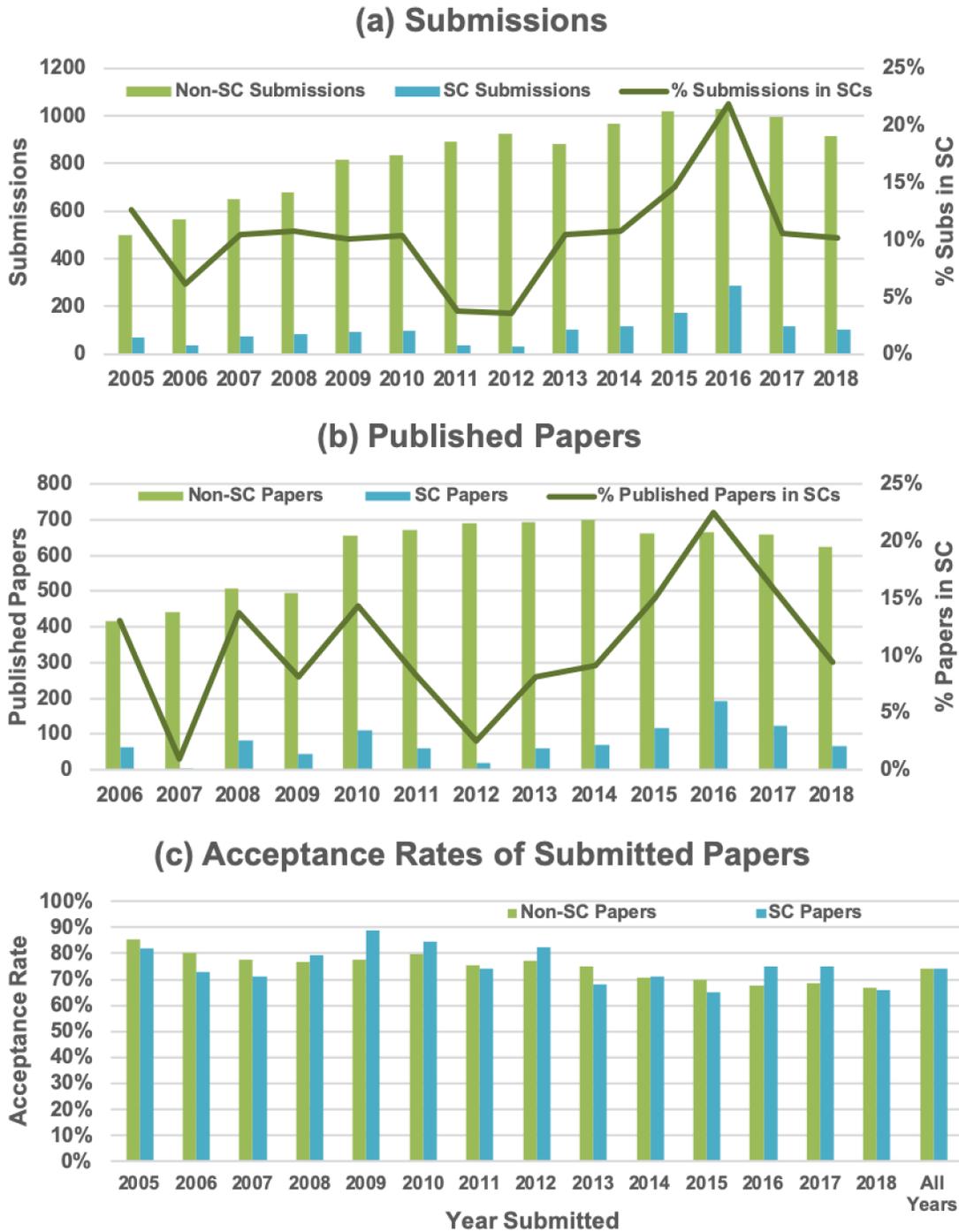
128 Impact metrics were examined for all papers published in JGR-SP from the beginning of
129 2006 to the end of 2018 and submissions from 2005-2018. There are a few published papers we
130 analyzed that were submitted before 2005 but published in 2006, so they appear in our
131 "published" paper dataset, but not in the "submitted" dataset. This time span includes the
132 publication of papers from 51 SCs. The total number of published papers in our analysis is 8881,
133 with 1009 papers listed within an SC. Note, however, that for joint special collections, i.e., those
134 SCs that include papers from more than one AGU journal, only the JGR-SP papers from the SC
135 were included in this analysis. This analysis excludes withdrawn and deleted manuscripts and
136 corrections.

137 Download data is retrieved from Wiley Journal Insights, a proprietary platform operated
138 by Wiley and includes the number of times a paper is viewed in full text online or downloaded in
139 PDF formats on Wiley Online Library; it includes download activity of the past five years of all
140 papers published in the journal. Citation data is retrieved from Dimensions Analytics platform,
141 and includes citations by all content indexed in the Dimensions database (see Hook et al., 2018,
142 section "2.3.2. Citations" for a detailed description of citation counts in Dimensions). Citing
143 publications can include articles, chapters, preprints, or monographs. Download and citation data
144 used in this analysis was retrieved 13 September 2019, and analyzed in Excel.

145 Figure 1 shows submissions to special collections in the time span from 2005 to 2018 and
146 the papers published from 2006 through 2018. The current editor in chief, the first author of this
147 study, made it a priority of his term to increase the number of special collections, and its effect is
148 evident in Figure 1, which shows peak submissions to special collections in 2016, a year in
149 which 9 special collections were open to submissions at least for some portion of the year.

150 A concern that is sometimes raised about SC papers is whether they receive the same
151 editorial and reviewer scrutiny. One way to quantitatively evaluate this concern is to consider the
152 proportionality of the final decisions for papers in special collections relative to the rest of the
153 journal. Figure 1c shows these final decisions, with columns for the rates of acceptance for each
154 year for SC and non-SC papers (withdrawn/deleted submissions excluded). Note that acceptance
155 rate is calculated from the eventual final decision of each of the submitted manuscripts counted
156 in Figure 1a. It is seen that in some years, the SC acceptance rate is higher and other years is

157 lower. For the all-years column, the values are both 74% (to be very specific, they are 74.34%
 158 and 73.97% for SC and non-SC papers, respectively). This difference is negligible; there is no
 159 preference for accepting a manuscript submitted to a special collection compared to non-SC
 160 submissions.



161

162 **Figure 1.** Submissions, published papers, and acceptance rates by year (panels a,
 163 b, and c, respectively). Non-SC manuscripts are shown with the green column, the
 164 special collection manuscripts with the blue columns, and the black lines in panels

165 a and b show the percentage of submissions and papers that were in special
166 collections, using the right-hand scale.

167

168 Figure 2 presents two measures of the impact of papers in special collections versus non-
169 SC papers published in the journal over the study epoch. The two metrics are average citations
170 per paper and average downloads per paper. The download information only exists for the past 5
171 years, so Figure 2b focuses on this interval (August 2014 through August 2019). The definition
172 of a “download” is online access to the full text article and includes both full/enhanced article
173 (HTML) and PDF formats. Since download data is only from the past five years, this download
174 chart does not show the immediate popularity of articles published prior to August 2014.

175 In Figure 2a, it is seen that the trend is a decreasing number of citations with each passing
176 year from 2006 to the present. Because the citations are cumulative, this trend is expected. The
177 obvious deviation to the trend is the citation rate for SC papers published in 2007, which have
178 much lower average citations than expected for papers 7 years old. However, as seen in Figure
179 1b, there were only four SC papers published that year, so this value is not statistically robust.

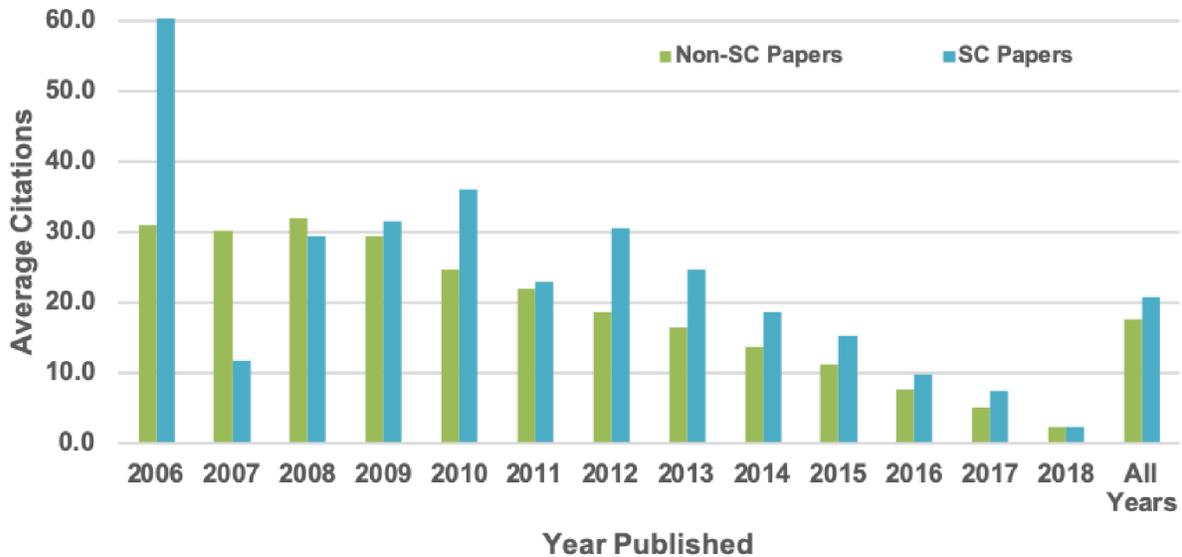
180 Because the download data are only available for the last 5 years, several features are
181 evident in Figure 2b. From 2014 to 2018, this value should decrease, as it does, because the
182 papers were only available for part of the 5-year interval. For papers published in 2013 and
183 before, they all have the same 5-year window of downloads included in the bar height. It is seen
184 that the downloads decrease rather slowly, indicating that papers in JGR-SP have a long lifetime
185 of interest to the research community.

186 It can be seen in Figure 2 that, for nearly every year and for both metrics, the SC paper
187 value exceeds that of the non-SC paper value. This is also true for the “all years” columns, with
188 average citations per paper of 20.8 and 17.6, and average downloads per paper of 403 and 335,
189 for SC and non-SC articles, respectively.

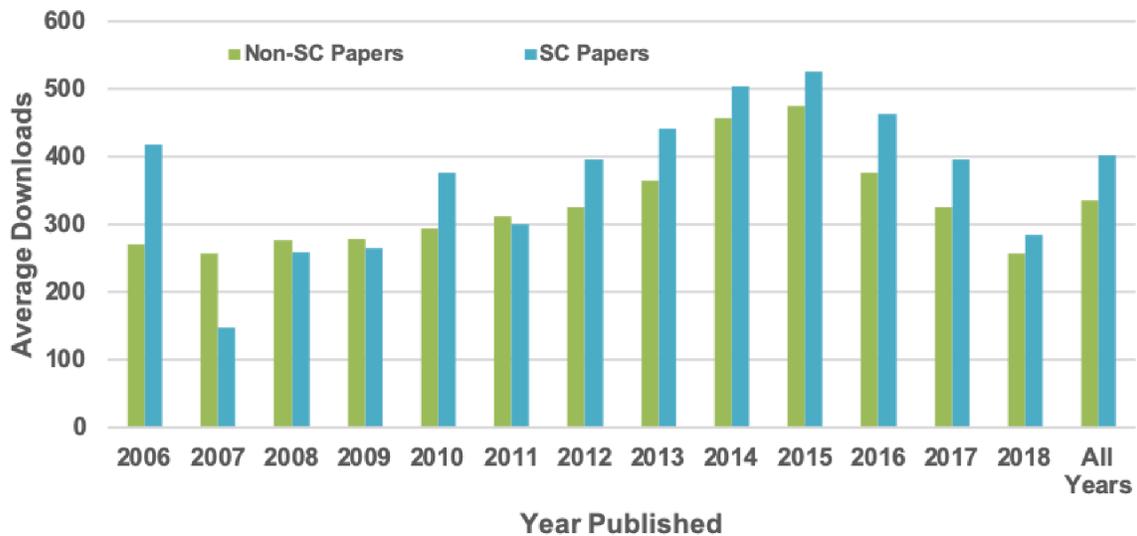
190 To assess whether the differences in average citations or downloads per paper are
191 statistically significant, Welch’s t tests were conducted. Poisson counting statistics were used to
192 assign uncertainties to each value in Figure 2, based on the published paper numbers in Figure
193 1b. It was found that all pairs of values (SC versus non-SC metric for a given year) are highly
194 significant, with all t values greater than 10 and many greater than 100, much larger than the 2.6
195 t value needed for 99% confidence of difference. The difference in the “all years” columns are
196 also highly statistically significant.

197 It should be noted that some special collection papers are heavily influenced by a small
198 handful of highly cited papers. These are particularly found in two collections published in 2016,
199 "Big Storms of the Van Allen Probes Era" and "Major Results from MAVEN." The median
200 citation rate for the "Big Storms of the Van Allen Probes Era" special collection is 17; this means
201 that over 50% of papers in this set from 2016 already have double-digit citations. A median less
202 than the mean indicates a right-sided tail to the distribution; the skew of the citation counts for
203 this special collection is 1.4. To assess if this is an unusual feature specific to this special
204 collection, the skew values were calculated for each of the 37 special collections. While a few
205 special collection citation counts have a skew that is below zero, indicating a slightly left-sided
206 tail, nearly all have a positive skew value and over half of special collection citation count
207 distributions have a skew above unity, indicating a heavy right-sided tail.

(a) Average Citations between January 2006- August 2019



(b) Average Downloads between August 2014- August 2019



208

209 **Figure 2.** A comparison of impact metrics for papers in special collections (blue
 210 columns) against the values for non-SC papers (green columns), per year and for
 211 all years combined. Panel (a) shows average citations per paper (2006 – August
 212 2019) and (b) presents average downloads per paper (August 2014 – August
 213 2019). The average citations for papers published in the years 2006-2018.

214

215 To more thoroughly investigate if it is SC inclusion that increases citations and
216 downloads or whether it is some other factor, the published papers were categorized according to
217 four other parameters. The first three are the main organizers from Moldwin and Liemohn
218 (2018): the use of a colon in the title, the number of authors on the paper, and the number of
219 references in the bibliography. The fourth attribute is paper type. The breakdown of average
220 citations (from January 2006 through August 2019) and average downloads (from August 2014
221 through August 2019) for the first three attributes are presented in Figure 3. The left column
222 (Figures 3a-3c) shows average citations for the four parameters while the right column (Figures
223 3d-3f) shows average downloads.

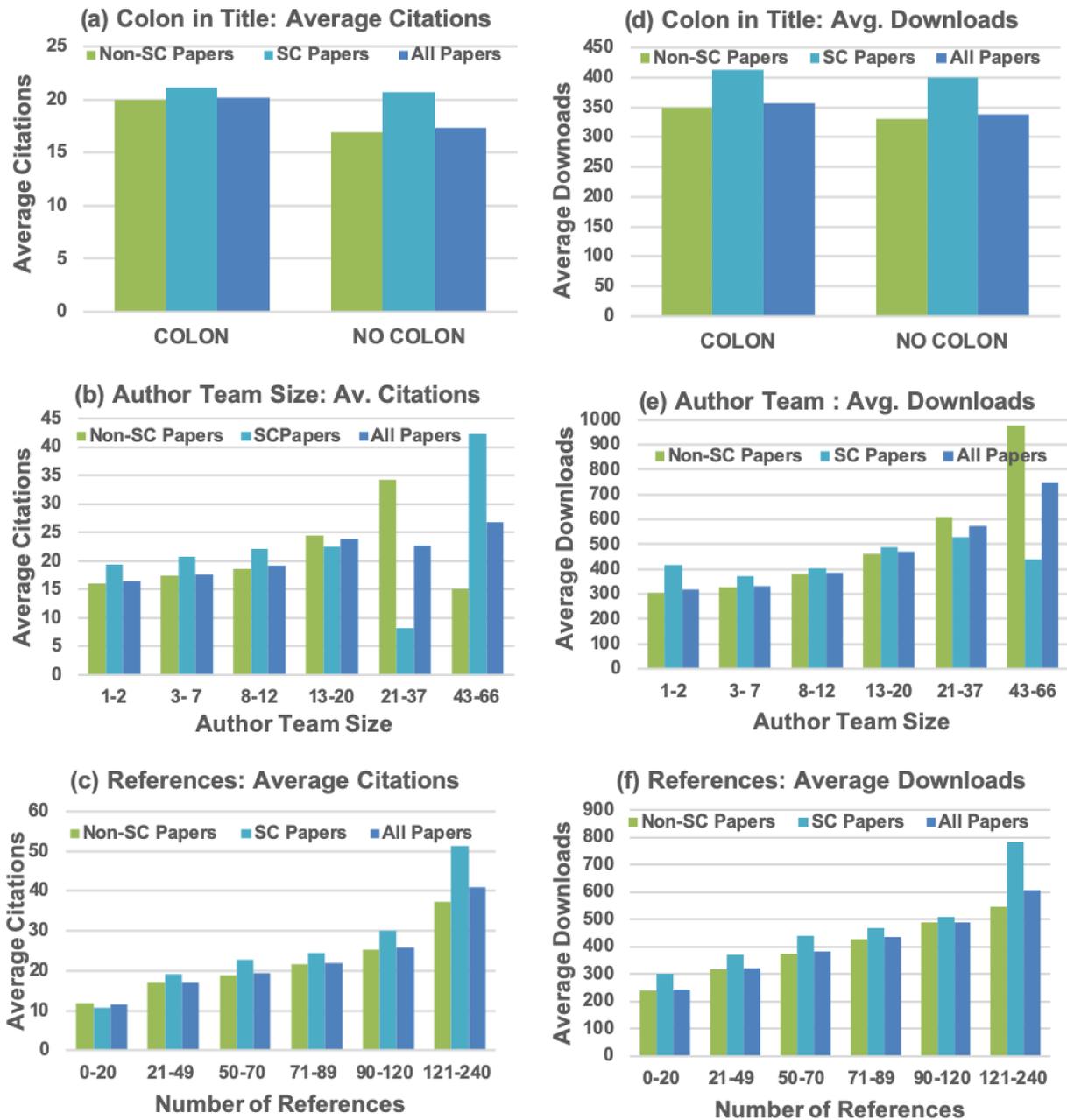
224 Figures 3a and 3d show the results for the use of a colon in the title. For the SC papers,
225 there are 234 with a colon and 775 without, while of the non-SC papers, 1715 include a colon
226 and 6157 do not. We observe the result of Moldwin and Liemohn (2018) in average citations of
227 non-SC papers and “all papers,” with papers with a colon in the title having a higher citation rate
228 that is statistically significant. The opposite is true for SC papers, however, with the citation rate
229 slightly lower, although still statistically significant. The download rates are not different by a
230 statistically significant amount – the use of a colon does not change the download rate.

231 Figures 3b and 3e present the average citations and downloads based on author team size.
232 While it appears that there is slight growth in both impact quantities with author team size, this is
233 a bit misleading because the sample size in the higher bins becomes small. The highest author-
234 count bin, for instance, has only 4 and 3 papers in it for non-SC and SC papers, respectively, and
235 the previous bin has 29 and 23, respectively. At author team sizes of 20 and below, there is an
236 upward trend for both non-SC and SC papers, consistent with what was found by Moldwin and
237 Liemohn (2018). However, the increase with author team size is not large nor is it monotonic.

238 The impact based on references in the paper are shown in Figures 3c and 3f. These two
239 plots reveal a clearer, more pronounced upward slope with references. For the top bin, there is
240 significant scatter in individual paper citations and downloads but, even for this bin, the
241 difference of the average citation and download values with its neighboring bin values is
242 statistically significant.

243 The final parameter to consider is paper type, shown in Figure 4. Seven categories of
244 paper type are shown: Research Articles; Review Articles; Brief Reports; Methods Reports; Data
245 Reports; Commentaries; and Introductions to Special Collections. Comments, Replies,
246 Corrections, and Editorials have been excluded since they are more editorial in nature and
247 typically receive few to no citations. Also shown are columns for the “all-paper average” values
248 of citations and downloads. Regarding counts of each type, the Research Article is by far the
249 most common with 7227 and 892 non-SC and SC papers, respectively. Next is the Brief Report,
250 which has 324 and 11 papers in the non-SC and SC categories, respectively. Note that JGR-SP
251 no longer uses this paper type, and all “brief report” papers since 2014 are submitted as Research
252 Articles. This is followed by Methods Reports, which includes two paper types, the old (pre-
253 2014) Techniques papers and the new Technical Reports: Methods papers, with 111 and 52
254 papers in the non-SC and SC categories, respectively. Similarly, the Data Reports group includes
255 the old Data Report paper type as well as the new Technical Reports: Data paper type, having 12
256 and 3 in the non-SC and SC categories, respectively. Review articles are next with 7 and 25
257 papers in the non-SC and SC categories respectively. The fifth in the list is Commentaries, with
258 13 and 14 in the two categories, and finally Introductions to Special Collections, of which there

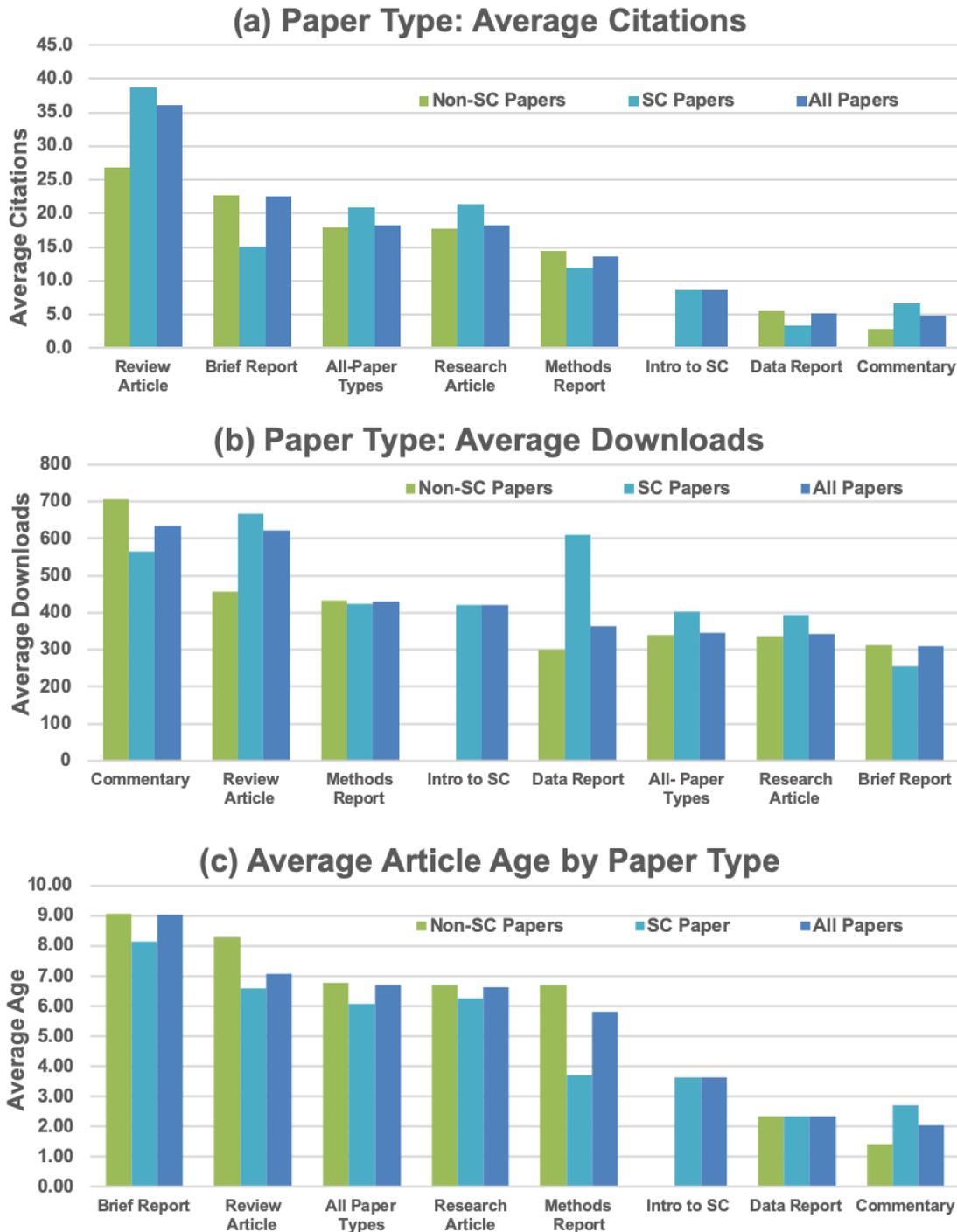
259 11 (with zero outside of collections). Yes, the final three paper types for all have more papers in
 260 SCs than not.



261

262 **Figure 3.** Parameter analysis of average citations (left column) and average
 263 downloads (right column), for the use of a colon in the title (panels a and d), the
 264 number of authors (panels b and e), and the number of references within the paper
 265 (panels c and f).

266



267

268 **Figure 4.** Average citations, average downloads, and average paper age according to paper type,
 269 with the columns showing results for papers in an SC or not.

270

271 It is seen in Figure 4a that citations of Review Articles outpace other paper types. This is
 272 expected. In addition to being a historically highly-cited paper type, in this dataset, after Brief

273 Report, they also have the highest average age compared to all of the articles (7 years old) as
274 seen in Figure 4c, which allows them more time to accumulate citations. Brief report, a now
275 retired paper type, is the oldest and second most highly cited paper type. It is interesting that
276 Review Articles inside of SCs have a much higher average citation value than those not in SCs.
277 It is also seen in Figure 4a that Methods Reports have fewer average citations than Research
278 Articles, with SC Methods papers having fewer average citations than non-SC Methods papers
279 while SC Research Articles have a higher average citation value than non-SC Research Article
280 papers. Three categories – Introductions to SCs, Data Reports, and Commentaries – have
281 significantly fewer citations than the other categories, whether in SCs or not. This is expected for
282 Commentaries because they only came into usage for JGR-SP in 2016 (their average age is 2
283 years, as seen in Figure 4c).

284 The average downloads data in Figure 4b, however, reveals a different scenario.
285 Commentaries are the most downloaded paper type. Despite their relative newness in JGR-SP,
286 this high download value implies that they are widely read. Review articles are the second most
287 highly downloaded article type, but just barely behind, with only 13 fewer average downloads
288 (both SC and non-SC) than Commentaries. The next category is Methods Reports and
289 Introduction to the Special Collection, both with an average of over 400 downloads per paper.
290 Following these two is the Data Reports paper type, revealing a statistically significantly higher
291 download count when these paper types are within an SC than when they are not. At the end of
292 the list are the paper types of Research Article and Brief Report. These last two paper types were
293 in the top half of citations.

294 Because the paper type average citations and average downloads are not further broken
295 down by year, comparing any two paper types in Figures 4a and 4b needs to be done with the
296 average paper age presented in Figure 4c. As revealed in Figure 2, the average citations in Figure
297 4a are biased toward the paper types with older papers, while the average downloads in Figure
298 4b are biased towards paper types with younger papers.

299 A caveat to Figures 2, 3, and 4 is that all SC papers were considered together instead of
300 being considered separately for each of the collections published in JGR-SP. It is worth
301 mentioning that the citation metrics presented here include citations to other papers in the same
302 special collection. It could be that special collection papers are citing each other and, if this is
303 true, then more papers in a collection would result in more citations to SC papers. This would be
304 especially true for Preface/Introduction papers, which used to be written as short descriptions of
305 the findings from each paper in the collection, thus contributing one citation to every paper in the
306 collection. AGU journal editors decided in 2013 to end this practice, so none of the recent special
307 collections include this augmentation to their citations. Also note that citations to other papers in
308 the same collection would predominantly be within the same year as the original publication,
309 because most papers in any given SC are published within the same calendar year. That is, this
310 type of citation would mostly contribute to the Immediacy Index (average citations in year A to
311 papers published in year A) of JGR-SP but not likely contribute to the Journal Impact Factor
312 (average citations in year A to papers published in years A-1 and A-2) unless a citing paper
313 within the same SC is published in the year following the cited paper's publication. Still, it is
314 useful to assess whether attributes of the SC have an influence on impact.

315 To examine this, a final analysis was conducted to determine if some SCs have a
316 particular characteristic that leads to more citations. One assessment considered the number of
317 papers in the SC, addressing the question of whether larger SCs result in more citations for the

318 papers within them. This indirectly addresses the questions of within-collection-citations, being
319 referenced by other papers within the SC, as well as self-citations, the authors of the SC papers
320 more heavily citing the SC papers in later years, but doing so without going through the extra
321 step of checking all citations to all papers in every SC. Plotting the average citations to papers in
322 the SC against the paper count within the SC yields a linear correlation coefficient of -0.12.
323 which is not statistically significant. There does not seem to be an influence on citations based on
324 the number of papers in a collection.

325 A second assessment was conducted by calculating the average number of authors for all
326 papers within each SC. This is another indirect way to check on self-citations, with the
327 hypothesis being that more authors would lead to more citations of the papers from those
328 authors. Plotting average citations to papers in the SC against the average author team size for
329 papers in that SC yields a linear correlation coefficient of -0.06, which is not statistically
330 significant. Therefore, at least through this indirect method, the evidence is against the notion of
331 self-citations leading to more overall citations for papers in an SC.

332 **3. Discussion**

333 In summary, the impact metrics show that science-focused papers in special collections
334 are more highly cited and read than non-special-collection papers published in JGR-SP. The
335 increased download rate is also true for methods-focused special collection papers, but their
336 citation rate is below that of non-special-collection papers.

337 One lesson to be learned from this is that special collections have a positive influence on
338 the field. The qualitative reasons for having special collections that were listed in the
339 introduction of this study are justified by the numerical analysis of recent special collections in
340 the journal. The number of manuscript submissions goes up, as seen in Figure 1a with the steady
341 upward trend of non-SC submissions and the transient bump of SC papers within the last 6 years.
342 It is not just shifting of papers that would have been submitted later but a real increase in
343 submissions as authors make the time in their schedules to complete their papers on these
344 specific topics. As seen in Figure 2, both downloads of and citations to these papers are higher
345 than for other papers in JGR-SP, indicating, at least by these metrics, a higher impact from
346 papers in special sections.

347 A finding from Figure 3 is that the parameters found by Moldwin and Liemohn (2018)
348 are confirmed in this larger database of papers but that none of the parameters examined here can
349 explain the larger average citation and download values of SC papers. Specifically, the trends in
350 both author team size and references in the bibliography are the same for both SC papers and
351 non-SC papers. Furthermore, the use of a colon in the title is opposite for SC papers than for
352 non-SC papers. These characteristics of the papers are not responsible for causing the increase in
353 the citation and download metrics. Regarding the higher citations and downloads for SC papers
354 relative to non-SC papers, it is either another factor not considered here or it is simply that the
355 research community reads and cites a paper more when it is part of a collection.

356 Figure 4 reveals that there is some nuance to this simplistic finding of a positive
357 influence. First, these plots show that citations to data-set-description and methodology-focused
358 papers are cited less than their Research Article counterparts. By that metric, these papers are
359 less impactful. Average downloads of these papers, however, especially when included in an SC,
360 are significantly higher than for Research Articles. These findings imply that such papers do, in

361 fact, have a strong impact on the field, but this impact has not yet manifested in citations from
362 scholarly publications.

363 A similar implication is seen in Figure 3d regarding Commentaries and Introductions to
364 Special Collections. These paper types are cited less than Research Articles but have a
365 statistically significantly higher average downloads value. They are not cited very much but they
366 are read by others. Therefore, they have a notable impact on the field, even though they are not
367 often cited by other scholarly literature.

368 Two assessments were conducted that indirectly address the issue of increased impact
369 due to self-citations by authors of papers within the SC. No evidence was found supporting the
370 idea that increasing papers or authors in the SC leads to more citations.

371 The differences in downloads and citations are statistically significant but not particularly
372 large. That is, these are statistics, and any individual paper might flourish or flounder either
373 within or outside of a special collection. In addition, there are, perhaps, other characteristics of
374 papers that could lead to increased impact and citations that were not examined in this study.

375 The results of this analysis hopefully encourage those in the space physics research
376 community, and even in other fields, to take part in more invited or special collections. Though
377 there is an additional time commitment to contribute a paper that they may not have written
378 otherwise, there seems to be a benefit to investing in such a project. Additionally, our results
379 justify workshop/conference organizers to coordinate a special collection with a journal
380 interested in accepting their themed submissions.

381 **Acknowledgments and Data**

382 This work was supported by the American Geophysical Union. This paper was written
383 using citation data obtained on (13 September 2019), from Digital Science's Dimensions
384 platform, available at <https://app.dimensions.ai>. Download and publication data was retrieved
385 from Wiley Journal Insights on 13 September 2019. Submission data was retrieved from AGU's
386 manuscript submission system. All of the data used in this analysis can be accessed via
387 University of Michigan's Deep Blue repository, <https://deepblue.lib.umich.edu/data/>.

388 *Submission note:* a Deep Blue DOI will be minted upon acceptance of the paper. For
389 submission, data files are zipped together and available as supporting information.

390

391 **References**

392 Clark, M. P., and B. Hanson, R. (2017), The citation impact of hydrology journals, *Water*
393 *Resources Research*, 53, 4533–4541, doi:[10.1002/2017WR021125](https://doi.org/10.1002/2017WR021125).

394 Digital Science. (2018-) Dimensions [Software] available from <https://app.dimensions.ai>.
395 Accessed on (13 September 2019), under license agreement.

396 Hendry, A. P., & Peichel, C. L. (2016). Are conference special issues worthwhile? *Evolutionary*
397 *Ecology Research*, 17(2), 141-155.

398 Hook, D.W., Porter, S.J., and Herzog, C. (2018), Dimensions: Building Context for Search and
399 Evaluation, *Frontiers in Research Metrics and Analytics*. 23 August 2018,
400 <https://doi.org/10.3389/frma.2018.00023>

- 401 Moldwin, M. B., and M. W. Liemohn (2018), High impact papers in space physics: Examination
402 of gender, country and paper characteristics, *Journal of Geophysical Research Space*
403 *Physics*, *123*, 2557–2565, doi: 10.1002/2018JA025291.
- 404 Olk, P., & Griffith, T. L. (2004). Creating and disseminating knowledge among organizational
405 scholars: The role of special issues. *Organizational Science*, *15*(1), 120-129.
406 <http://doi.org/10.1287/orsc.1030.0055>