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Astronomy & Astrophysics

Editorial

The 2007 A&A author survey: answers and follow-up

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ABSTRACT

Aims. We conducted an extensive survey of *Astronomy & Astrophysics* authors in April 2007 with the objective of assessing the perception of the Journal in the community. We discuss the results of this poll and present some changes in the editing and publishing of A&A that have been adopted by the Editors and A&A Board of Directors as a consequence.
Methods. The questions asked ranged from the degree to which authors are satisfied with the performance of the scientific Editors to attitudes concerning the trend towards online publishing of important sections of the journal. Other questions concerned structured abstracts and the role of language editing.
Results. There were 1524 complete answers which we estimate to be roughly 20% of the community of A&A authors. In general the respondents were satisfied with the work of the Editors (82% satisfaction) and with the performance of the Editors in chief. About 80% of respondents believe that the peer-review process is either very useful or useful in improving the quality of articles, and only 1.4% find it useless. More than 90% are satisfied with the work of the language Editors. A more controversial theme is that of the structured abstract format which was introduced on a trial basis two years ago, where 59% favor the traditional unstructured format but a substantial minority (30%) prefers the new style. Concerning A&A online sections, 86% of our respondents are in favor of the policy of publishing two sections of the journal online, but paradoxically, 47% of the respondents think that there should be no additional online sections, while 31% would welcome a fully electronic Journal.

Key words. Editorials

1. Introduction

In April 2007, *Astronomy & Astrophysics* conducted an extensive survey of the community. Our objective was to find out what our authors think of the A&A editorial process and to collect opinions about recent changes at the Journal, most notably the language editing, the online-only sections, the abstract formats, and our outreach efforts.

This online survey was prepared by the Editors using a web-based commercial software that turned out to be less flexible than advertised, but the mailing and reporting functions provided by the survey company worked flawlessly. The survey was taken on invitation only to an initial list of some 8000 colleagues who were registered as authors in our database. As it turned out, this list erroneously included a number of US colleagues who had refereed for A&A in the past but had only limited experience or none at all as authors of our Journal. Most of those US colleagues who took the survey told us about this, and some of them provided very valuable input on the way A&A is seen on the other side of the Atlantic. The survey was truly anonymous, which means in particular that we did not record the IP addresses of respondents (as is routinely done by most online surveys), with multiple answers avoided by the use of cookies. We nevertheless offered the possibility for respondents to identify themselves after they completed the survey.

The survey questionnaire comprised 42 questions, including 8 open-ended questions. The first survey question was used to screen out those respondents who had not published in A&A since January 2004, which marked the change in the editorial structure of the Journal. We recorded 1928 answers to the survey, 174 (9%) of which turned out to be from authors who had not published in A&A since January 2004, while 230 were incomplete duplicates. We thus report here on 1524 complete answers to the survey by actual A&A authors. This represents a sizable and statistically significant fraction, that we estimate to approximately 20% of the community of A&A authors. Among these respondents, 442 (29%) identified themselves.

Although in the survey we addressed the ability of Editors to pick out competent referees for the manuscripts they handle, we did not ask any direct question concerning the quality of refereeing, which surprised some of the respondents. This choice was motivated by the fact that we routinely give the opportunity to A&A authors to provide us with feedback about the quality of the peer-review process by filling out a specific questionnaire after the acceptance of their papers; this feedback is discussed in the yearly Editors' reports, and the next one will present a summary of these opinions over the last six years. We thus focused the present questionnaire on the editorial process itself, for which little feedback was available so far.

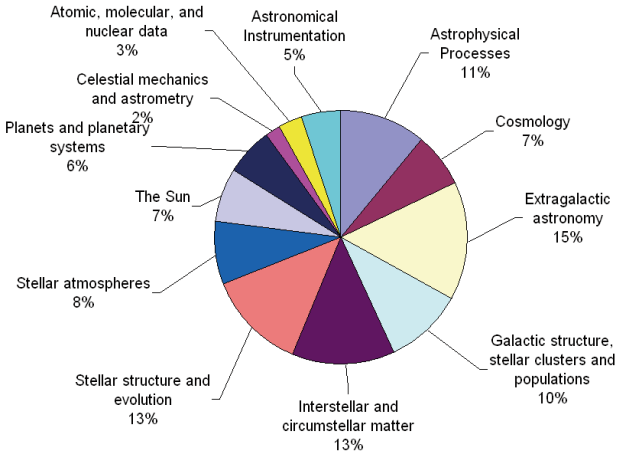
In the following, we first present the profiles of the respondents. We then discuss the answers to the various questions concerning the editorial system and language editing, and go on to discuss answers regarding the various new features that were implemented in A&A in recent years. Following this survey, the Editors and Board of Directors decided on a few changes in the A&A publishing process that are discussed in Sect. 13.

2. Respondent profile

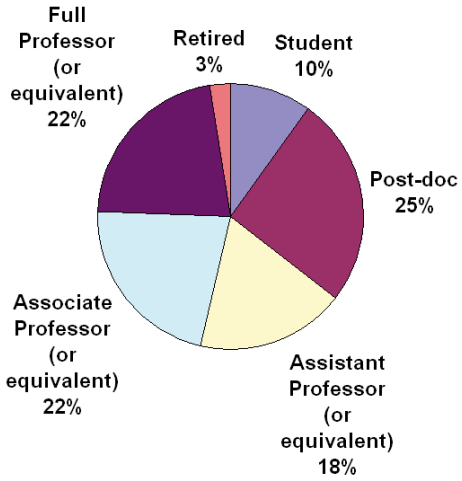
The first six questions were aimed at defining the respondent profiles and their publishing habits. The text of the questions and the respective replies (in percentage) are given below.

2.1. Questions on respondents

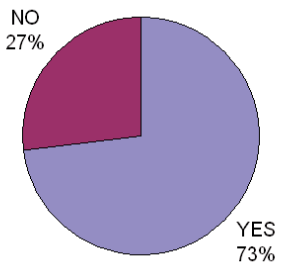
2.1.1. What is (are) your main research area(s)?



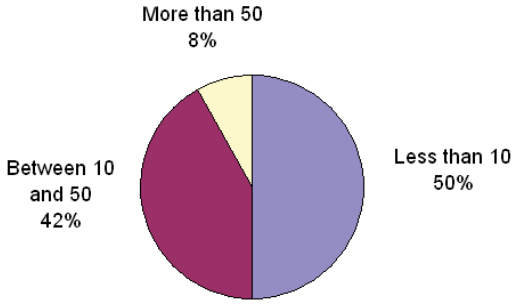
2.1.2. What is your professional status?



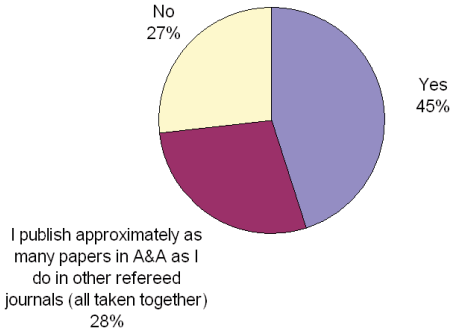
2.1.3. Our sponsors are: Argentina, Austria, Belgium, Brazil, Chile, Croatia, Czech Republic, Denmark, ESO, Estonia, Finland, France, Germany, Greece, Hungary, Italy, The Netherlands, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland. Do you work in a country sponsoring A&A?



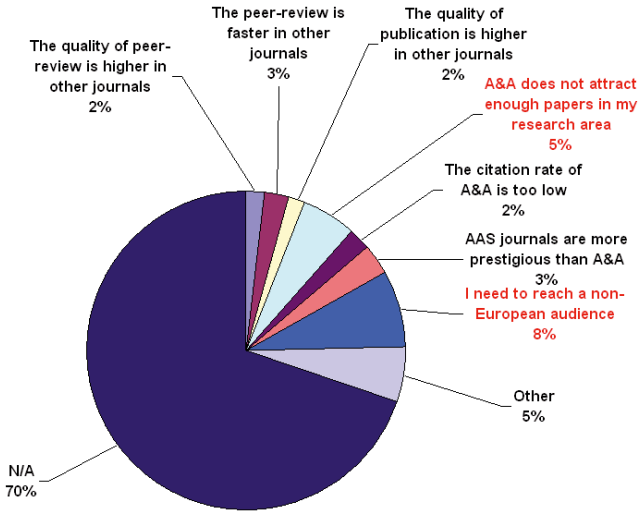
2.1.4. How many papers did you publish in A&A since the beginning of your career in astronomy?



2.1.5. Are your refereed publications published mainly in A&A?



2.1.6. If you work in a country sponsoring A&A but publish less in A&A than in other refereed journals, kindly tell us why. Otherwise, please choose “Not Applicable”



2.2. Comments on replies to questions on respondents

As it turned out, the cross-section of respondents is quite representative of the general population of A&A authors in terms of research areas, seniority, and membership in countries sponsoring A&A. Only 27% of the respondents do not publish mainly

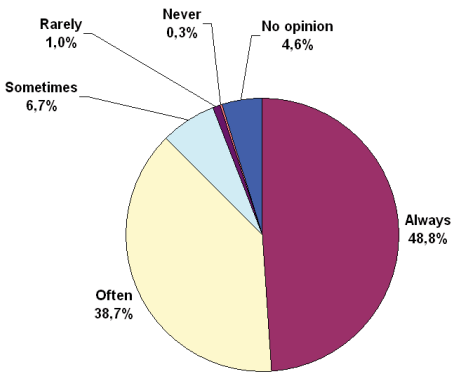
in A&A, which corresponds to the percentage of respondents working in countries that do not sponsor A&A. However, these two samples are not the same; 17% of authors working in countries sponsoring A&A (sponsoring authors hereafter) publish mainly outside of A&A, while 22% of authors working in countries that do not sponsor A&A (non-sponsoring authors hereafter) publish mainly in our Journal. We correlated the N/A replies (indicating faithfulness to A&A) to Question 2.1.6 with the various research areas of respondents (Question 2.1.1) and searched for significant ($>\sigma$) deviations from the average answers. We found that our most faithful authors work in stellar atmospheres, circumstellar matter, and atomic and molecular physics, while the least faithful are cosmologists and astrometry/celestial mechanics specialists. Asked about the reason they do not publish primarily in A&A, sponsoring authors cite as primary reasons the need to reach a non-European audience and that A&A does not attract enough papers in their research areas. The former reason is cited primarily by solar physicists, solar system scientists, and instrumentalists. The latter reason is given primarily by specialists in astrometry/celestial mechanics and cosmology. At the associate professor level is when sponsoring authors are least faithful to A&A, and they give as the primary reason the need to reach a non-European audience. None of the quality issues mentioned in survey Question 2.1.6 appears to play a notable role in the decision of our sponsoring authors to publish in A&A or not except among our senior colleagues (full professors or equivalent status) who cite, more often than less senior colleagues, a lower quality in the peer-review process and lack of prestige as reasons not to publish in A&A.

3. Opinions about scientific Editors

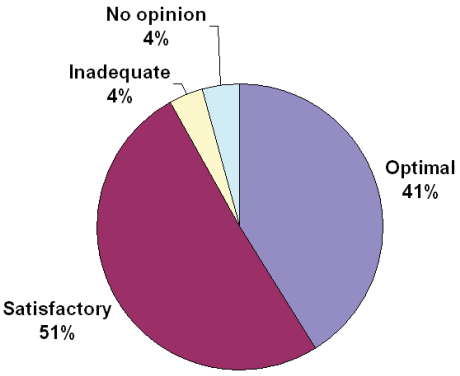
3.1. Questions on scientific Editors

The following questions deal with the general performance of A&A Editors (Associate Editors as well as Editor in Chief and Letters Editor in Chief, whenever they act as scientific Editors for your papers). In your reply, take into consideration all papers submitted to A&A over the past three years

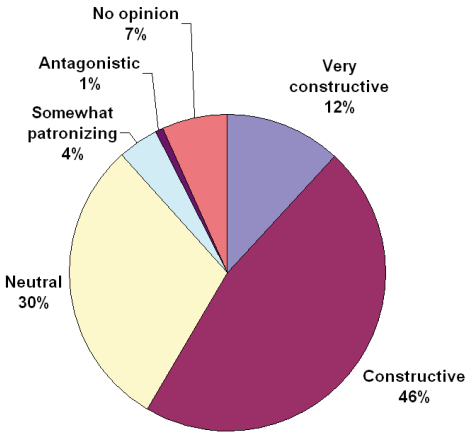
3.1.1. Did the Editors who handled your papers demonstrate an appropriate understanding of your research area (e.g., in their choice of referees)?



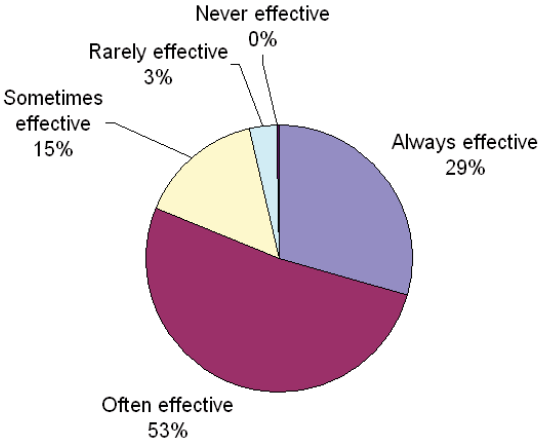
3.1.2. During the peer-review process, the Editor is your main interlocutor. The quality of your interaction with the Editor is therefore an important aspect of your relationship with the Journal. A&A Editors should be considerate and courteous and show a reasonable degree of availability in their relationship with you. How would you describe the quality of interaction with the Editors handling your papers?



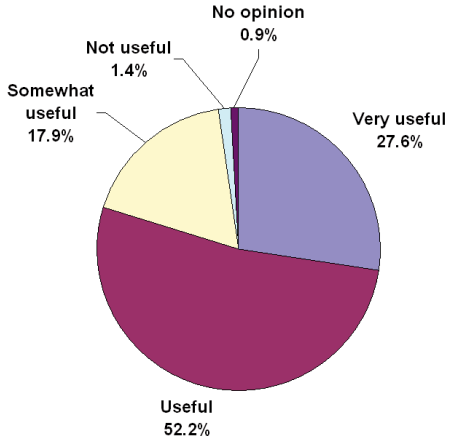
3.1.3. The attitude of the Editor towards authors is an equally important aspect of a successful peer-review experience. This is complicated by the fact that Editors are in charge of deciding what papers A&A publishes and must at times take decisions that authors do not like. A&A Editors should be careful to explain their decisions, even in the case of rejection, in a way that is not offensive to authors. How would you qualify the attitude of Editors toward you during the peer-review process?



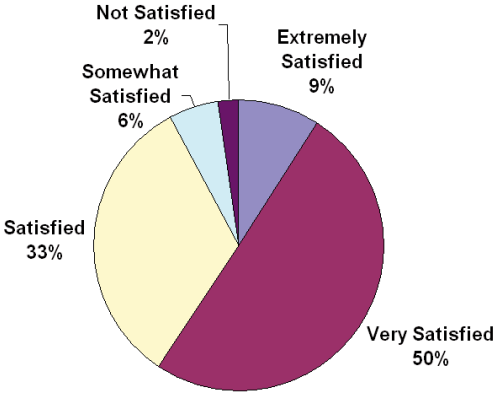
3.1.4. The role of Editors is not only to pass on referee reports to authors and revised versions to referees but also, and mainly, to make sure that the peer-review process is fair to all parties involved as well as reasonably speedy. In this respect, how would you qualify the effectiveness of A&A Editors during the peer-review process?



3.1.5. Please rate the general usefulness of the peer-review process in improving the articles that you submitted to A&A

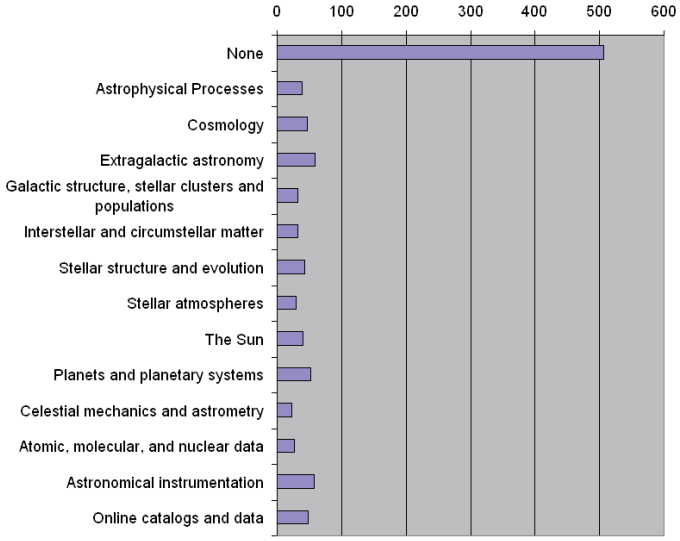


3.1.6. In general, how satisfied are you with the performance of A&A Editors?



3.1.7. Open-ended question (OEQ) – You may use the following box to explain your judgment of A&A Editors

3.1.8. In which broad research area(s), if any, should A&A have additional scientific Editor(s)?



3.2. Comments on replies to questions on scientific Editors

Since 87.5% of respondents tell us that scientific Editors always or often demonstrate an appropriate understanding of their research area, one can confidently conclude that the change in editorial structure implemented in 2004 has been a success. Significant deviations from the average answers were noted in astrometry/celestial mechanics, where less authors than average (in percentage) reported that Editors often understood their work while more authors than average reported that the Editors understood their work either always or sometimes. This contrasted opinion probably reflects that the current editorial team does not have extensive expertise in these specific research areas; individual Editors have varying degree of experience with dealing with these works, which might explain their varying abilities to identify suitable referees. We also note a deviation from the average answers in instrumental astronomy, but with an exactly opposite trend, which suggests that Editors may have some difficulty finding the most competent referees. The reason may lie in the fact that instrumentation is a research area where the number of very qualified referees for any given work is often small; if the most qualified referee is not available, it may be difficult to get as competent a reviewer.

The quality of interaction and the attitude of Editors are seen very positively, while the Editors are found to be always or often effective in conducting the peer-review process by 81% of the respondents. Answers to the open-ended question (OEQ) 3.1.7 provide reasons for this slightly lower rating of effectiveness (compared to the previous questions); authors often believe that the peer-review process could be faster. According to these replies, areas where delays should be shorter are (a) the time for finding a referee and (b) the time that a referee report or a revised version remains with the Editor before an action is taken. A number of authors would like the Editors to take a more active role in the peer-review process, while a few respondents complain that the Editors intervene too much. However, these individual comments should not hide that 92% of respondents are satisfied with the general performance of A&A Editors while

80% believe that the peer-review process is useful or very useful in improving their submitted articles and only 1.4% find the process useless. At a time when the usefulness of peer review is called in question in some circles, this result alone justifies the existence of peer-reviewed publications.

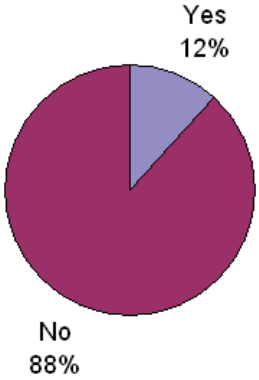
We searched again for significant deviations from the mean among the replies of respondents working in the various research specialization areas and found that the ability of the peer-review process to improve the papers was doubted by cosmologists, presumably because of the high level of competition in that field, while colleagues working in the fields of planetary science, astrometry/celestial mechanics, and atomic and molecular processes found it most useful. The percentage of authors who are either extremely satisfied or not satisfied at all with the performance of A&A Editors is larger among non-sponsoring authors, while there are more sponsoring authors than non-sponsoring ones that are very satisfied or satisfied with the A&A Editors. Assistant professors and retired colleagues have the most positive view of Editors, while associate and full professors are the most critical.

Asked whether A&A should have additional scientific Editors, 62% of respondents replied no. The remaining responses cover most of the research areas with no obvious peak indicating a real need. In order to decipher the meaning of these answers, we correlated the research areas of the 38% of respondents who thought that we needed additional Editors with their response to the question in point, and found that as a general rule authors who believe we should have more Editors want them in their own research area – presumably in the hope that it would result in faster peer review. The second noteworthy result that is uncovered by the cross-correlation is that 45% of the respondents working in planetary science and 24% of those working in astrometry/celestial mechanics believe that an additional Editor in planetary science is needed. No other significant trend appears in the data.

4. Opinions about Editors in Chief

4.1. Questions on Editors in Chief

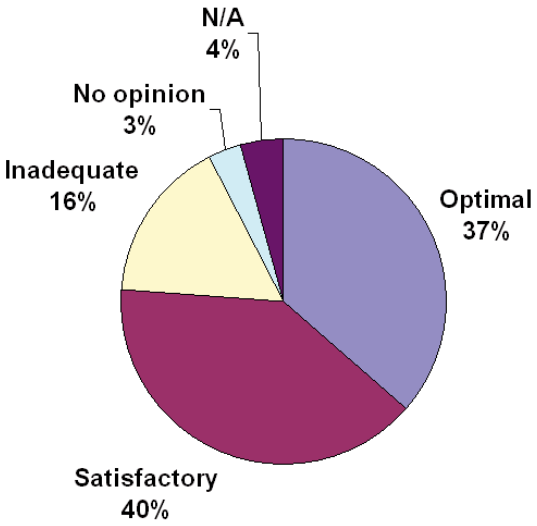
4.1.1. We are now asking you to judge the ability of the Editor in Chief and Letters Editor in Chief to resolve the conflicts that occasionally arise in the peer-review process in a fair and constructive way. Have you appealed to the Editor in Chief or Letters Editor in Chief during the past three years?



4.1.2. OEQ – What was (were) the reason(s) for your appeal(s)?

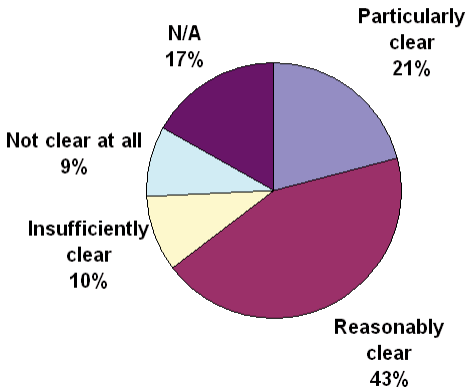
4.1.3. In case of conflict during the peer-review process, appealing to the Editor in Chief/Letter Editor in Chief is your last resort. The A&A Editor in Chief/Letters Editor in Chief should be courteously attentive to your difficulties and show a reasonable degree of availability in their relationship with you. How would you describe the quality of interaction with the Editor in Chief/Letters Editor in Chief when his intervention was needed?

The following percentages are based on the 189 positive replies to Question 4.1.1.



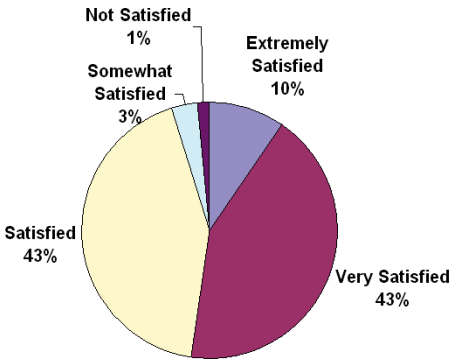
4.1.4. Decisions made by the Editor in Chief/Letters Editor in Chief in case of conflict are taken in the journal's best interests and do not necessarily please the plaintiffs. With this in mind, how would you describe the reasoning given by the Editor in Chief/Letters Editor in Chief in support of their decision(s) (even if you did not agree with the outcome of your appeal)?

The following percentages are based on the 189 positive replies to Question 4.1.1.



4.1.5. How satisfied are you with the general performance of the Editor in Chief/Letters Editor in Chief?

The following percentages are based on 971 answers.



4.1.6. OEQ – You may use the following box to explain your judgment of the A&A Editor in Chief/Letters Editor in Chief

4.2. Comments on replies to questions on Editors in Chief

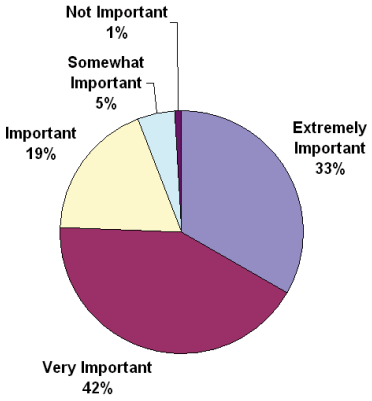
We asked authors who had experienced cases of conflicts to evaluate the performance of the Editor in Chief and Letters Editor in Chief in dealing with these difficulties. Most conflicts for which an arbitration of the Editor in Chief is requested fell in two classes: paper rejections that are challenged by authors and ethical issues, such as plagiarism and lack of proper referencing of relevant work. In some rare cases, working toward the solution of a conflict between authors of competing papers can involve Associate Editors, referees, and the Editor in Chief. Authors reported 189 cases of conflict since 2004, which amounts to 12% of all respondents. Among these, 77% considered that the quality of interaction with Editors in Chief in case of conflict was optimal or satisfactory and 64% said that the reasons given by the Editors in Chief to explain their decisions were clear. The question about how satisfied they were with the performance of Editors in Chief was answered by 971 colleagues, many of whom had not experienced any conflict during the peer-review process, and 96% expressed satisfaction. When restricting the sample to those respondents who did experience conflicts requesting arbitration by the Editor in Chief, the percentage of colleagues expressing satisfaction goes down to 82%. There are no significant differences between the replies of sponsoring and non-sponsoring authors to the questions regarding Editors in Chief. When considering replies according to seniority, we find trends that are similar to those found for satisfaction toward scientific Editors, although our more senior colleagues (associate and full professors) appear somewhat more approving of the Editors' in Chief actions. Many replies to OEQ 4.1.6 address details of individual problem cases.

5. Language editing

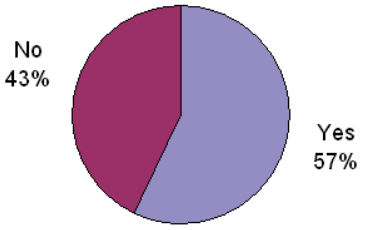
5.1. Questions on English-language editing

Now come a few questions on English-language editing, which was introduced at A&A a few years ago. While answering these questions, please keep in mind that most papers in A&A have been written by non-native English speakers, and they will also be read by many non-native English speakers, so seeking clarity is the main goal when the A&A language Editors make suggestions for changes. The language Editors thus try to make the expression clearer, to iron out ambiguities, and to suggest changes to help the author make the point more effectively

5.1.1. How would you qualify the importance of English-language editing for the overall perceived quality of A&A articles?

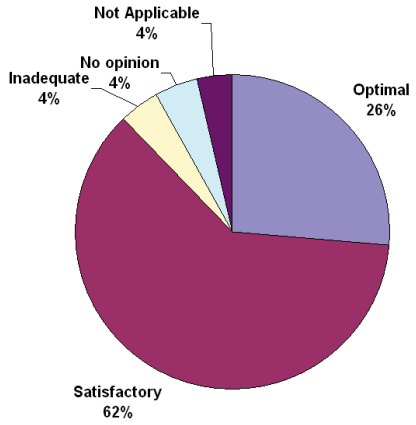


5.1.2. Have some of your papers been corrected by the English-language Editors over the past three years?



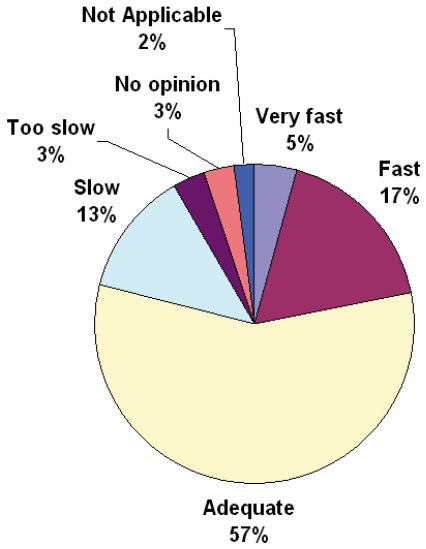
5.1.3. Interacting directly with English-language Editors can be useful to avoid misunderstandings and resolve complex language issues. Taking into account that A&A English-language Editors are not necessarily always available because they have other professional activities, how would you describe the quality of interaction with the English-language Editors handling your papers?

The following percentages are based on the 878 positive replies to Question 5.1.2.



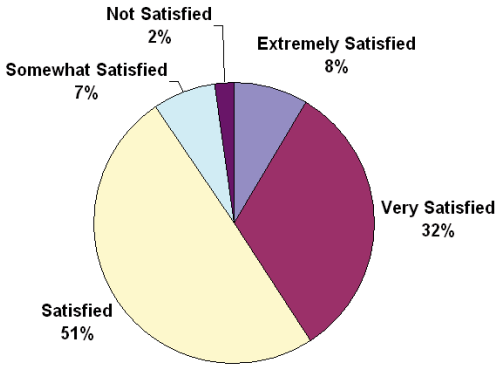
5.1.4. Taking into consideration the careful work needed to improve the English of the manuscripts, how would you qualify the average response time of the English language Editors for your papers (i.e., the time needed to return a corrected manuscript to you once the English language Editors has the needed referee format file in hand)? N.B. The median English language Editor response time is 14 days

The following percentages are based on the 878 positive replies to Question 5.1.2.



5.1.5. In general, how satisfied are you with the work of English-language Editors?

The following percentages are based on the 977 replies.



5.1.6. OEQ – You may use the following box to explain your judgment of A&A English-language Editors

5.2. Comments on replies to questions on language editing

It may be useful to recall here that we receive papers from authors working in more than 60 countries and that most of them are not native English speakers. English-language editing was first introduced at A&A in 2001 with one part-time language Editor correcting those papers that needed the corrections most. From this first experience it quickly became obvious that, if our goal was to work toward a more or less homogeneous quality of the English language, we needed to hire a team of language Editors for correcting a large fraction of accepted papers if not all. We have been working toward this goal over the past years and we currently have 4 language Editors on 2.5 full-time positions, but this is not yet sufficient for checking the English in all articles. Our language Editors have much experience in science writing and editing, but currently only one has an astrophysical background.

We are encouraged in our efforts to promote English-language editing by the overwhelmingly positive response to Question 5.1.1. One-third of the respondents told us that English-language editing was extremely important for the overall perceived quality of their works while 61% answered that it was very important or important, and only 1% answered that it was unimportant. Full professors are the ones who believe that language editing is most important, while retired colleagues are the ones to find it least important. There is no particular trend when one correlates answers to this question to the specialty areas of respondents, except that colleagues working in astrometry/celestial mechanics seem to find language editing a little less important than average, while colleagues working in atomic and molecular physics seem to find it a little more important than average. Each of these communities, however, represents only about 2% of the total number of respondents.

Correlating now the responses to Question 5.1.1 with responses to Question 2.1.3, one finds that non-sponsoring authors give somewhat more importance to English language editing than sponsoring authors do. Individual answers to OEQ 5.1.6 indicate that this is probably for two reasons. On one hand, native English-speaking, non-sponsoring respondents tell us that language editing dramatically improves the quality of articles published in A&A, while on the other, non-native English-speaking, non-sponsoring respondents definitely appreciate the improvements in clarity brought about by the corrections. The English language had been corrected for the papers of 57% of the respondents, and 81% of them are sponsoring authors. The quality of interaction with English-language Editors was deemed optimal or satisfactory by 88% of authors, while 16% of respondents find the return time for corrected manuscripts slow or too slow. However, 91% of respondents are satisfied with the overall performance of language Editors.

About 130 people provided individual answers to OEQ 5.1.6, of which about 60% were to praise the Editors' efforts generally or specifically. Positive feedback emphasized in particular that language editing helped authors make their points more effectively and also helped close the gap between native and non-native English speakers in clarity and style. Among the 40% that were not positive, only two respondents were openly hostile to the process, one of them saying that it *"feels humiliating"*. The main reasons given for dissatisfaction were (a) the large number of minor corrections, (b) the lack of astronomical background of the language Editors that sometimes led to misunderstanding or to suggested changes that did not correspond to the intended

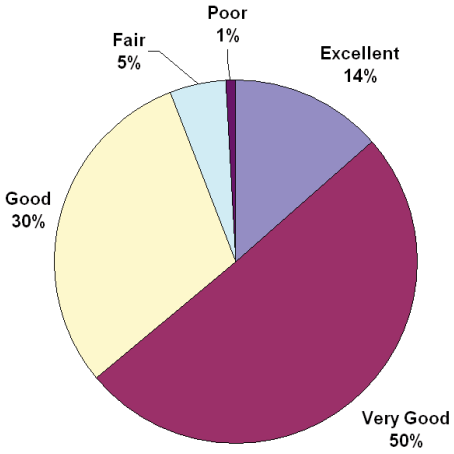
meaning, and (c) the time needed to complete the language editing loop from Editor to author (who is responsible for implementing changes) and possibly back to the Editor if the author had questions. A few authors mentioned a lack of consistency in both the choice of papers being language-edited and in the language corrections suggested by the various Editors. Several colleagues encouraged us to generalize language editing, while one person suggested that at least all abstracts should go through this step.

6. Overall opinions on the editorial system

6.1. Summary questions on editorial system

In the next question you will be asked to summarize your assessment of the A&A editorial system

6.1.1. How do you rate the overall quality of the A&A editorial svstem?



6.1.2. OEQ – In your opinion what changes, if any, are needed to further improve the A&A editorial system?

6.2. Comments on replies to the summary questions

A majority (64%) of the respondents believe that the A&A editorial system quality is very good or excellent, and another 30% find it good. This is encouraging to the Editors, but there is obviously room for improvement. Colleagues who appreciate the editorial system most work in solar physics and in atomic and molecular physics. Those who appreciate it least are cosmologists and, to a lesser degree, specialists in Galactic structure and stellar clusters. Correlating the answers to this question to the seniority level of respondents, one only finds significant deviations from the average answers among full professors and retired colleagues. Both groups grade the quality of the editorial process as excellent more often than other seniority groups. Full professors, however, also find the quality to be only fair more often than other groups. It thus appears that full professors (who represent 22% of the panel) have the most contrasted view of the A&A editorial system. Since senior colleagues often decisively influence their younger collaborators as far as publishing choices are concerned, our efforts to improve the Journal should clearly take their remarks into account. We thus gave special consideration to the 51 individual answers of senior colleagues to OEQ 6.1.2. Recurring themes were, first, the need for a better refereeing/editing process. About half of the comments focused on peer-review quality issues. Some examples are *"A more thorough analysis of papers by the referees is needed", "You must encourage reviewers to be more critical of the quality of the papers", "Publishing results in A&A should be more challenging", "I have the feeling that A&A referees are more complacent than those of other journals", "Too many average papers are published"*. Some of the respondents even noted that these comments were not specific to A&A, but were valid for all journals. The second most cited issue was the speed of the peer-review process; 10 respondents commented that it was too slow. Finally, 10 respondents commented that the current editorial system was working fine and did not need any change at this point. The remaining individual comments were single remarks on other issues, such as language editing and abstracts. Individual answers to OEQ 6.1.2 by less senior colleagues were often concerned with the speed of the peer-review process, while some suggested systematically using two referees for all papers, and a few advocated double-blind refereeing. Several respondents suggested more communication between Editors and authors especially in case of delays. We also noted some misconceptions in the responses, for example the belief that we use exclusively European referees. This is incorrect, as we request reports from referees all over the world and about one out of three referees is from North America.

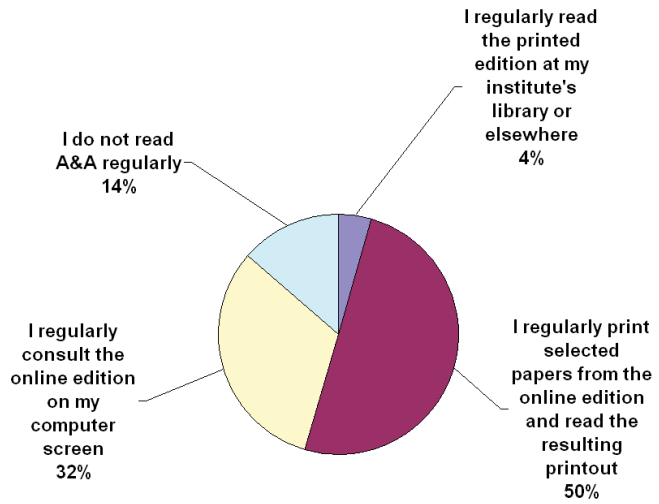
Obviously, a contradiction exists between respondents who want a more thorough peer-review process and higher quality papers in A&A and those who put priority on speed, since a higher-quality peer-review will most likely last longer than a quick refereeing job. The quest for a higher journal quality appears more prevalent in the sample of full professors than among younger colleagues. We come back to these interesting issues in Sect. 13.

7. Reading habits of respondents

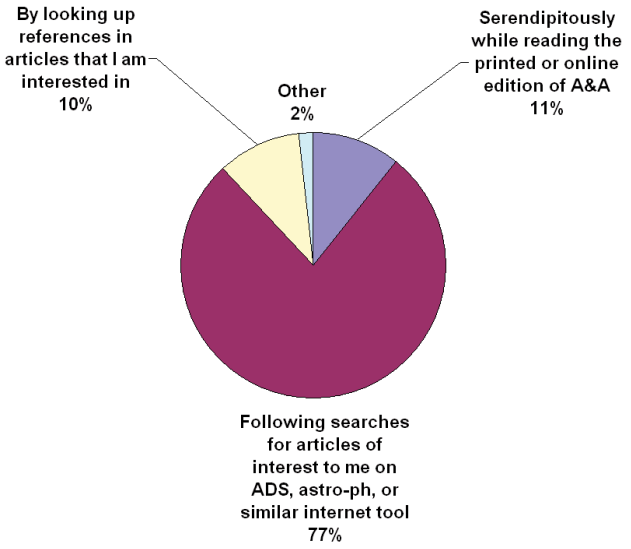
7.1. Questions on A&A reading habits

We now kindly request your opinion and advice on some recent changes that were introduced at the Journal. As for most other astronomy journals, part of A&A is now only published online. The main reasons for this evolution are the speed of publication and the reduced costs, which help us keep the subscription rate at a reasonable level. In the following, we are asking your opinion of this evolution, and start with three questions about your reading habits

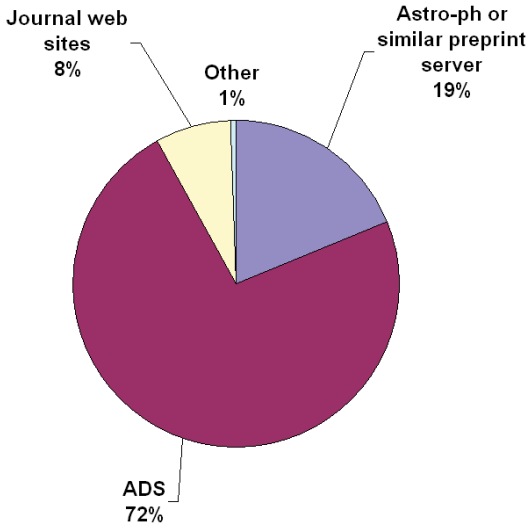
7.1.1. How do you usually read A&A?



7.1.2. How do you most frequently choose the A&A articles that you read?



7.1.3. From which publication provider do you most frequently download the papers you read?



7.2. Comments on replies to questions on reading habits

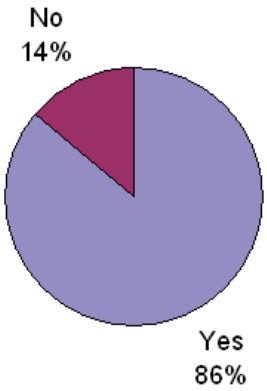
The respondents confirm that the printed version of A&A is now mainly of archival value, as only 4% read it regularly. The reference edition of A&A is clearly the online edition. The replies also confirm the preeminence of ADS as a search and download engine in the community of astronomers and the increasing importance of astro-ph as a source of information. Only 8% of our respondents use the Journal web site to download their reading matter. Since this portal is the main way for the Editors, the A&A Board of Directors, and the Publisher to communicate with the authors and readers of A&A, we encourage the readers of this editorial to visit the A&A web site (http://www.aanda.org/) regularly for all questions concerning editorial policies, style and language issues, and more generally to learn about the latest news about the Journal.

8. Opinions on online sections

8.1. Questions on online sections

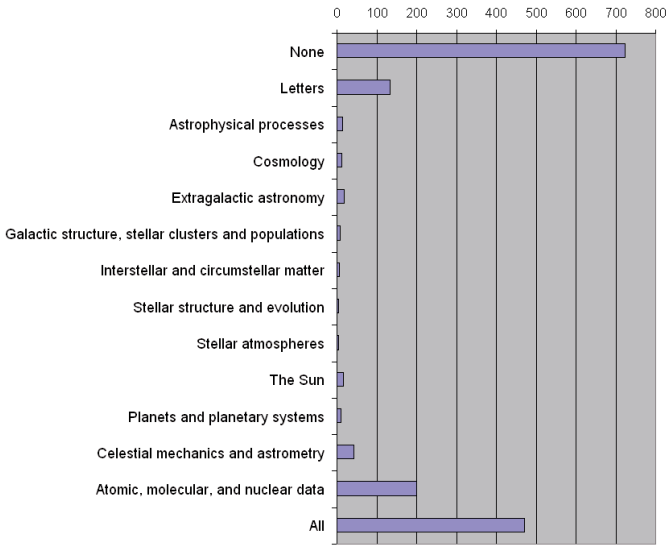
Now to the online edition of A&A

8.1.1. As you probably know from a recent editorial (A&A, 426, E1), we already publish Sects. 13 (Astronomical instrumentation) and 14 (Online catalogs and data) only online. Do you agree with this policy?



8.1.2. OEQ – If you would like to share your thoughts about the online sections with us, kindly use the following box

8.1.3. What other A&A Section(s), if any, should we also only publish online?



8.2. Comments on replies to questions on online sections

There is an overwhelming agreement of the respondents with our current policy of publishing two sections of the journal online only. Individual answers to OEQ 8.1.2 bring some interesting light on this issue. A number of colleagues working in astronomical instrumentation regret that Sect. 13 is singled out as the only online section besides the one for data and catalogs, which is in the eyes of many respondents a natural candidate for online-only publication. Nevertheless, a cross-correlation of answers to Questions 2.1.1 and 8.1.1 indicates that 71% of instrumentalists agree with the decision to publish Sect. 13 online only.

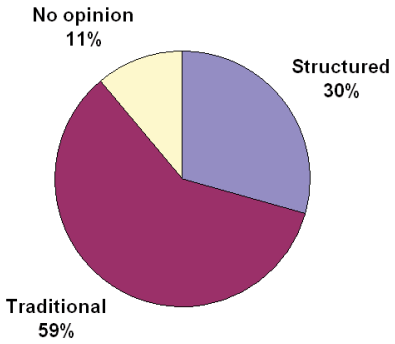
Given that only 4% of the community reads the printed edition of A&A, it is quite surprising that only 31% of respondents indicate that the full Journal should be electronic-only. Moreover, 47% of respondents tell us that there should be no additional online sections besides the ones that already exist, 13% suggest that Sect. 12 should also be online, and 9% propose to publish the Letters online only. Research specialty or seniority do not play a significant role in these opinions, with the two exceptions of instrumentalists and retired colleagues who appear more favorable than other respondents to an online-only Journal.

9. Opinions on abstract formats

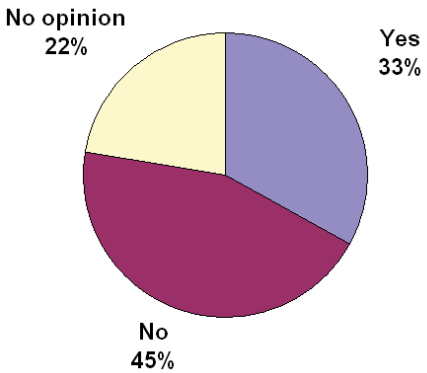
9.1. Questions on abstract formats

One year after the introduction of structured abstracts, we feel that the quality of A&A abstracts has generally improved in their organization and in their information content. The Editors are aware, however, that it is a somewhat controversial issue so are asking your feedback on this initiative

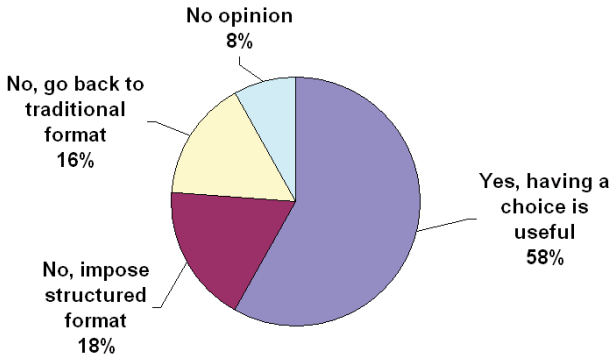
9.1.1. Which abstract form do you prefer for your own papers?



9.1.2. Would you prefer the structured format if the paragraph headings (“Aims”, “Methods”, etc.) were omitted while the underlying structure was retained?



9.1.3. Should we keep giving authors the choice of using either the traditional or structured format, as we do now?



9.1.4. OEQ – You may use the following box to explain your judgment of abstract formats

9.2. Comments on replies to questions on abstract format

The introduction of structured abstract in 2005 did not convince two out of three respondents, who prefer the traditional form. Structured abstracts are somewhat more accepted among sponsoring authors (35% prefer them) than among non-sponsoring authors (29% prefer them). Interestingly, 46% of the responding students, as well as 55% of retired colleagues prefer structured abstracts. On the other hand, only 30% of associate professor and full professor-level respondents prefer the structured form. Solar physicists are the group most favorable to the structured format (47%), followed by planetary scientists and astrometrists (39%). Cosmologists and extragalactic astronomers are attracted least to the structured format (27%). The possible alternative format of a structured abstract without headings was considered preferable by only one out of three respondents. However, a majority of respondents feel that having a choice of abstract format is useful, and only 16% would prefer to go back to the traditional format.

There were more than 250 answers to the open-ended Question 9.1.4, an indication that the format abstract is a hotly debated issue. Indeed, these answers spanned the whole spectrum of possible opinions, from extremely negative (e.g., *“I hate structured abstracts”*) to extremely positive (e.g., *“With the structured abstracts, the abstracts have improved 100-fold”*). Positive and negative individual answers are in an approximate 1 to 2 ratio. Colleagues who like the structure often explained why they do in some detail, e.g., *“A remarkable number of articles manage to get published with traditional abstracts that don’t even mention the results of the work. Structured abstracts largely avoid this problem”* or *“In the structured form abstracts are clearer and more relevant information is necessarily included, which helps both authors and readers”*.

Some recurrent themes emerged in the negative individual comments. Motivations for rejecting the structured form can be stylistic, e.g., *“It gives the abstract a school science project feel”* or *“Structured abstracts break down the flow of the text and I do not favor them from an aesthetic point of view”* or a matter of principle, because the structure *“limits academic freedom”*. Structured abstracts are seen as too rigid by many respondents, while others noted that some structured abstracts remain uninformative and badly written.

A particular problem is that some authors tend to write incomplete sentences under the *Aims* and *Methods* headings. This

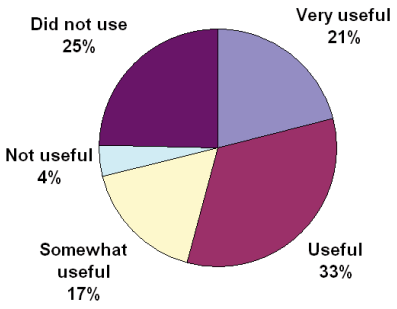
is of course incorrect style and the language Editors have been instructed to complete these sentences. However, some abstracts with incomplete sentences managed to get through the editorial process unnoticed and were published, which was lamented by several attentive readers of the Journal, as well as by the Editors. A number of colleagues mentioned that because astronomical papers are so diverse, some abstracts do not fit well in the structured format. Indeed, this is one reason why the structured abstract format was not made mandatory. However, many respondents apparently did not know that the use of structured abstracts was not an obligation. We have now made this choice more visible in the instructions for authors. Several respondents suggested a more active involvement by the scientific Editors in the rewriting of abstracts as an alternative to structured abstracts. These colleagues are obviously unaware of the amount of time (typically 2 h daily) that associate Editors spend working for the Journal even without correcting the abstracts. While several respondents urged us to be consistent and even to *"dare impose structured abstracts"*, a vast majority is in favor of keeping a choice, which is seen as useful in many cases.

10. Opinions on outreach initiatives

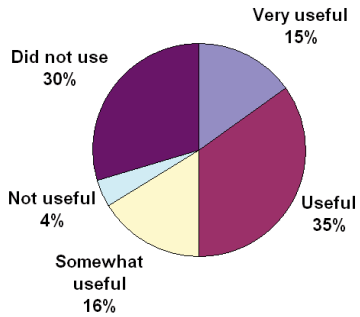
10.1. Questions on outreach

Finally, three questions on some services we currently provide.

10.1.1. How do you rate the usefulness of press releases in attracting the attention of the general public to some outstanding science published in A&A? N.B. Recent press releases can be found on the A&A web site `www.aanda.org`



10.1.2. How do you rate the usefulness of the newly introduced highlights, which are meant to attract the attention of A&A readers to some works that are of broad interest to the astronomical community? N.B. Recent highlights can be found on the A&A web site `www.aanda.org`



10.2. Comments on replies to questions on outreach

About half of the respondents answered that the press releases and the recently introduced highlights are useful while 25–30% did not use them or do not know about them. Some respondents commented that these services did not have enough visibility.

Highlighted papers are chosen by the scientific Editors because they find them interesting, not because they find them "better" than other papers. These were introduced only a few months before the survey and remained relatively unknown at the time of the survey because they were mainly posted on the A&A web site, which is visited regularly only by a small percentage of readers, as answers to Question 7.1.3 showed. A link to the Highlight page is now included in the table of contents (TOC) email. A few respondents thought that the contents of A&A is not huge enough to make Highlights necessary, and some were concerned that they introduced an arbitrary selection among A&A papers.

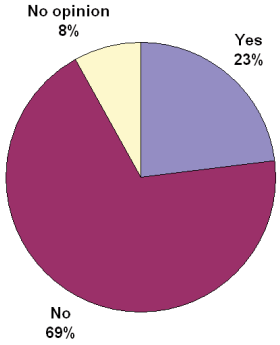
Press releases, which are often done in collaboration with large institutions such as ESO, are quite useful to promote not only some articles that appeal to a wide public, but also to make the name A&A known in a much wider circle than its usual community of readers. Several respondents were concerned that authors would tend to promote themselves through press releases. We therefore stress here that press releases are proposed by the Editors to authors, and not the opposite.

11. Opinions on usefulness of offprints

11.1. Question on offprints

The final question is about the offprints, which are costly.

11.1.1. Would you object if we stopped sending you free offprints of your papers?



11.2. Comments on replies concerning offprints

Less than one out of four A&A authors would object if we stopped sending offprints. A number of respondents used the final OEQ 12.1.1 to point out that the final pdf file of the published paper could advantageously replace the free offprints, while others mentioned that 10 offprints should be sufficient in most cases.

12. Final authors' comments

12.1. Final open question

12.1.1. OEQ – If you would like to share any additional thoughts about the Journal with us, kindly use the following box

12.2. Comments on answers to the final open question

Many replies to this question concerned previous survey topics and were addressed in the discussion of these topics. Several aspects of the A&A editorial policy were addressed by respondents to this final question. A number of respondents also compared A&A to other astronomy journals, while others sent words of encouragement to the Editors.

We noted among the individual comments a few misconceptions about the A&A policies that we would like to correct here by asserting very clearly that A&A is a journal committed to publishing works originating from the entire world in all areas of astronomy, and that we strongly believe that the Journal should remain faithful to its stated objectives. The misconceptions in point are as follows.

Editors were accused by a few authors of trying to increase the Journal's impact factor at the detriment of high quality work by refusing papers in areas that do not attract many citations. This is, of course, an incorrect belief. What Editors are trying to do is to increase the quality of A&A by making sure that the scientific content of submitted articles is optimized. We never have screened submitted papers on the belief that they would not be cited. The fact is that it is often impossible to predict how a paper will do in terms of citations (except for catalogs and similar papers, which by their nature often attract many citations).

A related misapprehension is that we do not welcome data papers anymore. This opinion is obviously erroneous; we should recall here that Sect. 14 of A&A, entitled "Catalogs and data", is indeed dedicated to the publication of data.

Another mistaken belief was expressed by some respondents who believe that we do not treat submissions from non-sponsoring authors in the same way as submissions from sponsoring authors. More specifically, a few non-sponsoring authors noted that Editors are harsh and quick to reject their papers, whereas similar papers from sponsoring authors would be accepted. This opinion does not correspond to the reality, and we emphasize here that A&A sponsorship is a criterion when it comes to evaluating papers. *The only difference between sponsoring and non-sponsoring authors is that the latter are requested to pay page charges; the peer-review process is of course exactly the same for all articles.*

A small subset of comments was concerned with the cost of the institutional subscription to A&A, which is perceived as too high for institutes in developing countries. A few authors noted that A&A was demanding an awful lot from their authors (obligatory LaTeX files, space-saving page formatting, structured abstracts, etc.) while giving less (fewer printed pages since we publish online material, less offprints, etc.) than before. Legitimately, these authors would like to see the subscription price go down in return for their efforts. We point out that our demands in terms of paper layout and online material have allowed A&A to keep the number of published pages constant over the last several years in spite of the increase in submitted papers. As a consequence, the A&A subscription price could be kept constant (except for inflation adjustments) since 2001. We note also that the publisher now provides *full open access to part of A&A, more specifically to the Letters and the online sections.*

Among the suggestions made by respondents for improving the Journal, some quite technical but also very helpful, we would like to mention *verbatim* a few suggestions that we found particularly stimulating.

COMMENT: *To stay at the forefront of journals in astronomy and astrophysics, I believe that A&A should continue the current path of innovating its contents. Some serious thought should be given to new possibilities offered by on-line publishing. In particular, A&A should perhaps require that authors submit machine-readable data for all figures to the journal or an institute affiliated with A&A (e.g. CDS). What I would like to see in the future is that when I see an image in the on-line edition of A&A, I can click on it, get a fits or jpeg file and play around with the cuts, so I can see every detail that I may be interested in. Likewise, if I see a graph in A&A, I would like to be able to click on it, get the data, and plot it in any way I would find useful. [...]*

We agree that we have only scratched the surface when it comes to the new possibilities offered by the electronic medium, and we are grateful for being urged to go further in that direction. As a first step toward interactive graphs, we are currently implementing the DEXTER[1] tool for extracting data from the graphs contained in the A&A online articles This is not exactly what the above suggestion is about but adding more complex interactive features is a more difficult task because it requires storing the data sets for each figure. While possible in principle, this is difficult in practice given the volume of articles we deal with. However, interactive imaging of data can be implemented in steps, starting for example with the papers of Sect. 14 for online catalogs and data, and we can work toward this goal with our publisher.

COMMENT: *I think that with modern communication technology, bigger steps could be taken to improve the efficiency of a scientific Journal (i.e. to help organizing and sharing knowledge and research work). In particular, I can think of a blog-like or wiki-like section where articles could be discussed directly on the Journal web-site by whoever has something to say about the subject. That would also allow the whole community to improve a given article, and in some cases to correct obvious mistakes. It is inevitable that referees sometimes let mistakes go uncorrected in the papers, while they would be very easy to correct afterwards. Another idea would be to allow the community to "judge" the papers (after acceptation and publication), by some sort of vote or ranking for instance. Some papers are much more read and appreciated than cited. [...]*

Interestingly, our publisher EDP Sciences proposed a few years ago to open a blog-like discussion forum on the A&A web site. The reasoning behind this proposal was very much the same as expressed in this comment. The idea was discussed by the A&A Board of Directors and dismissed because it was not seen as a relevant task for an academic journal. The suggestions made by this author will nevertheless provide the Editors with an incentive for discussing another possible option that has a similar aim, namely the publication of Comments.

COMMENT: *Editors, in the course of their work, might identify a small subset of papers (maybe 5% of the current flow) worth printing for a much wider readership (research in physics at large). Then they would have to negotiate with authors appropriate rewriting tuned to nonspecialized readership. This would create a very different journal.*

This is an intriguing suggestion. In a way, the current Highlights are a first step in this direction since the Editors try to

[1] DEXTER was developed by the SAO/NASA Astrophysics Data System.

select papers that have appeal to astronomers outside the specific field of research of the highlighted paper. Selecting papers that have appeal to an even wider community is of course possible, even though the rewriting might prove difficult. In any case, this suggestion is worth considering carefully, and we are very grateful to all the respondents who took the time to share their ideas with us. As explained in the following section, we have started implementing a number of them.

13. Conclusions and follow-up

Survey results were discussed during the annual A&A Board of Directors meeting, which took place on May 5, 2007 in Vienna, and during the recent editorial meeting that took place in Freiburg im Breisgau on October 5, 2007. Our main conclusions are summarized here, and we also report on some decisions taken as a result of the opinions expressed in the survey.

It is obvious from the answers that the community appreciates what we are doing to improve A&A but requests even more from the editorial board. The main expectations we identified are a more professional peer-review process, more speed in handling the manuscripts, and more communication with the Editors. We also noted a strong demand for a more uniform treatment of articles, e.g., for paper admissibility, language editing, online material, and online sections. We address these issues in turn.

13.1. Quality of the peer-review process

The request for improved peer review concerns mainly two areas. Some senior colleagues would welcome a more demanding refereeing work, while colleagues of all seniority levels demand more involvement of the Editors in the peer-review process.

Concerning the first point, we note that Editors focus their efforts on making sure that the peer-review process improves the submitted works. Both the feedback that we get from authors at acceptance time and the answers to survey Question 3.1.5 confirm that the refereeing improves a vast majority of A&A papers. The peer-review process takes much time from both the Editor and the referee and we are gratified that a large fraction of authors (80%) note a significant improvement in their papers. Demanding even more from Editors and referees is of course possible, but one has to question whether this is also justified given the answers to this survey.

According to some opinions, Editors are sometimes seen as a mere "mailbox" between authors and referees. This is of course an incorrect perception, since the Editors read all papers to find competent referees. They also critically assess the reports and revisions even though they may not provide authors with comments on the papers' contents. Some Editors give their own appreciation of the works when they feel such comments can be useful, while others are less actively involved in the evaluation process. During the last editorial meeting, the A&A scientific Editors were encouraged to take a more active role toward authors and referees while keeping the strict neutrality needed for ensuring a fair and smooth peer review.

Since the beginning of 2006, we have changed to a system in which the Letters are handled by the same office and by the same Editors as the main journal. As far as we can see, this has been a success and makes it easier to transfer a paper from the Letter section to the main journal and vice versa.

13.2. Speed issues

A speedier peer-review process is cited as the action that could improve the editorial process most by a large number of respondents. Obviously, we all agree that a fast peer-review is desirable. However, a thorough refereeing job requires serious thinking and thus time. There are two areas where we could possibly accelerate the process. First, we will try to find a willing referee faster than we do now by waiting less time before sending a second request when we do not receive an immediate answer from the prospective referee. The current median time between submission and sending the manuscript to a referee is 8 days, but we have noticed in the past years that it is becoming increasingly more difficult to find willing referees, mainly due to their many competing duties. Second, we will try to reduce the idle time when manuscripts or referee reports have been received by an Editor but not sent back to the final recipient because the Editor is absent or busy with other duties. We would like to remind our authors here that all the Editors are also active scientists who cannot always be online for A&A matters. Finally, we note that the average duration of the peer-review process could be improved if authors performed the revisions requested by referees more quickly. Even when only modest changes are requested, the time spent in revision is often long.

13.3. Communication issues

Authors also expect more communication from the Editors and the editorial office on the progress of their papers, and we agree that this is something that can be improved. Since authors can follow the progress of their manuscript on our web site, we considered that a minimum communication level was all that was needed when we first prepared the set of automated and semi-automated template letters that are sent to authors. Obviously authors would like more detailed news about their papers than is provided on the web site, and we are thus modifying our protocols to allow for more automated answers, as well as more individual letters whenever there are unusual delays or other difficulties in handling the manuscript.

13.4. Paper admissibility

Concerning paper admissibility, we should recall that in a few submission cases, papers are sent back to authors by the Editor in charge without a referee report but with a request to add to the scientific content of the work or to perform an initial revision of the English before resubmitting. The procedure is not always understood by authors, who believe that they should automatically be granted a referee. This is a misconception; we do not want to send papers out for refereeing if they are obviously lacking substance or if their English is incomprehensible. Referees are busy and indispensable people who do not need to be bothered with useless tasks. A paper can even be rejected directly if its contents do not match the criteria for publication in A&A (see the A&A web site for details). In such a case, the decision is taken by at least two Editors and involves one of the Editors in Chief, so we believe that, at least during the past two years, we have treated most submissions in a consistent way as far as admissibility is concerned. It is evident that different Editors will arrive at different conclusions in borderline cases, but we try to minimize these differences as much as possible.

13.5. Language editing

Answers have shown that language editing is widely appreciated by our authorship. There were some requests for more consistency in language editing, both in the papers being sent to editing and in the level of editing. We had two meetings with language Editors to discuss these points and came up with a new procedure for choosing papers sent to language Editors. The main change is that one of the language Editors decides which papers must be corrected and which ones do not need corrections, whereas previously this suggestion was made by the Editors. The new procedure should ensure a more consistent level for manuscripts sent for English corrections.

Our mid-term objective is to correct most papers. However our work force is currently inadequate for this task, and an additional position will be budgeted for 2009. Following a suggestion made by one respondent, we have decided to edit all abstracts that need corrections, since they are the most visible part of published papers. Finally, our team of language Editors will prepare a short editorial (to be published in Spring 2008) explaining their aims in editing A&A articles and providing authors with a short guide giving the basic requirements expected from A&A papers as far as style is concerned. We hope that this will be helpful in establishing consistent style standards for all articles.

13.6. Online material and data at the CDS

Following a request made by several respondents, we are also trying to have a more consistent policy for online material. In particular, we will no longer move single figures or short tables outside of printed papers. *Primary targets for online material are appendices that are not useful for a first reading of a paper, long tables, and large sets of figures.* The decision to have parts of a paper published online is left to the appreciation of the scientific Editor in charge of the paper, although they usually follow the authors' suggestions.

We note also that we receive more and more animations that are meant to enhance the results presented in papers. We store the files (with the agreement of the authors) at the A&A web site in order to facilitate downloading. We consider this to be a useful tool that increases the impact of published papers.

It is also worth noting here that (particularly in cases where perennial Data Archives are not available) we are increasing the frequency with which we archive at CDS the calibrated data associated with images published in A&A. This also increases the papers' value as it is useful for many future studies.

13.7. Abstracts

Concerning abstracts, we agree with respondents that the benefit of the structure is less obvious for Letters and short articles than for full-fledged investigations. *We will therefore keep giving the choice of structured or traditional abstract format for A&A articles and encourage authors to use the structured format for all papers that can benefit from it.*

We emphasize again here that *structured abstracts should use full sentences.* Omitting the subject of a sentence in the abstract is bad style.

13.8. Online edition

We are encouraged by how a vast majority (86%) of the respondents agree with our policy of having online-only sections. However, it appears from the individual comments that the decision to publish a given section online-only is seen as somewhat arbitrary. While a primary incentive for using the electronic medium for some sections was indeed cost reduction, we have come to realize that the potential of this new medium remains largely unexploited for specific categories of papers that include material such as movies and multi-dimensional data sets. We are thus enlarging the online-only part of A&A with the objective of allowing for new contents that take full advantage of the possibilities offered by the electronic medium. Although only a small majority (53%) of respondents approve this decision today, we hope that a larger fraction of the community will agree with us in the near future.

The Board of Directors thus decided, following the opinion expressed by a fraction of the respondents to the survey, to publish Sect. 12 *"Atomic, molecular, and nuclear data"* online starting January 2008. We have also introduced at the same time the new online Sect. 15 devoted to *"Numerical methods and codes"* since we identified a need for peer-reviewed descriptions of numerical codes with enough interest to a sizable fraction of the astrophysical community. With these additions, the online-only part of A&A contains the sections of potential use to a wide range of astronomers (instrumentation, numerical codes, atomic and molecular data, observational data, and catalogs). We emphasize again that *the A&A online-only sections are in open access* so that articles published in these sections are freely available to the entire community.

The reader will have noticed the contradiction in the answers to the questions on reading habit and online sections. While only 4% of authors read the printed edition of A&A regularly, less than 1 out of 3 respondents would welcome an online-only edition of the full Journal. Obviously, this is inconsistent. The answers clearly show that *the printed edition of the Journal remains useful as a perennial paper archive but has little value as an information tool for the community.* As a consequence of the change in destination of printed scientific journals that we have witnessed in the last decade, A&A will be led in the foreseeable future to provide the community with both an online reference edition that will take full advantage of all possibilities of the electronic medium and some kind of print-on-demand facility for archival purposes on paper and other media. This move, which appears unavoidable but that A&A does not want to rush, will lead to faster publication of the peer-reviewed research results at a lower cost for the libraries, two highly desirable features in the current public research environment.

To conclude, we would like to warmly thank all the respondents who took the time to fill out the survey questionnaire. We are also grateful for the many encouragements that were expressed. We have learnt a lot about the way A&A is perceived in the community and hope that the changes that A&A is implementing now as a consequence of the survey will meet with at least some of your expectations.

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