

## Page Charges and Article Length in Astronomy Journals

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**Abstract.** A study of 34 journals in astronomy and astrophysics looked at the relationship between journal page charges and the length of articles published. Although some writers contend that page charges encourage contributors to write shorter articles, there was no correlation between page charges and the length of articles published. American journals with relatively high impact factors were more likely to have page charges, but there was no overall correlation between impact factor and either page charges or article length.

### 7. What We Examined

- Do journals have page charges? (See Figure 1.)
- Do journals with page charges publish shorter articles?
- Is there any correlation between journal impact and either page charges or article length?

Contrary to what would seem reasonable economic expectations, page charges do not correlate with shorter articles (see Table 1).

In assessing the relationship between page charges and impact factor we segmented the journals into three ranks based on their impact factors. Journals with high impact factors were significantly more likely to charge for publication through standard page charges ( $\chi^2 = 7.039$ ,  $p < .05$ ). However, charging for

Table 1. Page charges do not correlate with shorter articles.

Journals	Average article length
Page charges	10.4
No page charges	9.8
All journals	10.1



Figure 1. Journals with page charges.

reproduction of color images did not correlate with a journal's impact factor ( $\chi^2 = 0$ ). The correlation between average article length and journal impact factor was also not significant ( $r^2 = 0.099$ ).

## 2. Discussion and Conclusion

Our study corroborates the observation by Odlyzko (1997) of a decline in page charges. Only three of the 18 publishers of astronomy and astrophysics journals assess such charges, and these are not the large, commercial houses. All seven journals with page charges were in the top half of the impact factor rankings. Journals from five commercial firms charge for color images (Figure 2), often with complicated assessments or requiring interaction with the publisher. These nine journals are distributed throughout the impact factor ranking.

The Taylor & Francis statement on limited allotment for color reproductions exemplifies the view that journal publications are a common good and that authors should therefore avoid taking more than their share by keeping their demands within reason. Page charges can be viewed as economic incentives to promote behavior supportive of the common good by rationing the number of submissions (Barton 1963). Considerations well beyond economics, however, clearly affect authors' publication decisions. This is evident in the publication of longer articles in the journals with page charges.

There are many variations in author charges; indeed, 17 of these journals specifically do not charge for publication,<sup>1</sup> and information was not available for ten titles. This range of practice draws into question Open Access advocates' suggestion (Doyle et al. 2004) that authors are accustomed to paying for publication and so will not be concerned about paying to support OA publications.

<sup>1</sup>*Annales Geophysicae* for example, declared in a banner on its website "No page or service charge for authors / No extra charge for colour illustrations." See: <http://www.cesr.fr/~anngéo/>



Figure 2. Journals charging for color figures.

With new alternatives, and as new authors unfamiliar with page charges enter the field of astronomy, will page charges diminish? There is a variation in practices that has changed over time. Clearly this is a subject to debate now.

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