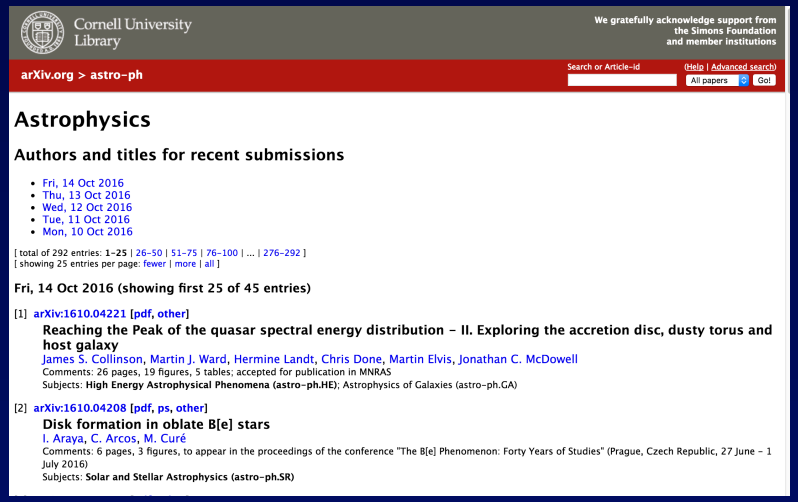
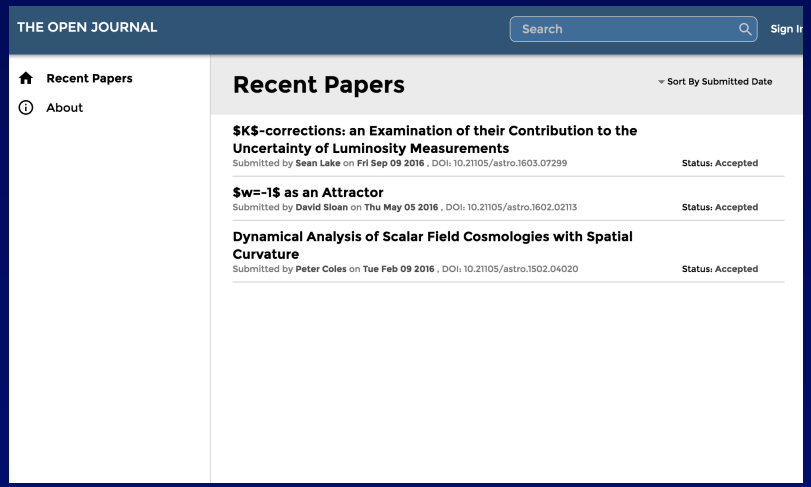
The Open Journal of Astrophysics





Ted Bunn

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Manifesto

- The only thing we need journals for is peer review.
- Reviewers do this for free.
- Traditional journals charge a lot of money
  - » Often $10^3 – 10^4$ ($,€,£) / yr / journal.
- We're giving our labor as authors and reviewers to the publishers, and then buying the products back from them at exorbitant prices!

The Open Journal

- Post your paper to the arxiv.
- Submit to the journal by giving the arxiv number.
- Referees can make comments and authors can respond to them directly, allowing for faster iteration.
- When paper is accepted, it appears on the journal Web site and is given a DOI number. DOI number enables services like ADS to know that it's been published and generate correct citations.
- Demo at https://www.youtube.com/watch?v=j90JyDnSpxQ

K-corrections: an Examination of their Contribution to the Uncertainty of Luminosity Measurements

Sean E. Lake, E. L. Wright

(Submitted on 23 Mar 2016 (v1), last revised 3 Sep 2016 (this version, v3))

In this paper we provide formulae that can be used to determine the uncertainty contributed to a measurement by a K-correction and, thus, valuable information about which flux measurement will provide the most accurate K-corrected luminosity. All of this is done at the level of a Gaussian approximation of the statistics involved, that is, where the galaxies in question can be characterized by a mean spectral energy distribution (SED) and a covariance function (spectral 2-point function). This paper also includes approximations of the SED mean and covariance for galaxies, and the three common subclasses thereof, based on applying the templates from Assef et al. (2010) to the objects in zCOSMOS bright 10k (Lilly et al. 2009) and photometry of the same field from Capak et al. (2007), Sanders et al. (2007), and the AllWISE source catalog.

Comments:	10 pages, 6 figures, 6 tables (1 extended); OJA, submitted; data doi:10.6084/m9.figshare.3804210
Subjects:	**Astrophysics of Galaxies (astro-ph.GA)**; Instrumentation and Methods for Astrophysics (astro-ph.IM); Data Analysis, Statistics and Probability (physics.data-an)
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	(or **arXiv:1603.07299v3 [astro-ph.GA]** for this version)

Conclusions

- The scientific publishing industry needs to adapt to the new era.
- Peer review is the only important thing journals do, and it can be (nearly) free.
- Questions for you:
  1. Would you submit your work to the Open Journal?
  2. If not, what changes could the journal make that would change your mind?