



# Paper Productivity of Ground-based Large Optical Telescopes from 2000 to 2009

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(Submitted on 2 Jul 2011)

We present an analysis of the scientific ("refereed") paper productivity of the current largest (diameter >8 m) ground-based optical(-infrared) telescopes during the ten year period from 2000 to 2009. The telescopes for which we have gathered and analysed the scientific publication data are the two 10 m Keck telescopes, the four 8.2 m Very Large Telescopes (VLT), the two 8.1 m Gemini telescopes, the 8.2 m Subaru telescope, and the 9.2 m Hobby-Eberly Telescope (HET). We have analysed the rate of papers published in various astronomical journals produced by using these telescopes. While the total numbers of papers from these observatories are largest for the VLT followed by Keck, Gemini, Subaru, and HET, the number of papers produced by each component of the telescopes are largest for Keck followed by VLT, Subaru, Gemini, and HET. In 2009, each telescope of the Keck, VLT, Gemini, Subaru, and HET observatories produced 135, 109, 93, 107, and 5 refereed papers, respectively. We have shown that each telescope of the Keck, VLT, Gemini, and Subaru observatories is producing 2.1 +/- 0.9 Nature and Science papers annually and the rate of these papers among all the refereed papers produced by using that telescope is 1.7 +/- 0.8 %. Extending this relation, we propose that this ratio of the number of Nature and Science papers over the number of whole refereed papers that will be produced by future extremely large telescopes (ELTs) will be remained similar. From the comparison of the publication trends of the above telescopes, we suggest that (i) having more than one telescope of the same kind at the same location and (ii) increasing the number of instruments available at the telescope are good ways to maximize the paper productivity.

Comments: 17 pages, accepted for publication in PASA

Subjects: **Instrumentation and Methods for Astrophysics (astro-ph.IM)**

Cite as: [arXiv:1107.0353](https://arxiv.org/abs/1107.0353) [astro-ph.IM]

(or [arXiv:1107.0353v1](https://arxiv.org/abs/1107.0353v1) [astro-ph.IM] for this version)

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From: Sang Chul Kim [[view email](#)]

[v1] Sat, 2 Jul 2011 02:27:16 GMT (62kb)

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