



# The New Generation Atlas of Quasar Spectral Energy Distributions from Radio to X-rays

Zhaohui Shang, Michael Brotherton, Beverley J Wills, Derek Wills, Sabrina Cales, Daniel A Dale, Richard F. Green, Jessie Runnoe, Rodrigo S. Nemmen, Sarah Gallagher, Rajib Ganguly, Dean C. Hines, Benjamin Kelly, Gerard A. Kriss, Jun Li, Baitian Tang, Yanxia Xie

(Submitted on 10 Jul 2011 (v1), last revised 12 Jul 2011 (this version, v2))

We have produced the next generation of quasar spectral energy distributions (SEDs), essentially updating the work of Elvis et al. (1994) by using high-quality data obtained with several space and ground-based telescopes, including NASA's Great Observatories. We present an atlas of SEDs of 85 optically bright, non-blazar quasars over the electromagnetic spectrum from radio to X-rays. The heterogeneous sample includes 27 radio-quiet and 58 radio-loud quasars. Most objects have quasi-simultaneous ultraviolet-optical spectroscopic data, supplemented with some far-ultraviolet spectra, and more than half also have Spitzer mid-infrared IRS spectra. The X-ray spectral parameters are collected from the literature where available. The radio, far-infrared, and near-infrared photometric data are also obtained from either the literature or new observations. We construct composite spectral energy distributions for radio-loud and radio-quiet objects and compare these to those of Elvis et al., finding that ours have similar overall shapes, but our improved spectral resolution reveals more detailed features, especially in the mid and near-infrared.

Comments: 46 pages, 10 figures, 10 tables, Accepted by ApJS. Composite SED data files for radio-loud and radio-quiet quasars (rlmsedMR.txt, rqlmsedMR.txt) are included in the source (Other formats -> Source). Supplemental figures are not included

Subjects: **Cosmology and Extragalactic Astrophysics (astro-ph.CO)**

Journal reference: 2011 ApJS..196....2

Cite as: [arXiv:1107.1855](#) [astro-ph.CO]  
(or [arXiv:1107.1855v2](#) [astro-ph.CO] for this version)

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

astro-ph.CO

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

astro-ph

## References & Citations

- [INSPIRE HEP](#)  
([refers to](#) | [cited by](#))
- [NASA ADS](#)

## Bookmark (what is this?)



## Submission history

From: Zhaohui Shang [[view email](#)]

[\[v1\]](#) Sun, 10 Jul 2011 14:08:39 GMT (401kb)

[\[v2\]](#) Tue, 12 Jul 2011 14:04:32 GMT (401kb)

*[Which authors of this paper are endorsers?](#)*

Link back to: [arXiv](#), [form interface](#), [contact](#).