

# The optical continuum of BL Lac objects

A. Veronesi<sup>1</sup>, B. Sbarufatti<sup>2</sup>, S. Ciprini<sup>3</sup>,  
R. Decarli<sup>1</sup>, A. Treves<sup>1</sup>, R. Falomo<sup>4</sup>, J. Kotilainen<sup>5</sup>



We consider a sample of 46 BL Lac objects (BLL) for which we have spectra in the 3800-8000 Å range obtained with the ESO 8 meter VLT + FORS1. Here we discuss some global properties about

- 1) Continuum  
and
- 2) Line Spectrum

## References:

Sbarufatti et al. 2005, AJ, 129, 559

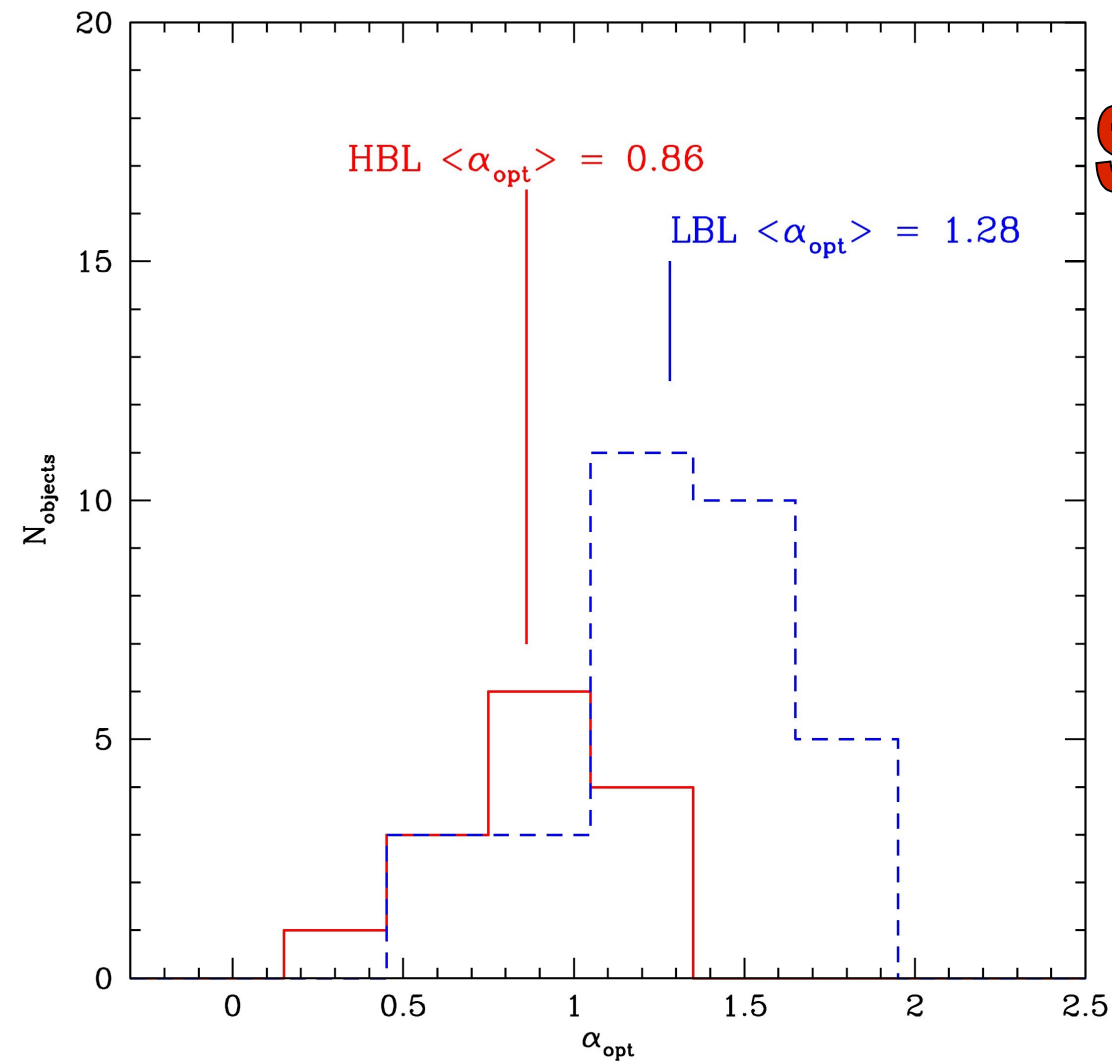
Sbarufatti et al. 2006, AJ, 132, 1

Sbarufatti et al. 2008, submitted to AJ

<http://www.oapd.inaf.it/zbllac/>

# CONTINUUM

## Statistical Distributions of: Optical Spectral Index

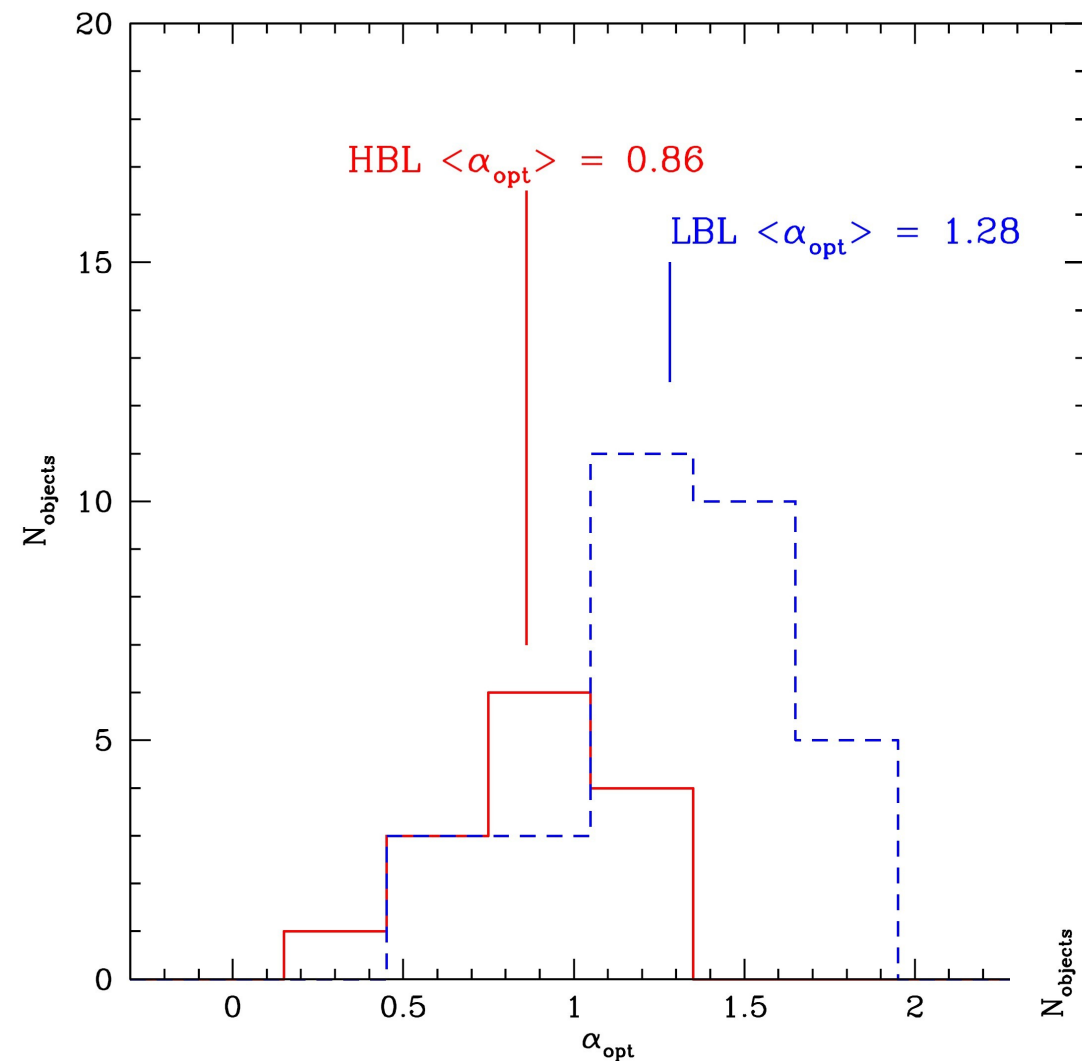


Optical spectral index distributions of  
14 HBL (in red) and 32 LBL (in blue)

$$F_{\nu} \propto \nu^{-\alpha}$$

# CONTINUUM

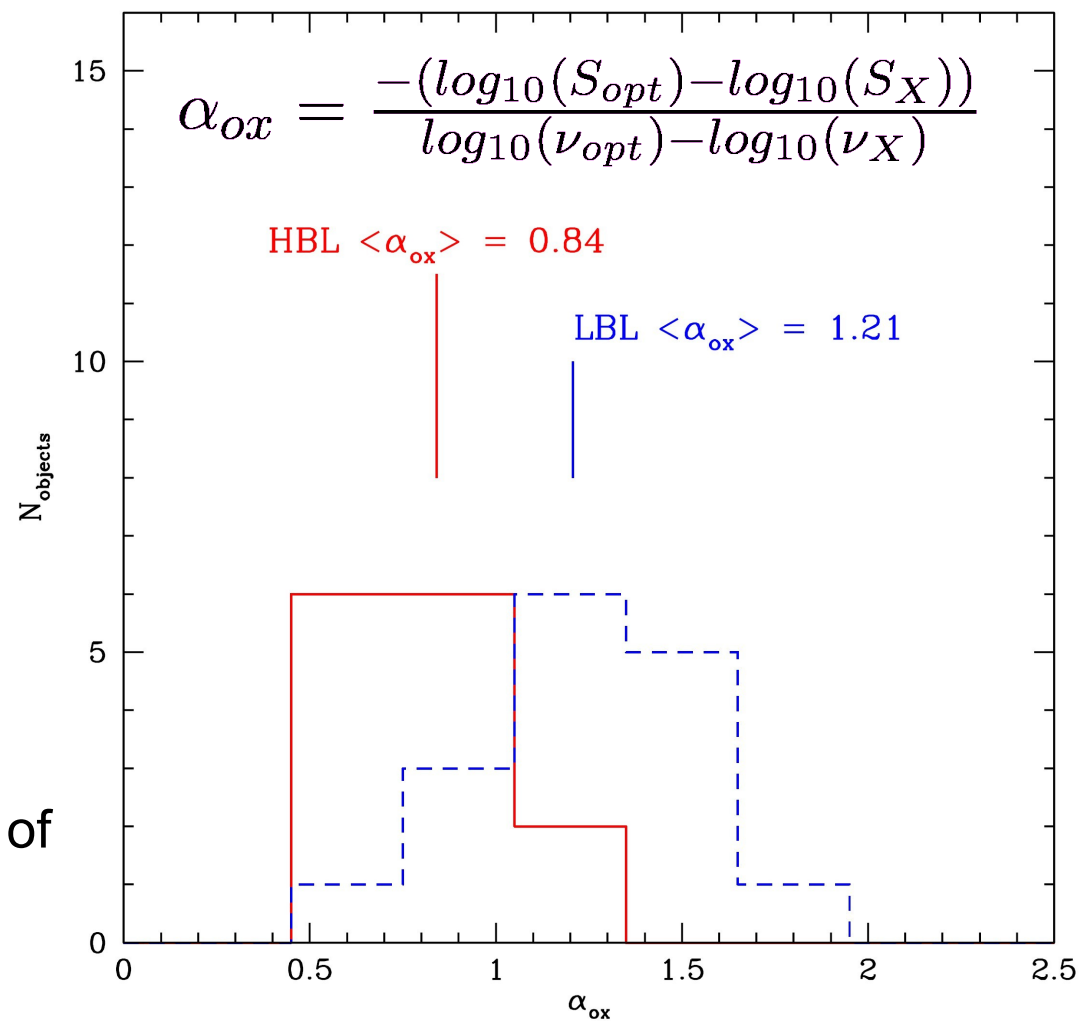
## Statistical Distributions of: Optical Spectral Index and Optical-X-ray Spectral Index



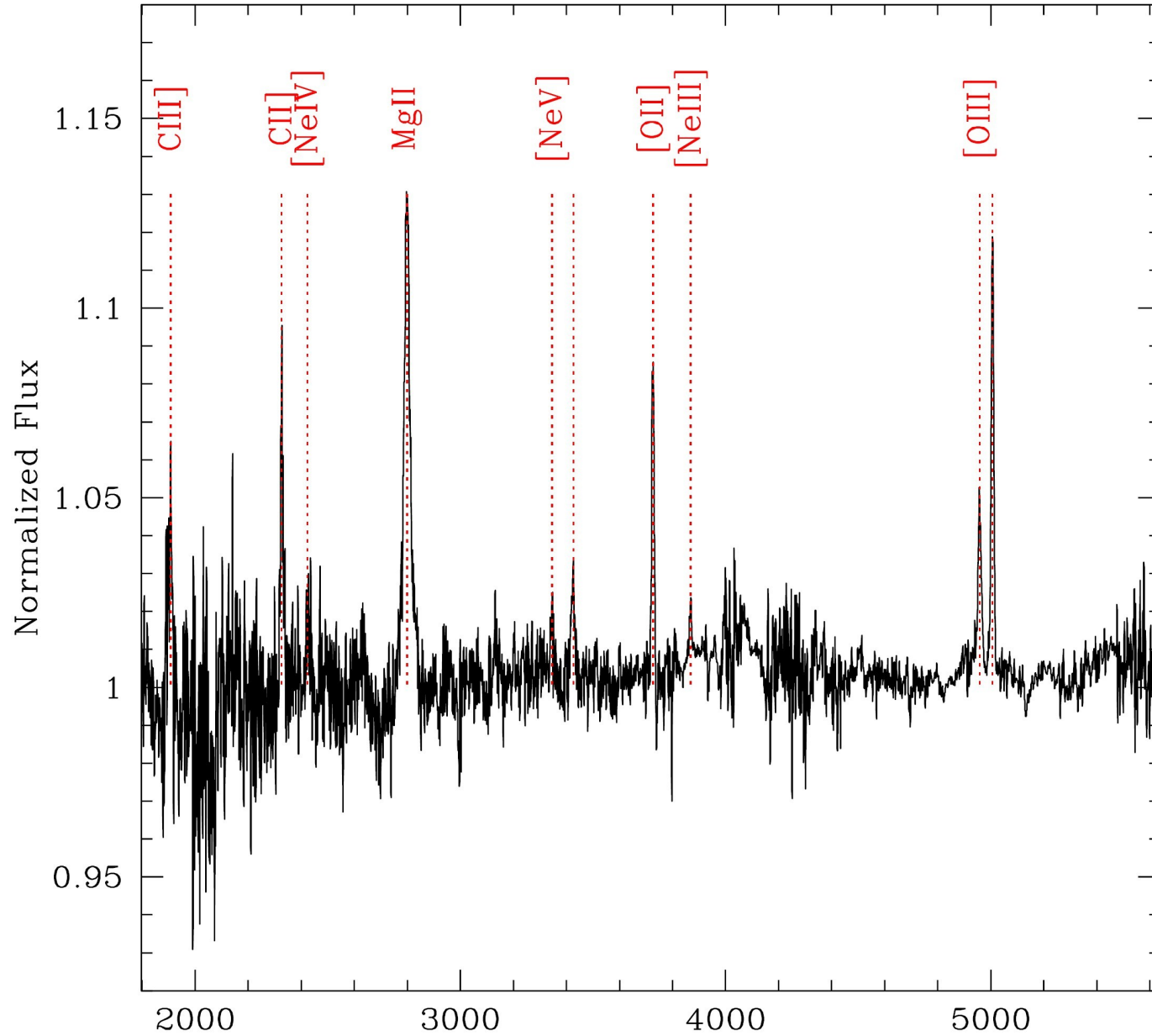
Optical spectral index distributions of 14 HBL (in red) and 32 LBL (in blue)

Optical-X-ray spectral index distributions of 14 HBL (in red) and 16 LBL (in blue).

$$F_{\nu} \propto \nu^{-\alpha}$$



# LINE SPECTRUM



Emission Lines	Lambda	EW
	Å	Å
(1)	(2)	(3)
[OIII]	5007	-1.44
[OIII]	4959	-0.69
[NeIII]	3869	-0.18
[OII]	3727	-0.95
[NeV]	3346	-0.39
[NeV]	3426	-0.19
MgII	2798	-4.31
[NeIV]	2423	-0.19
CII]	2326	-0.97
CIII]	1909	-1.08

The composition in a mean spectrum of normalized spectra of the 13 objects (all LBL) for which the emission lines are detected. The most important emission lines marked on in red.

**THANKS**

**Visit our website to see our large database of BLLs:**

<http://www.oapd.inaf.it/zblac/>