

The intrinsic reddening in AGNs Type 1.9: influence to the black hole mass estimation

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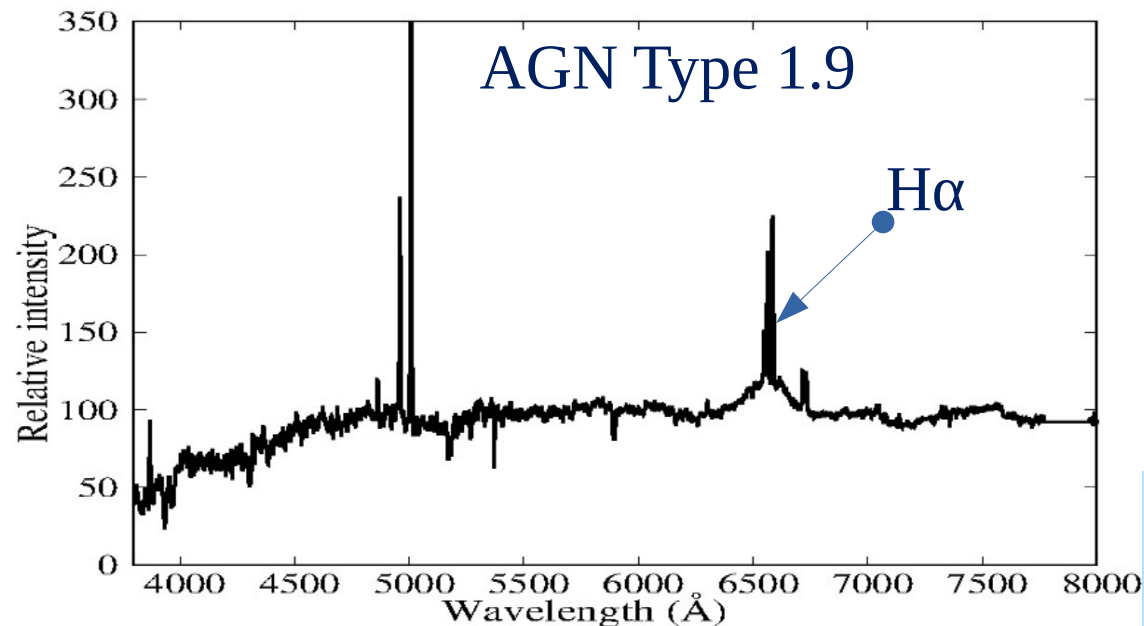
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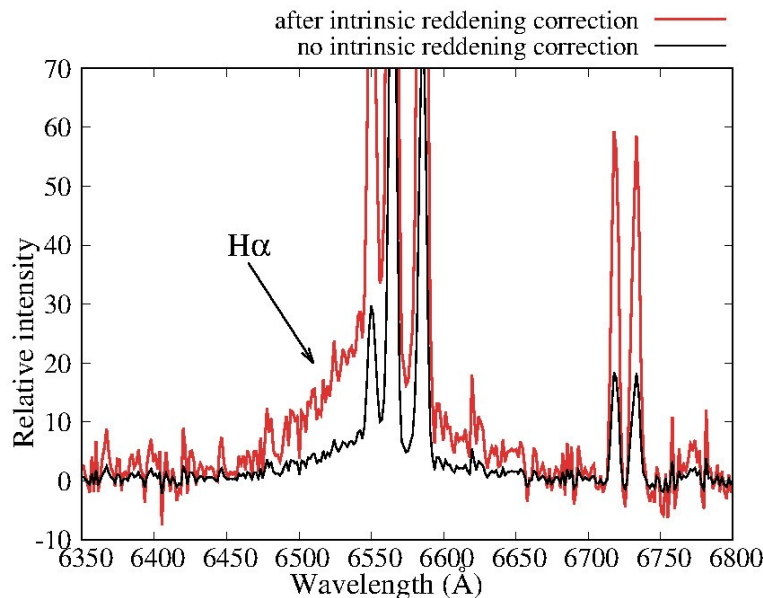
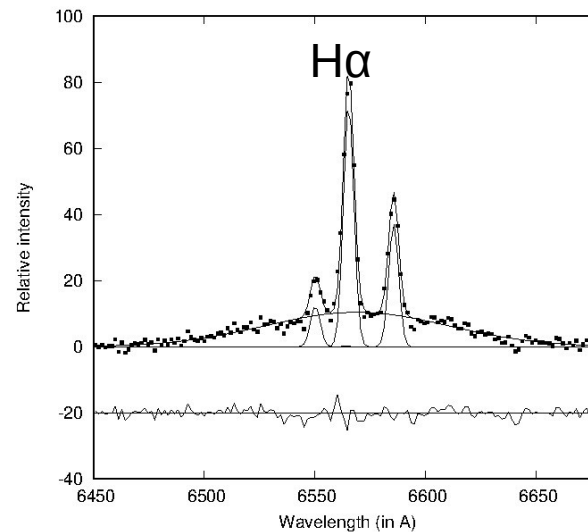
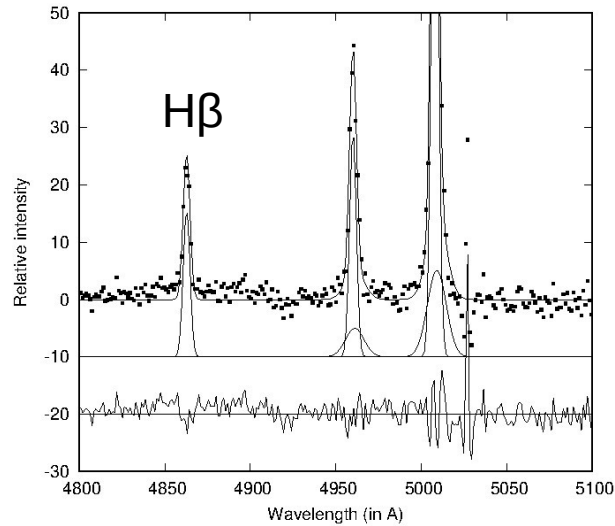
Introduction

- AGNs Type 1.9 - weak continuum emission, no broad emission lines except the broad H α line.
- The missing of the other Balmer lines is probably caused by strong intrinsic reddening in these objects (Osterbrock 1981).
- The only way to estimate M_{BH} using virial motion of the BLR gas is by using the properties of the broad H α component (FWHM H α and LH α , see Greene & Ho 2005).
- In this research, we used the sample of the AGNs Type 1.9 in order to check if intrinsic reddening has influence to the measured spectral parameters, and consequently to the M_{BH} estimation in these objects.



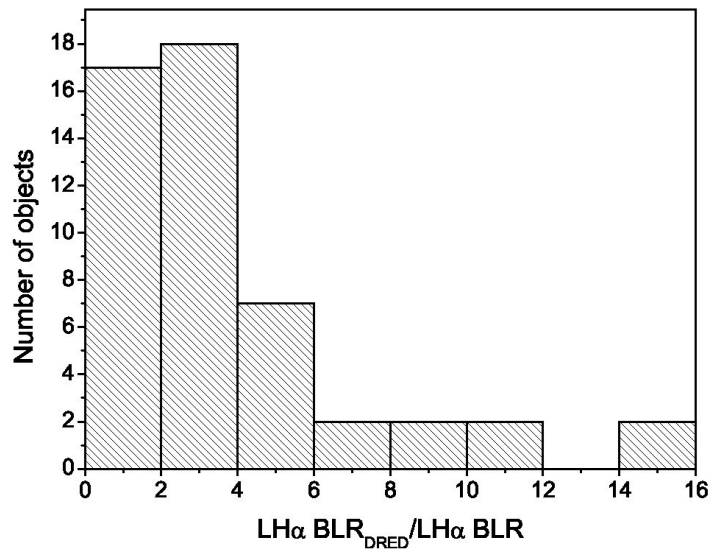
The sample and analysis

- The sample: 51 AGN Type 1.9, SDSS DR14, with $S/N > 20$.



- The correction for intrinsic reddening is done by using the flux ratio of the $H\alpha$ and $H\beta$ narrow components (Baron & Ménard, 2019), and extinction law given in Cardelli et al. (1989).

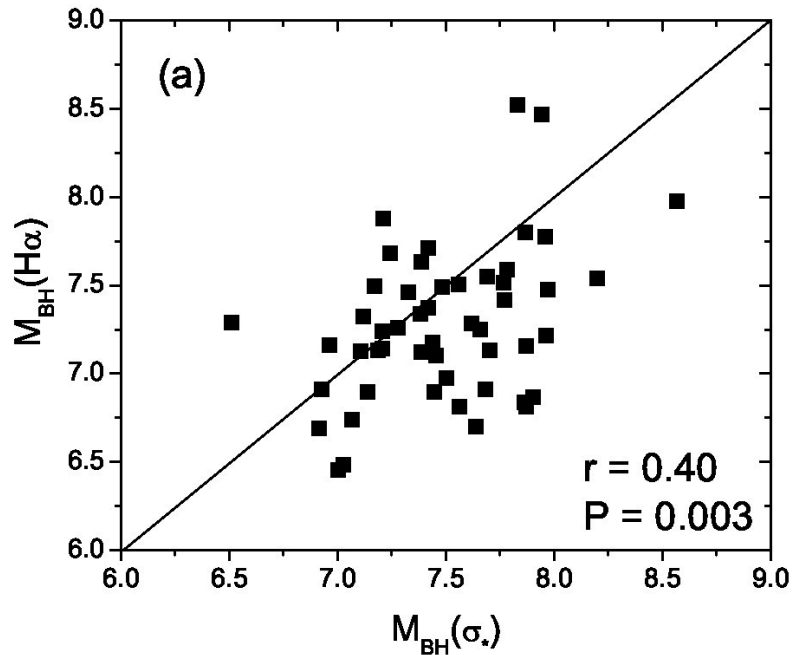
Results



$M_{BH}(H\alpha)_{DERED}$ v.s. $M_{BH}(H\alpha)_{(no\ correction)}$

- $M_{BHs}(H\alpha)_{DERED}$ are better following 1-1 relationship with $M_{BH}(\sigma_*)$,
- $M_{BHs}(H\alpha)_{DERED}$ have slightly stronger correlation with the $M_{BH}(\sigma_*)$.

not corrected for intrinsic reddening



corrected

