**INTRODUCTION**

The discovery of extremely tight correlations between the masses of black holes (BHs) and properties of their host galaxies has led to the intriguing idea that every large galaxy may contain a BH at its center. A significant amount of effort has been exerted in attempts to explain the origin, evolution, and scatter of the relationships between BHs and their host galaxies, as well as to explore the role that abundant BHs may play in observed phenomena from X-rays to radio.

While it has been suggested that the hierarchical assembly of galaxies can naturally give rise to at least some of the tight correlations that have been found (Peng, 2007), the prominence of active galactic nuclei (AGNs) at all stages of cosmic history proclaims the importance of accretion growth in BHs. The potential for an AGN phase to either enhance or smear the correlations between BH masses and host galaxy attributes will depend upon the details of BH accretion.

With the ability to determine BH masses in AGNs from the properties of broad emission lines (as described in the next section), deep spectroscopic surveys hold the promise of being able to push below the most luminous tail of AGNs at any given redshift and to begin to probe the full distribution of accretion rates. The AGN and Galaxy Evolution Survey (AGES, Kochanek, in prep.) uses the MMT 6.5m telescope and the Hectospec fiber spectrograph to follow-up AGN candidates from the B0303 field of the NOAO Deep Wide-Field Survey. Candidate AGNs are identified from a combination of multi-wavelength observations, primarily relying upon X-ray, optical, and infrared photometry. The BH properties from the first observing season of AGES were analyzed by Kollmeier et al. (2006), who found that the distribution of accretion rates was preferentially confined to a narrow band. Here we present preliminary results of subsequent Hectospec observations, which extend to z = 2.25. AGES represents the first exploration of the typical accretion properties of intermediate redshift AGNs with moderate BH masses.

**METHOD**

**Black Hole Mass**

The $M_{BH}$ measurement employs the empirical relationships between broad line region size, continuum luminosity, and broad line widths that have been established through reverberation mapping (e.g., Peterson et al. 2004; Bentz et al. 2006).

Specifically:

$$\log M_{BH} = A + B \log L_{cont} + 2 \log V$$

where $V$ is the FWHM of the emission line, $L_{cont}$ is the luminosity of the continuum near the line, and $A$ and $B$ are the coefficients of the radius-luminosity relation for each line.

Different redshift ranges provide access to different broad emission lines. We measure H$eta$ for $z < 0.75$, MgII for $0.4 < z < 2.0$, and CIV for $1.6 < z < 4.5$ associated with each line is a continuum region: 5100 Å, 3000 Å, and 1350 Å, respectively. In the equation above, we adopt $B_{H\beta}=0.50$ and $B_{CIV}=0.53$ from Vestergaard & Peterson (2006), and $B_{MgII}=0.62$ from McLure & Dunlop (2004).

We estimate $L_{cont}$ for each AGN from its $R$-band magnitude, which is extrapolated to the appropriate wavelength assuming a spectral slope of $F_{\lambda} = \lambda^{-1.5}$, the average behavior for AGNs of comparable luminosity (Dietrich & Hamann, in prep.).

The FWHM of each emission line is estimated by subtracting a linear fit to the continuum near the line, then fitting a 6th-order Gaussian-Hermite polynomial to the observed line profile (after interactively removing the narrow-line contribution to H$eta$), and measuring the FWHM from the model. All spectra were visually examined and fits not accurately reflecting the line were removed from further consideration.

**Bolometric Luminosity**

We estimate monochromatic luminosities from broad-band photometry and apply the bolometric correction published by Gallagher et al. (2007).

**Eddington Ratio**

The Eddington ratio is simply defined as $L_{BH}/L_{Edd}$, where the Eddington luminosity, $L_{Edd}$ is proportional to the BH mass and marks the luminosity at which radiation pressure balances the gravity of the BH.