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Erratum: Secularly powered outflows from AGNs: the dominance of non-merger driven supermassive black hole growth

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Table 1. Corrected properties of the 12 galaxies observed in Smethurst et al. (2019), with outflow rates calculated from the extent and flux of [O III] in narrow band imaging taken with the Shane-3m telescope at the Lick Observatory, as described in Smethurst et al. (2019). Neville, Hermione and Cho have lower limits on their calculated [O III] gas masses since the narrow band image was contaminated by gas ionized by star formation. Note that the uncertainties are not included in the upper and lower limits, we simply state the uncertainties alongside the limits. Padma and Flitwick have upper limits set by the measured gas mass in Blaize (3.87 ± 0.02) from the disk-dominated control sample of (see section 4 of Smethurst et al. 2019).

Name	$\mathrm{Log_{10}}$ ($\mathrm{M_{BH}/M_\odot}$)[a]	λ_{Edd}[a]	$\dot{m}$[a] ($\mathrm{M_\odot\ yr^{-1}}$)	$\mathrm{Log_{10}}$ ($\mathrm{M_{O\,III}/M_\odot}$)	Outflow rate ($\mathrm{M_\odot\ yr^{-1}}$)	Inflow rate ($\mathrm{M_\odot\ yr^{-1}}$)	% accreted	t_{outflow} (Myr)
Ron	8.16 ± 0.11	0.04 ± 1.55	0.05 ± 0.19	5.66 ± 0.03	0.0005 ± 0.0001	0.05 ± 0.20	$99 \pm 5\%$	921 ± 126
Neville	6.30 ± 0.12	0.86 ± 2.22	0.07 ± 0.18	$> 4.25 \pm 0.07$	$> 0.0005 \pm 0.001$	$> 0.07 \pm 0.18$	$< 99 \pm 4\%$	6 ± 4
Hermione	7.31 ± 0.14	0.004 ± 0.385	0.04 ± 0.12	$> 4.63 \pm 0.05$	$> 0.005 \pm 0.001$	$> 0.04 \pm 0.16$	$< 87 \pm 4\%$	9 ± 1
Harry	6.56 ± 0.10	0.08 ± 2.29	0.02 ± 0.04	4.75 ± 0.03	0.0035 ± 0.0005	0.02 ± 0.04	$81 \pm 3\%$	16 ± 2
Theodore	6.73 ± 0.28	0.77 ± 0.19	0.06 ± 0.04	4.65 ± 0.06	0.0020 ± 0.0004	0.06 ± 0.09	$97 \pm 2\%$	25 ± 7
Snape	6.27 ± 0.11	0.39 ± 0.12	0.03 ± 0.24	4.06 ± 0.08	0.00005 ± 0.00001	0.03 ± 0.03	$99 \pm 2\%$	228 ± 26
Regulus	7.80 ± 0.13	0.28 ± 0.62	0.08 ± 0.16	5.25 ± 0.02	0.005 ± 0.001	0.08 ± 0.12	$94 \pm 2\%$	35 ± 6
Goyle	7.86 ± 0.22	0.27 ± 0.01	0.07 ± 0.10	5.03 ± 0.03	0.0012 ± 0.0001	0.07 ± 0.11	$98 \pm 2\%$	101 ± 11
Crabbe	6.90 ± 0.11	0.10 ± 0.32	0.02 ± 0.06	4.2 ± 0.1	0.0004 ± 0.0001	0.02 ± 0.04	$98 \pm 2\%$	22 ± 9
Padma	7.62 ± 0.10	0.20 ± 0.46	0.07 ± 0.04	3.4 ± 0.1 (<3.87)	$< 0.0004 \pm 0.0002$	$< 0.07 \pm 0.1$	$> 99 \pm 2\%$	4 ± 2
Flitwick	7.30 ± 0.37	0.37 ± 0.60	0.12 ± 0.13	3.0 ± 0.1 (<3.87)	$< 0.0004 \pm 0.0001$	$< 0.07 \pm 0.12$	$> 99 \pm 3\%$	8 ± 3
Cho	6.96 ± 0.09	0.089 ± 0.080	0.03 ± 0.03	$> 4.41 \pm 0.02$	$> 0.00016 \pm 0.00002$	$> 0.03 \pm 0.06$	$< 99 \pm 3\%$	86 ± 10

Note. [a]Measurements from Simmons, Smethurst & Lintott (2017). Black hole masses are calculated using a virial assumption by measuring the full width half maximum of the broadened Hα component. Eddington ratios and black hole mass accretion rates are calculated using the bolometric luminosity of the AGN, inferred from the WISE W3 band at 12 μm, applying a correction from Richards et al. (2006). The large errors on $\dot{m}$ and λ_{Edd} are due to the propagation of uncertainties from the WISE W3 magnitudes.

In Smethurst et al. (2019), the [O III] gas masses in outflows from 12 disk-dominated AGN were calculated using narrowband imaging from the Shane-3m. An error in the standard star flux calibration resulted in the over estimate of the flux in each image by three orders of magnitude. Due to the intricacies of the reduction of the individual sources, this resulted in an overestimate in the range $1.3 - 3.9$ dex (with an average of 2.6 dex) of the calculated [O III] gas masses. This error propagated through to give a typical overestimate of the outflow rates (and in turn the inflow rates) of 2.6 dex. Despite this, all of the conclusions of Smethurst et al. (2019) still hold and are in fact made stronger. Including, that secular mechanisms are more than sufficient to both grow a SMBH and power an outflow from the AGN, and this results in different accretion and outflow properties compared to the merger dominated sample of Bae et al. (2017).

We provide the correct gas masses, outflow rates and inflow rates in Table 1 below. The mean outflow rate for the DISK-DOM-OUTFLOW sample is now $0.0020 \pm 0.0005\ \mathrm{M_\odot\ yr^{-1}}$. For an updated study please see Smethurst et al. (2021; submitted).

Please note, we have also added authors who were involved in the data acquisition but were omitted from the original author list.

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DATA AVAILABILITY

The data underlying this article will be shared on reasonable request to the corresponding author.

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