



Erratum: “Planet Formation around Super Massive Black Holes in the Active Galactic Nuclei” (2019, ApJ, 886, 107)

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There are several typos in the published article, which are corrected by section as follows. We are grateful to Hidekazu Tanaka (Tohoku University) for pointing out some of the errors.

2.1. The Snow Line in AGNs and Major Difference from the Protoplanetary Disks

$$r_{\text{sub}} = 1.3 \text{ pc} \left(\frac{L_{\text{UV}}}{10^{46} \text{ erg s}^{-1}} \right)^{1/2} \left(\frac{T_{\text{sub}}}{1500 \text{ K}} \right)^{-2.8} \times \left(\frac{a_d}{0.05 \mu\text{m}} \right)^{-1/2} \quad (1)$$

2.2. Outline of Evolution of “Fluffy” Dust Aggregates

$$\eta \dots \sim 2 \times 10^{-5} M_{\text{BH},7}^{-1} r_1 c_{s,1}^2 \quad (4)$$

2.3. The Growth Time and Destruction by Collisions

Equation (5) is evaluated for $\Delta v \simeq 1/2 \sqrt{\alpha} c_s R_e^{1/4} S_t$, then the growth time is

$$t_{\text{grow}} \dots \simeq \frac{16}{3} \sqrt{\frac{2}{\pi}} \frac{H_g}{\sqrt{\alpha} R_e^{1/4} c_s f_{dg}} \simeq 1.3 \times 10^7 \text{ [yr]} c_{s,1}^{-1} \left(\frac{f_{dg}}{0.01} \right)^{-1} \left(\frac{H_g}{0.1 \text{ pc}} \right) \times \left(\frac{\alpha}{0.1} \right)^{-1/2} \left(\frac{R_e}{10^4} \right)^{-1/4}. \quad (5)$$

Appendix

A.1. Hit-and-stick Phase

The eddy turnover time t_L is ... and $t_\eta \sim R_e^{-1/2} t_L$... For the hit-and-stick phase, $S_t \ll R_e^{-1/2}$, then ...

$$\sim 0.5 \text{ [m s}^{-1}] \left(\frac{S_t}{1.5 \times 10^{-4}} \right) \times \left(\frac{\alpha}{0.3} \right)^{1/2} \left(\frac{R_e}{3 \times 10^4} \right)^{1/4} c_{s,1}, \quad (12)$$



A.2. Collisional and Gravitational Compression Phases

In Equations (15) and (16), the ranges of S_t are divided by $Re^{-1/2}$, not Re .

A.3. Evolution of Dust Aggregates as an N-body System

There is a typo in the left-hand side of Equation (17):

$$\rho_{\text{int},f} = \left(\rho_{\text{int}}^4 + \rho_0^4 \frac{E_{\text{imp}}}{0.15NE_{\text{roll}}} \right)^{1/4}. \quad (17)$$

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