



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_40019_A
Title of the Manuscript:	Fe Kα lines of MCG-6-30-15: Emission from thin-torus particles around a Kerr black hole
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>The manuscript is similar to J W Sulentic's article.</p> <p>Please describe in detail regarding monochromatic particles.</p> <p>4.3 Please explain 3rd paragraph; Fig 3e& Fig 2 in a better ,more clear format.</p>	<p>Thanks! Yes, the manuscript deals with a similar data-fit modelling to J W Sulentic's article [12,13]. Ref.[13] includes [12] and I did not cite [12] in the previous draft. Now I add [12].</p> <p>The difference between my work and Sulentic's work lies in the black hole (BH) states: Sulentic's work uses a disk model with a nonrotating BH; my work uses a torus model with a rotating BH.</p> <p>To stress clearly this point to readers, the following is added in Introduction (page 2): In this case, a disk-illumination model of a nonrotating black hole paradigm is unable to predict observed overall profile shapes nor always fit consistently to the disk inclinations[12,13] which is followed by a detailed introduction from the previous disk model of a static BH to the later torus model of a rotating BH.</p> <p>Thanks! Following detailed description is added in the first place where the phrase of "monochromatic particles" appears in the text on page 2: ... As defined in [15,18], these particles emit identical and isotropic fluorescent Fe Kalpha lines and occupy all of the possible orbits around the central BH...</p>



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		<p>Thanks! Following two places are updated:</p> <p>----Rewrite the last sentence of the 1st paragraph:</p> <p>In this figure, our data-fitting result is compared with that observed by Tanaka et al [7] where the authors suggested an accretion disk to exist in MCG-6-30-15. The observed the observed profile is redrawn in the bottom panel which occurred as Figure 2 in Tanaka et al's paper.</p> <p>----Rewrite 3rd paragraph:</p> <p>(1) Both of them have three humps from 4.5 keV to 7.2 keV at ~4.8 keV, ~5.5 keV and ~6.2–6.6 keV, respectively. The middle hump has the lowest intensity and the right one has the highest intensity.</p> <p>(2) Both of them are significantly asymmetric about the line emission energy, $E_e = 6.35$ keV, with a much more extended red wing (i.e., red-shifted hump) on the lefthand-side profile than a narrow blue wing (i.e., blue-shifted hump) on the right-hand side.</p> <p>(3) Both the red-shifted hump and the blue-shifted hump drop sharply at ~4.6 keV and ~6.7 keV, respectively. Between them, there appears the third hump. This three-hump identification is different from the previous argument that there exist merely two peaks[7,10].</p>
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<u>Minor</u> REVISION comments	Multiple punctuation and spelling errors	Thanks! I carefully read the texts and corrected 4 spelling and grammar errors in words or phrases, as highlighted in "black" in this revised version.
<u>Optional/General</u> comments	Good, solid manuscript. Validates Wilkins's theory	Thanks for the comment!