



SDI Review Form 1.6

Journal Name:	<u>British Journal of Mathematics & Computer Science</u>
Manuscript Number:	Ms_BJMCS_29215
Title of the Manuscript:	MAYER's formula for black hole thermodynamics in constant magnetic field
Type of the 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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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	There were some errors found in several equations. It is understood that the author did considerable work; however, these changes should occur before the paper is accepted... The reason it is compulsory is that these may change values that will influence the quality of the analysis...	I have clarified this around formula (3.18) by adding some sentences
Minor REVISION comments	I wonder what is 'surface gravity' mentioned in keywords. <i>The theory shows that beyond a mass equal to two or three times the solar mass, the neutron star itself is unstable and continues to contract. I was under the impression that if the supergiant weighed more than 1.4 times the solar mass, it would result in a neutron while smaller weights would yield black holes... It will be impossible to prove either of us correct...</i> <i>Such an object can only be described by mathematical formulas of general relativity. They indicate that inside such a star, the relationship of space and time are reversed. As far as I am concerned, I have never heard this about space and time. Could the author add a sentence or so about this point...</i> Eq 3-19 and later on at two other partial derivatives were incorrect. A term should disappear. These impact the entire analysis.	I give a definition to the surface gravity at the location where i speak about the parameters ($\square$, J, Q, M, $\square$, $\square$, $\square$ and B) just before I present the organisation of the paper at the end of the introduction At line 9 in page 101, I write sentences clarifying the state of the black hole and the structure of the space-time with reference do to Novikov What concerns equation 3.19 I clarify it by adding some sentences around this formula and a supplementary not



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	Novikov mentions that nothing leaves the speed of light. Evidence only shows gravity. What would that say? Some also suggest if a supernova is greater than 1.4 times our sun, it would produce a neutron star. If smaller, it would be a black hole. Hard to tell... What is the overall objective of these terms? This thermodynamic model was not readily grasped. What are the trends? This should have been clarified before the conclusions section... The meaning of $\kappa - dA$ is questionable in terms of units... Is this correct?	numbered equation to explain (3.19) We have said a sentences about Novikov at line 9 page 101. I have also add a reference book (Frolov and Novikov) in which a detailed description of black hole is given I have added some explanation in the derivation of the Mayer relation before equation (3.69) and other sentences just before equation (3.74). Also some sentences clarified the meaning of the derivative of the entropy are written just before the conclusion Concerning κ-dA, I have explain this term in the begin of the page 103 juste after formula (3.1)
<u>Optional/General</u> comments		