



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_34248
Title of the Manuscript:	Hilbert scheme and multiplet matter content
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)
<u>Compulsory</u> REVISION comments	<p>What is claimed in the abstract and in the conclusion, i.e. the use of the Nakamura algorithm to compute the number of particle generations of instances of the standard model, i.e. the $1/3(1,1,1)$ and $1/3(1,2,10)$, was already done in a previous paper, co-authored by the same person who is writing this manuscript:</p> <p>D-Branes and Hilbert Schemes https://core.ac.uk/download/pdf/2550008.pdf</p> <p>The reviewer considers that the manuscript lacks scientific content, and it does not meet the requirement to be a sound review of known facts either, which are disconnected with the proposed purpose of the manuscript.</p> <p>That being said, Sections 5 and 7 are contained in Section 3 of the manuscript mentioned above, and the rest of the sections are very well known facts in geometry and topology for very particular cases, as explained in detail below.</p> <p>Section 2 gives a sketchy overview on the Euler characteristic in terms of the CW-decomposition of the Euclidean plane. It is not clear at all for the reviewer why the elliptical geometry needs to be mentioned, it is not relevant for the rest of the manuscript.</p> <p>Section 3 and 4 intend to give an outlook on the</p>	



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	<p>notion of orbifold, that can be found in any standard textbook on modern algebraic geometry, e.g. Thurston's book "The Geometry and Topology of 3-manifolds", Chapter 13.</p> <p>Section 5 and 7 are almost identical to Section 3 of D-Branes and Hilbert Schemes https://core.ac.uk/download/pdf/2550008.pdf</p> <p>Section 6 is also standard knowledge in complex geometry and it does not connect with the rest of the manuscript.</p> <p>In the conclusion is stated that "we can prove that the construction of the Hilbert scheme... is in accordance with Nakamura's algorithm". This was never proven.</p>	
<u>Minor</u> REVISION comments	<p>Line 68: These are not coverages of the Euclidean plane, these are just subregions.</p> <p>Line 70: Euler-Puankare-→ Euler-Poincare.</p> <p>Line 73: E is NOT the number of geodesic curves, it is the number of edges. For example, the diagonal of a square is a geodesic curve but is not an edge of the square.</p> <p>Line 130: Not ALL toric varieties are singular, e.g. the torus.</p>	
<u>Optional/General</u> comments		

Reviewer Details:

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