Erratum: Majorana physics through the Cabibbo haze

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The authors of this paper have made revisions to the original work. This revised version omits a section where a particular linear combination of dimension-five operators was mistakenly claimed to produce the special form of the Majorana matrix discussed in this paper. Although these changes do not affect the main results of the work, minor changes have been made throughout to reflect this omission.

In the Introduction, the paragraph of the original manuscript which read

We find one remarkable Majorana matrix compatible with μ - τ symmetry. It is generated by either a particular linear combination of two dimension-five operators with two familon fields, or a single dimension-six operator with three familon fields.

has been reworded to reflect the omission of the aforementioned linear combination. It now reads as

We find one remarkable Majorana matrix compatible with μ - τ symmetry. It is most elegantly generated by a single dimension-six operator with three familon fields, although it may also be obtained from special linear combinations of dimension-five operators

An additional paragraph has been added directly following which highlights the changes to section 5.1 of the previous paper:

In the original version of this paper, we mistakenly identified a particular linear combination of dimension-five operators and motivated it by an underlying theory. As this linear combination does not produce the Majorana matrix discussed in the text, we have deleted the relevant section in this revised version.

The major revisions of the original manuscript are to section 5.1. Eq. (5.1) of the original manuscript, which gave the erroneous linear combination, and the sentence preceding it have been removed. The original eq. (5.2), however, still gives the correct form for the Majorana matrix, and is now given as eq. (5.1) in the latest version. The text immediately following eq. (5.6) of the original manuscript, which outlined a possible underlying theory with which to justify the linear combination, has been removed. In its place, we have included a new paragraph which highlights that a linear combination capable of producing the new eq. (5.1) points to additional symmetries, and mention forthcoming work which will address this issue:

Any linear combination, with precise relations amongst different operators, points to additional symmetries. In a future publication, we explore how such linear combinations can arise naturally by enlarging the symmetry group from $Z_7 \rtimes Z_3$.

In the Conclusions section of the original manuscript, the sentence which originally read as

Our search yields exactly two dimension-five operators and one dimension-six operator, containing two and three familon fields, respectively, which single out the special matrix and are compatible with the light neutrino masses.

has been reworded slightly to be consistent with these changes. It now reads,

Our search suggests either a linear combination of several dimension-five operators or one dimension-six operator. They contain two or three familon fields, respectively, single out the special matrix, and are compatible with the light neutrino masses.

highlighting that several dimension-five operators may be possible, and categorizes the solutions by the number of familon fields instead of by particular linear combinations.

We have also corrected an erroneous sign in eq. (4.6), which originally read

$$\frac{|M_2| - |M_1|}{|M_1| + |M_2|} = \frac{1}{4}(r + 1)\lambda^4 + \mathcal{O}(\lambda^{12}),$$

to the correct

$$\frac{|M_2| - |M_1|}{|M_1| + |M_2|} = \frac{1}{4}(r - 1)\lambda^4 + \mathcal{O}(\lambda^{12}).$$

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