desirable properties, the chief of which is the absence of tree-level flavor-changing neutral currents, thus allowing the $SU(2)_R$ breaking scale to be as low as experimentally allowed by collider data. This became known in the literature as the alternative left-right model (ALRM) [4]. Here we explore further consequences of the DLRM, coming from the $SU(2)_R$ sector.

II. MODEL

Consider the gauge group $SU(3)_C \times SU(2)_L \times SU(2)_R \times U(1) \times S$, where S is a global symmetry such that the breaking of $SU(2)_R \times S$ will leave the combination $L = S - T_{3R}$ unbroken. This allows L to be a generalized lepton number which is conserved [1] in all interactions except those which are responsible for Majorana neutrino masses. The fermion content of the DLRM is given by

$$\psi_L = \begin{pmatrix} \nu \\ e \end{pmatrix}_L \sim (1,2,1,-1/2;1), \quad \psi_R = \begin{pmatrix} n \\ e \end{pmatrix}_R \sim (1,1,2,-1/2;1/2), \tag{1}$$

$$Q_L = \begin{pmatrix} u \\ d \end{pmatrix}_L \sim (3,2,1,1/6;0), \quad d_R \sim (3,1,1,-1/3;0), \tag{2}$$

$$Q_R = \begin{pmatrix} u \\ h \end{pmatrix}_R \sim (3,1,2,1/6;1/2), \quad h_L \sim (3,1,1,-1/3;1). \tag{3}$$

This basic structure was already known many years ago [5, 6] but without realizing that n is a scotino, i.e. a dark-matter fermion.

The scalar sector of the DLRM consists of one bidoublet and two doublets:

$$\Phi = \begin{pmatrix} \phi_1^0 & \phi_2^+ \\ \phi_1^- & \phi_2^0 \end{pmatrix}, \quad \Phi_L = \begin{pmatrix} \phi_L^+ \\ \phi_L^0 \end{pmatrix}, \quad \Phi_R = \begin{pmatrix} \phi_R^+ \\ \phi_R^0 \end{pmatrix}, \tag{4}$$

as well as two triplets for making ν and n massive separately:

$$\Delta_L = \begin{pmatrix} \Delta_L^+/\sqrt{2} & \Delta_L^{++} \\ \Delta_L^0 & -\Delta_L^+/\sqrt{2} \end{pmatrix}, \quad \Delta_R = \begin{pmatrix} \Delta_R^+/\sqrt{2} & \Delta_R^{++} \\ \Delta_R^0 & -\Delta_R^+/\sqrt{2} \end{pmatrix}. \tag{5}$$

Their assignments under S are listed in Table I.

The Yukawa terms allowed by S are then $\overline{\psi}_L \Phi \psi_R$, $\overline{Q}_L \tilde{\Phi} Q_R$, $\overline{Q}_L \Phi_L d_R$, $\overline{Q}_R \Phi_R h_L$, $\psi_L \psi_L \Delta_L$, and $\psi_R \psi_R \Delta_R$, whereas $\overline{\psi}_L \tilde{\Phi} \psi_R$, $\overline{Q}_L \Phi Q_R$, and $\overline{h}_L d_R$ are forbidden. Hence m_e, m_u come from