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\[\beta\beta\)-decay nuclear matrix elements and half-life predictions in the
interacting boson model with isospin restoration\]

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Recently, we have introduced a method for isospin restoration in the calculation of
nuclear matrix elements (NME) for $0\nu\beta\beta$ and $2\nu\beta\beta$ decay within the framework
of IBM-2 [1]. With this method, we calculate NME for all processes of interest in
$0\nu\beta^-\beta^-$, $2\nu\beta^-\beta^-$, and in $0\nu\beta^+\beta^+$, $0\nu\beta^+EC^+$, $0\nu\beta ECEC$, $2\nu\beta^+\beta^+$, $2\nu\beta^+EC$, and
$2\nu ECEC$. With isospin restoration, we find that the Fermi (F) matrix elements for
$2\nu\beta\beta$ vanish, as expected, and those for $0\nu\beta\beta$ are considerably reduced. By com-
bining these matrix elements with recently calculated phase-space factors [2-4] we
are able to make our most accurate half-life predictions for all discussed processes.


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