



## Poster session 4 – Friday 8 July

### P4.076 Neutrinoless double beta decay, nuclear environment and structure

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The recent progress in theoretical description of the  $0\nu\beta\beta$ -decay is shortly reviewed. A novel mechanism of the  $0\nu\beta\beta$ -decay associated with nuclear environment is presented [1]. The light and sterile neutrino exchange mechanisms of the  $0\nu\beta\beta$ -decay are analyzed [2]. The  $0\nu\beta\beta$ -decay with the inclusion of the right-handed leptonic and hadronic currents and by assuming small neutrino masses is revisited [3]. The possibility to discriminate between different  $0\nu\beta\beta$ -decay mechanisms by using data on  $0\nu\beta\beta$ -decay half-lives of different nuclei is addressed [4]. The present-day results of the calculation of the  $0\nu\beta\beta$ -decay NMEs are discussed, in particular those achieved within QRPA with partial restoration of the isospin symmetry [5]. Subject of interest are the accuracy and reliability of calculated NMEs associated with different  $0\nu\beta\beta$ -decay mechanisms [6]. An impact of the quenching of the axial-vector coupling constant on double-beta decay processes is addressed [7]. A connection between the  $2\nu\beta\beta$ -decay and  $0\nu\beta\beta$ -decay matrix elements is analyzed.

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