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## MATEMATICAL MODELING OF RESONANT PROCESSES IN CONFINED GEOMETRY OF ATOMIC AND ATOM-ION TRAPS

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MATEMATICAL MODELING OF RESONANT PROCESSES IN CONFINED GEOMETRY OF ATOMIC AND ATOM-ION TRAPS

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Mathematical modelling of resonant processes in confined geometry of optical and electromagnetic traps is Our talk is devoted to computational aspects of the developed theoretical models, based on the nondirect

- 1. V.S.Melezhik, J.I.Kim, and P.Schmelcher, Phys. Rev. A76 (2007) 053611-1-15.
- 2. S.Saeidian, V.S.Melezhik, and P.Schmelcher, Phys. Rev. A77 (2008) 042721-1-15.
- 3. V.S.Melezhik, Lecture Notes in Computer Science 7125, Springer (2012) pp. 94-107.
- 4. V.S.Melezhik, EPJ Web of Conferences 108 (2016) 01008-1-9.
- 5. V.S.Melezhik and P.Schmelcher, New J. Phys. 11 (2009) 073031-1-10.
- 6. S. Sala et al. Phys. Rev. Lett. 110 (2013) 203202-1-5
- 7. E. Haller at al. Phys. Rev. Lett. 104 (2010) 153203-1-4.
- 8. V.S. Melezhik, ICNAAM 2012, AIP Conf. Proc. 1479 (2012) pp.1200-1203.
- 9. V.S. Melezhik, Phys. Atom. Nucl. 77 (2014) pp.446-452.
- 10. P. Giannakeas, V.S. Melezhik, and P. Schmelcher, Phys.Rev.Lett. 111 (2013) 183201-1-5.
- 11. V.S. Melezhik and A. Negretti, Phys. Rev. A94 (2016) 022704-1-8.
- 12. D. Leibfried, R.Blatt, C.Monroe, and D.Wineland, Rev. Mod. Phys. 75 (2003)pp.281-324.

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