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M T Mustafa* (tahir.mustafa@qu.edu.qa), Mathematics, Statistics and Physics, Qatar University, Doha, 2713, Qatar. *Exact solutions and symmetry classification of wave equation on surfaces of revolution.*

A classification of surfaces of revolution according to their isometries was carried out by Eisenhart in 1925. We investigate the corresponding classification question for symmetries of wave equation, and obtain a complete classification of surfaces of revolution according to the symmetries of wave equation. The minimal symmetry algebras are utilized in a unified manner to obtain the solutions, in general integral form, for the wave equation on any surface of revolution. In particular, we compute examples of exact solutions of wave equation on surfaces in different classes of classification including surfaces admitting only minimal symmetry algebra as well as surfaces admitting extra symmetries. (Received August 07, 2015)