

## 拉盖尔多项式解点堆动力学方程的尝试

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**摘要** <正> 一、公式推导点堆积分方程如下:

**关键词** [拉盖尔多项式](#) [点堆动力学方程](#) [追赶公式](#)

**分类号**

### SOLUTION OF POINT REACTOR KINETIC EQUATIONS BY USE OF LAGUERRE POLYNOMIALS

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**Abstract** Point reactor kinetic equations with six groups of delayed neutrons are solved by use of the expansion of neutron population density and delayed neutron precursors in forms of Laguerre Polynomials. The reactivity insertion into reactor is permitted to vary in time such as from zero to second powers. Under the condition of constant reactivity insertion, the derived coefficient determinant with a triangular form is convenient to be solved. For the reactivity insertion varied in time, the forward-backward formulae are derived so as to save calculation time in the higher order approximations. At last, the comparisons of results with those of the exact method as well as weighted residue method are shown to be satisfactory.

**Key words** [Laguerre polynomials](#) [Point reactor](#) [kinetic equations](#) [The forward-backward formula](#)

DOI

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