

[Nabiev, Ibrahim M.](#)

Determination of the diffusion operator on an interval. (English) Zbl 1302.34030
[Colloq. Math.](#) 134, No. 2, 165-178 (2014).

The inverse spectral problem is studied for the differential equation

$$y'' + (\lambda^2 - 2\lambda p(x) - q(x))y = 0, \quad x \in (0, \pi),$$

with the boundary conditions

$$y(\pi) = e^{it}y(0), \quad y'(\pi) = e^{it}y'(0).$$

Sufficient conditions for the solvability of the inverse problem are provided along with an algorithm for the solution.

Reviewer: [Vjacheslav Yurko \(Saratov\)](#)

MSC:

- [34A55](#) Inverse problems involving ordinary differential equations
- [34B24](#) Sturm-Liouville theory
- [47E05](#) General theory of ordinary differential operators (should also be assigned at least one other classification number in Section 47-XX)

Cited in **2** Documents

Keywords:

[differential operators](#); [inverse spectral problems](#)

Full Text: [DOI](#)