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**Explicit solutions for a system of nonlinear Schrödinger equations with delta functions as initial data.** (English) [Zbl 1424.35312](#)

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The authors study a system of nonlinear Schrödinger equations with initial conditions depending on delta functions. They seek a solution of a particular form. By deriving a conservation law, they obtain an explicit solution of this form by using only elementary calculus. The global behaviour of this solution is easily deduced from the explicit form.

Reviewer: [Anthony D. Osborne \(Keele\)](#)

**MSC:**

[35Q55](#) NLS equations (nonlinear Schrödinger equations)

[34A05](#) Explicit solutions, first integrals of ordinary differential equations

Cited in **1** Document

**Keywords:**

[Nonlinear Schrödinger equation](#); [delta function](#); [explicit solution](#); [global behaviour](#)