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**Difference schemes for a problem of laser thermochemistry in gases.** (English. Russian original)

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Comput. Math. Math. Phys. 32, No. 11, 1593-1603 (1992); translation from Zh. Vychisl. Mat. Mat. Fiz. 32, No. 11, 1767-1777 (1992).

Summary: Difference schemes for solving a system of equations which describe the interaction between optical radiation and a chemically active gaseous medium are considered. The convergence of the solution of the difference problem to a fairly smooth solution of the differential problem is proved.

**MSC:**

65Z05 Applications to the sciences

65M06 Finite difference methods for initial value and initial-boundary value problems involving PDEs

35Q80 Applications of PDE in areas other than physics (MSC2000)

92E20 Classical flows, reactions, etc. in chemistry

78A40 Waves and radiation in optics and electromagnetic theory

80A32 Chemically reacting flows

**Keywords:**

laser thermo-chemistry; difference schemes; chemically active gas mixture; optical radiation; convergence