

# GLOBAL SOLUTION FOR THE COAGULATION EQUATION OF WATER DROPS IN FALL WITH THE HORIZONTAL WIND\*

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## Abstract

We consider the integro-differential equation describing the coagulation process of water drops falling in the air in a three-dimensional domain with presence of a horizontal wind. Under suitable hypothesis and some conditions we prove the existence of the stationary solution thus the global solution using the techniques developed in [10] and [2].

MSC: 35Q35, 76N10.

**keywords:** Equation of air motion, integro-differential equation, global solution.

## 1 Introduction

We consider the equation which describes the displacement of drops by the gravitational force and by the horizontal wind as well as the coagulation

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