

Table of Contents

SPRAY 3.1 - General Description and User's guide	2
1 SPRAY 3.1 code	2
2 SPRAY 3.1 launching instructions	2
3 User interface	2
4 Examples of ASCII input files	3

SPRAY 3.1 - General Description and User's guide

1 SPRAY 3.1 code

- [1.1 General description](#)
- [1.2 Overview of the code](#)
 - [1.2.1 Description of the block diagram](#)
- [1.3 Equations of motion](#)
 - [1.3.1 Thomson's 1984 scheme](#)
 - [1.3.2 Thomson's 1987 scheme](#)
- [1.4 Implemented equations](#)
 - [1.4.1 Thomson's 1984 Scheme](#)
 - [1.4.1.1 Scheme A](#)
 - [1.4.1.2 Scheme B](#)
 - [1.4.1.3 Scheme C](#)
 - [1.4.2 Thomson's 1987 scheme](#)
 - [1.4.2.1 Scheme for horizontal and vertical velocity fluctuations](#)
 - [1.4.2.1.1 Bi-Gaussian PDF](#)
 - [1.4.2.1.2 Gram-Charlier PDF](#)
 - [1.4.2.2 Scheme for horizontal total velocity and vertical fluctuations](#)
 - [1.4.2.3 Scheme for horizontal and vertical total velocity](#)
 - [1.4.2.4 Scheme for low-wind conditions and velocity fluctuations](#)
 - [1.4.2.5 Scheme for low-wind condition and total velocities](#)
 - [1.4.3 Particles motion above the PBL](#)
- [1.5 Topography and vertical coordinates](#)
- [1.6 Boundary conditions](#)
- [1.7 The TURKEY code](#)
 - [1.7.1 Vertical Profiles of the turbulence quantities](#)
 - [1.7.2 Land-use data](#)
- [1.8 Plume rise](#)
 - [1.8.1 Plume rise for stacks](#)
 - [1.8.1.1 Buoyant sources](#)
 - [1.8.1.2 Neutral sources](#)
 - [1.8.2 Plume rise for flares](#)
 - [1.8.3 Plume rise for fires](#)
- [1.9 Dry deposition](#)
- [1.10 Gravitational settling](#)
- [1.11 Wet deposition](#)
- [1.12 Radioactive decay](#)

2 SPRAY 3.1 launching instructions

- [2.1 envspray file](#)
- [2.2 filspray file](#)

3 User interface

- [3.1 Spatial structure of the model](#)
- [3.2 Temporal structure of the model](#)
- [3.3 Input files](#)
 - [3.3.1 Parameters File](#)
 - [3.3.2 SPRAY.DAT auxiliary file](#)

- [3.3.3 Emission Files](#)
- [3.3.4 3D Meteorological file](#)
- [3.3.5 'Bin' files general structure](#)
- [3.3.6 3D meteorological file content](#)
- [3.3.7 TURKEY input files](#)

[3.4 Output files](#)

- [3.4.1 Log file](#)
- [3.4.2 Particles file](#)
- [3.4.3 Turbulence output file](#)
- [3.4.4 Concentration and deposition file](#)
- [3.4.5 Checkpoint/restart files](#)

[4 Examples of ASCII input files](#)