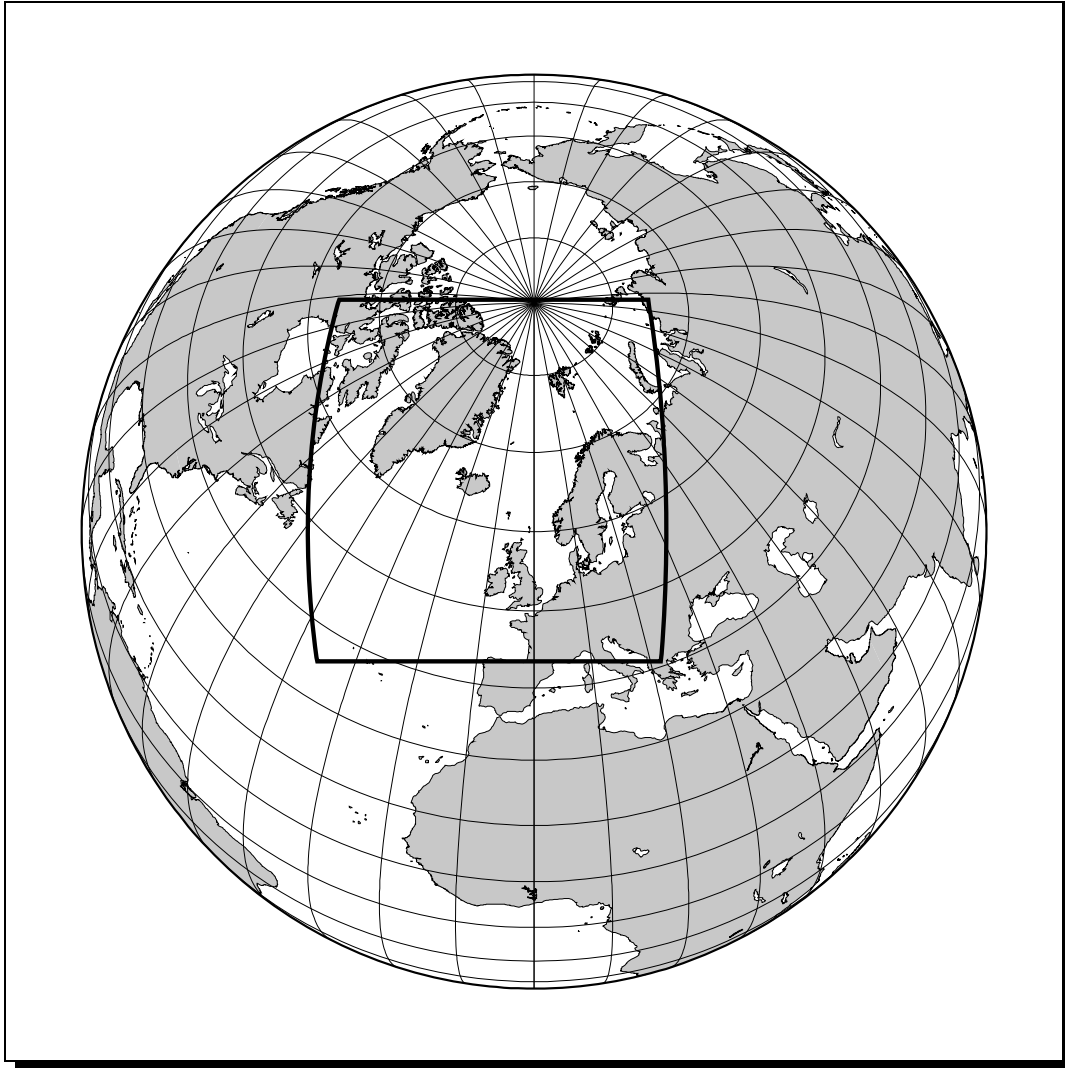# Numerical modeling of particle tracing

## — a prognostic tool in marine geology

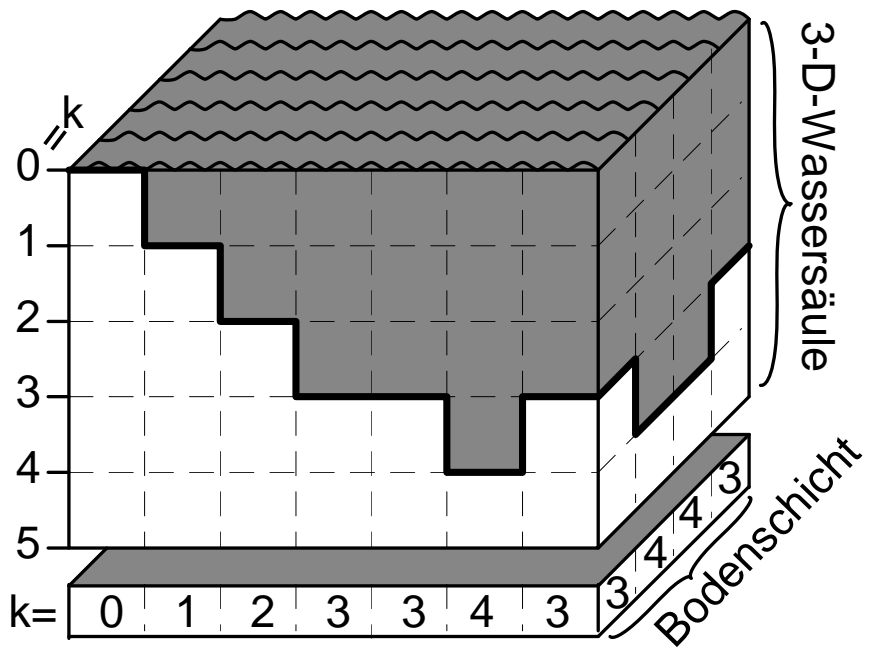Bernd J. Haupt and Karl Stattegger

The model area of SENNA and PATRINNA.

SENNA:      **SE**dimentation (Erosion, Transport, and Deposition)
in the **N**orthern **N**orth **A**tlantic

PATRINNA: **PA**rticle **Tr**acing **I**n the **N**orthern **N**orth **A**tlantic

<u>Structure of the talk</u>

a) What is meant to be modelled and what results do the two models provide?

b) What requirements does the model have to meet?

c) Description of the models SENNA und PATRINNA?: flow chart

d) In what way are the critical velocities at the beginning of the bottom and suspension transport considered?

e) Model area, grid resolution, topography of the model.

f) Two modeled scenarios: Rezent/LGM

g) Problematical areas of the model and *one* possible solution.

3-D-Wassersäule

=k

0

1

2

3

4

5

Bodenschicht

k=  | 0 | 1 | 2 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 3

3-D-Modell

2-D-„Bodenschicht"