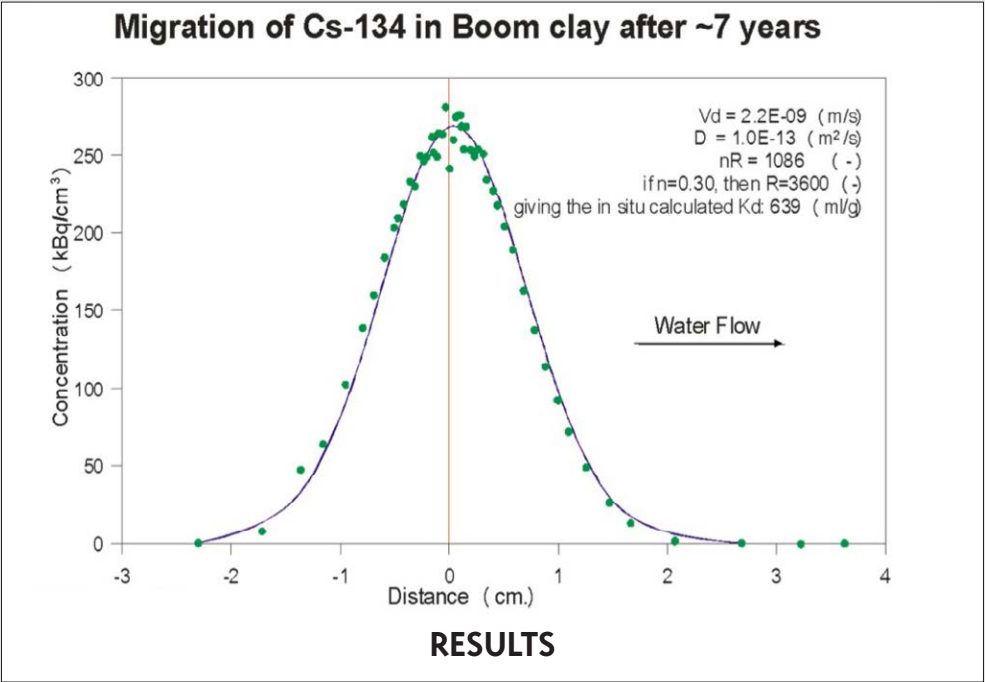
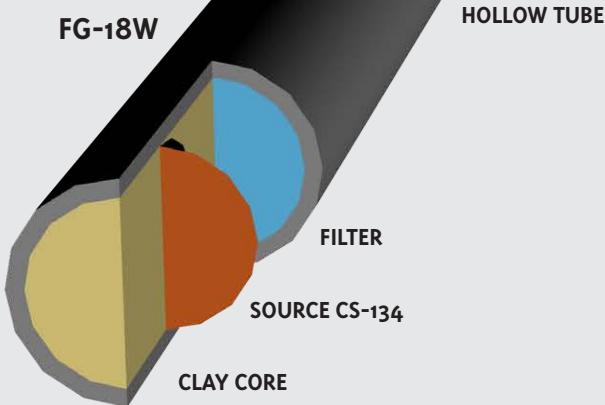


MIGRATION

1987 - 1994

Cs-134
Migration percolation experiment



GOAL

Demonstration of migration behaviour of retarded radionuclides in the Boom Clay.

July 1987
Installation of the experimental set-up

June 1994
Retrieval of the clay core

DETERMINATION OF DIFFUSION
PARAMETERS FOR ¹³⁴CS UNDER
IN-SITU CONDITIONS

CONFIRMATION OF RESULTS OBTAINED
IN LABORATORY EXPERIMENTS
(ON SURFACE)

MIGRATION

1985 - present

HTO CP₁
Tritium injection at Concrete Plug 1



GOAL

Validation of model and parameter values of flow and transport modelling of radionuclides in Boom Clay.

1985

Installation of multi-piezometer tube

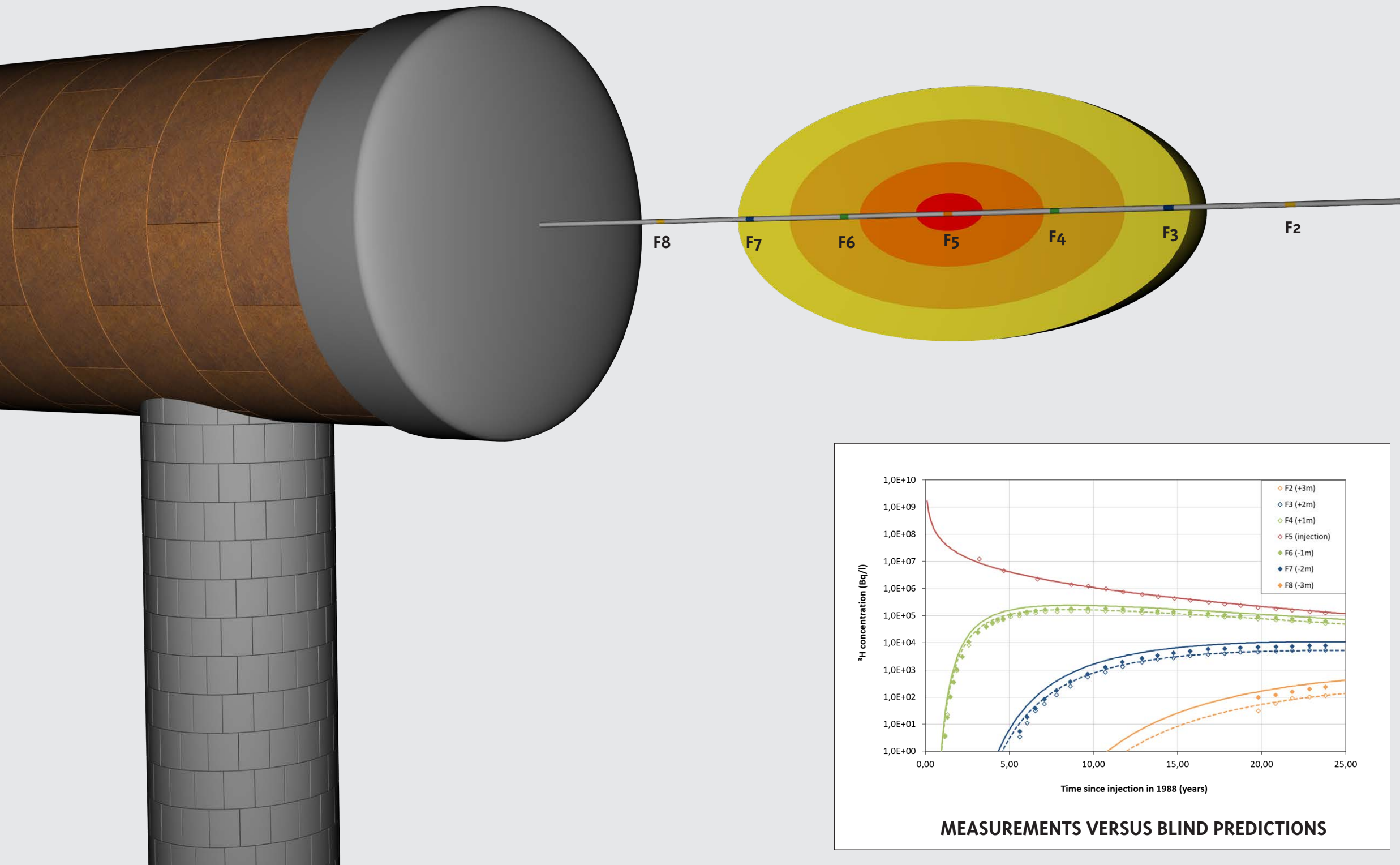
1988

Injection of 1GBq HTO in central filter

DEMONSTRATION THAT SOLUTE TRANSPORT IS DIFFUSION DOMINATED

PROOF THAT TRANSPORT PARAMETERS OBTAINED ON A SMALL SCALE ARE RELEVANT FOR THE LARGER SCALE

UNIQUE TEST CASE FOR MODEL AND PARAMETER VALIDATION



MIGRATION

1995 - present

TRIBICARB-3D
TRitium and BICARBonate migration in 3D



GOAL

Study of the migration of radioactive substances in anisotropic Boom Clay.

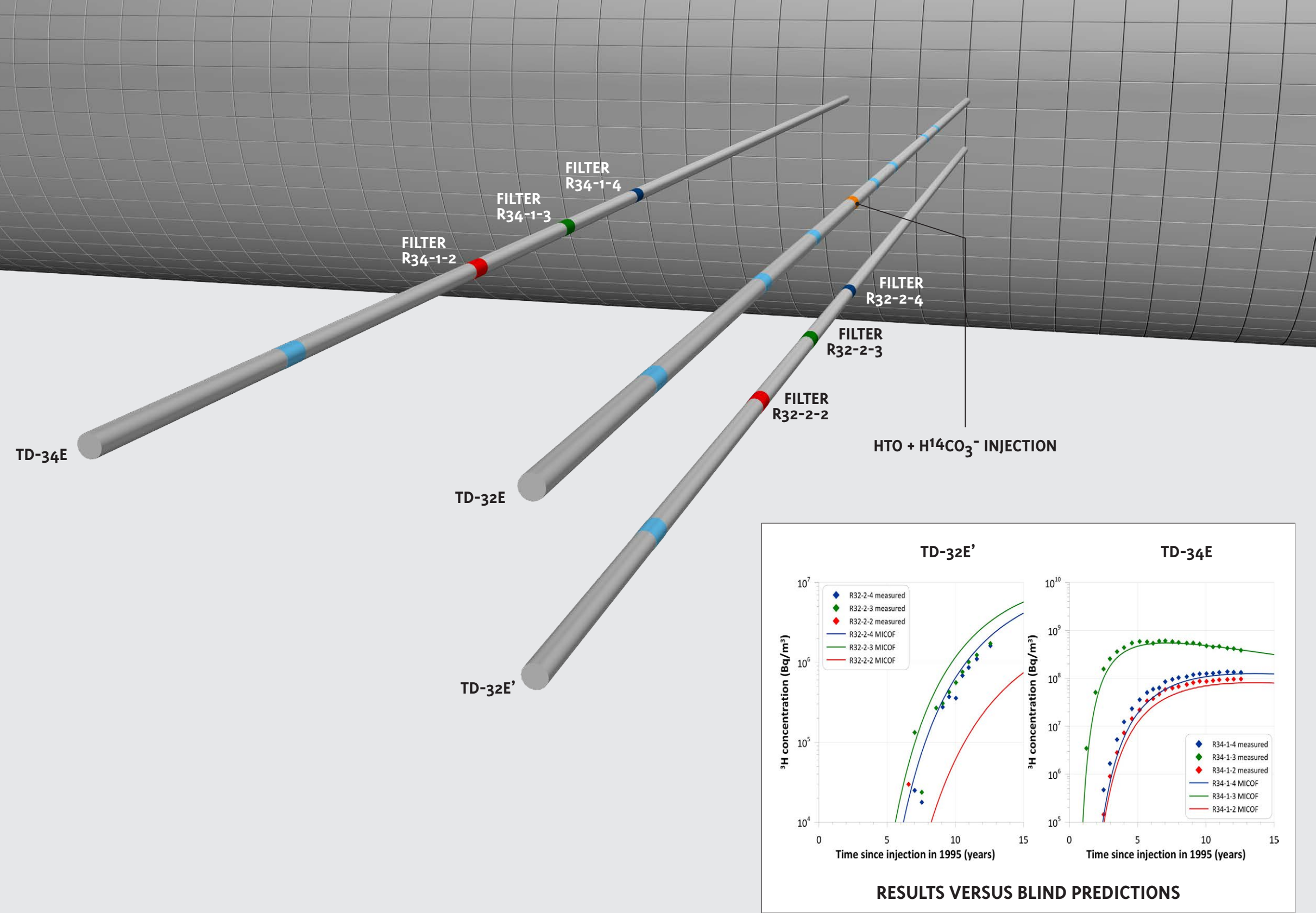
1995
Installation of the experimental set-up

1995
HTO and $\text{H}^{14}\text{CO}_3^-$ injected to study migration parallel and perpendicular to the Boom Clay layering

CONFIRMATION THAT SOLUTE TRANSPORT IS DIFFUSION DOMINATED

PROOF THAT TRANSPORT PARAMETERS OBTAINED ON A SMALL SCALE ARE RELEVANT FOR THE LARGER SCALE

UNIQUE TEST CASES FOR MODEL AND PARAMETER VALIDATION



MIGRATION

1997 - present

TRANCOM

Large scale injection with C-14 labelled organic matter



GOAL

Study of the long-term transport behaviour of dissolved organic matter colloids in Boom Clay.

1997
Installation of the experimental set-up

June 1997
Injection of ¹⁴C-labelled dissolved organic matter in filter 8 in horizontal piezometer

June 1998
Injection of ¹⁴C-labelled dissolved organic matter in filter 8 in vertical piezometer

TRANSPORT OF COLLOIDS IN BOOM CLAY IS SUBJECT TO FILTRATION PROCESSES

