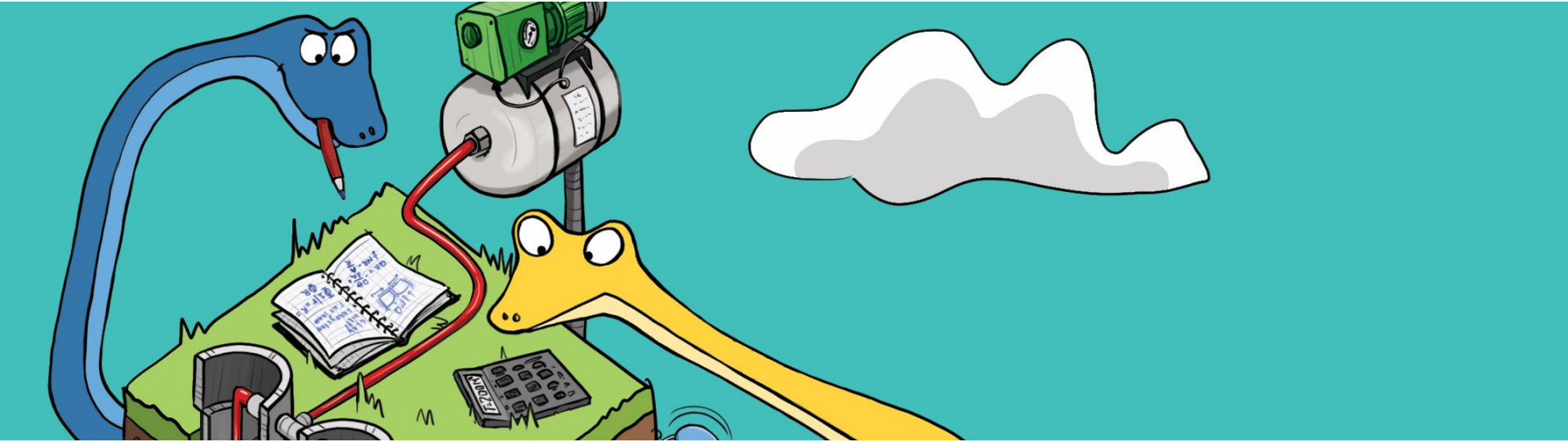

Pomptest met TTim

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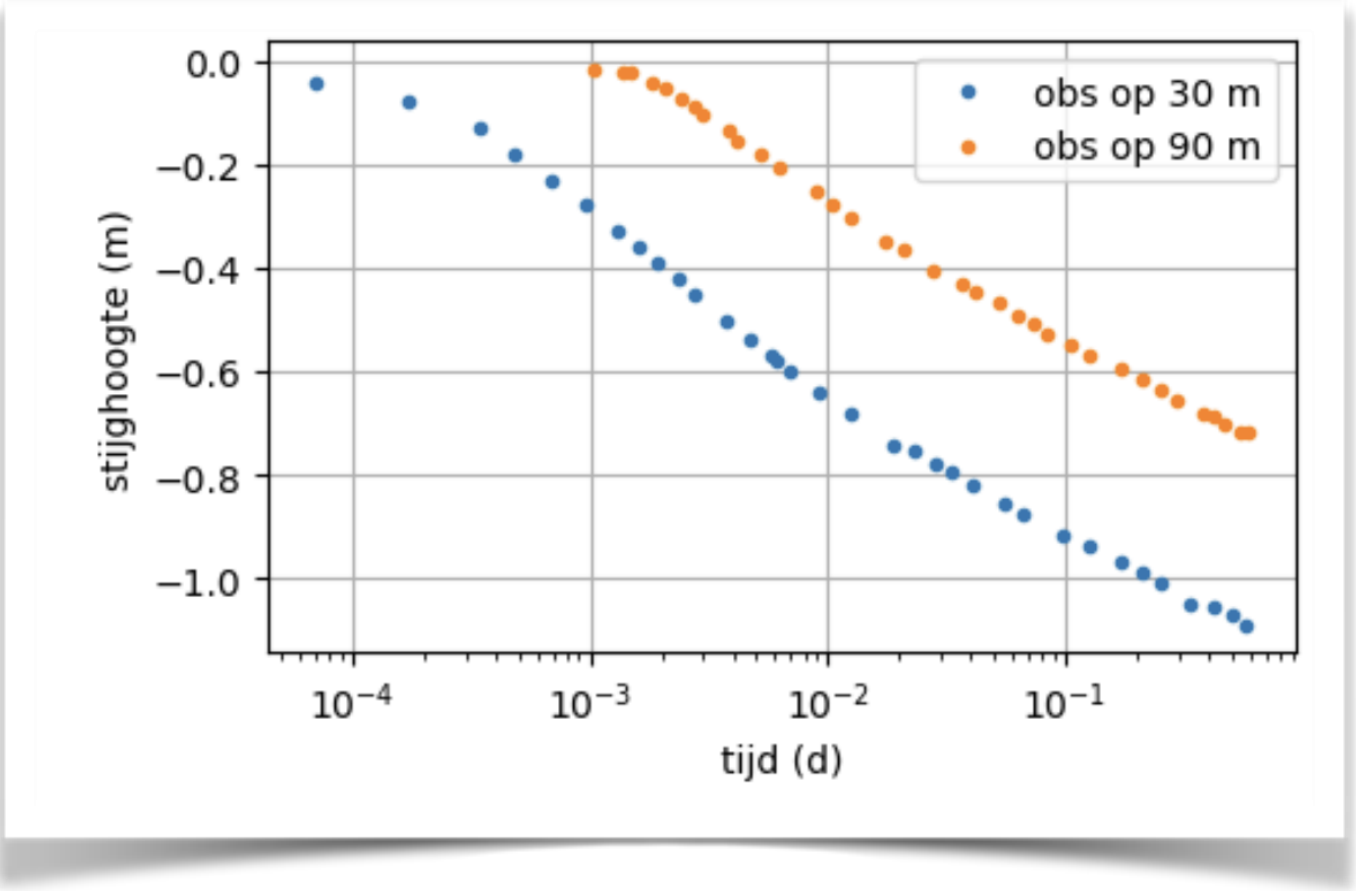
Pomptest Oude Korendijk. Metingen in twee peilbuizen



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ttim model met 1 put in een confined aquifer

```
ml = ttm.ModelMaq(kaq=60, # hydraulic conductivity
                  z=[-18, -25],
                  Saq=1e-4, # storage coefficient
                  tmin=1e-5,
                  tmax=1)
w = ttm.Well(ml,
             xw=0,
             yw=0,
             rw=0.2,
             tsandQ=[(0, 788)],
             layers=0)
```

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Laad de data

```
# time and drawdown of piezometer 30m away from pumping well
data1 = np.loadtxt("data/piezometer_h30.txt", skiprows=1)
t1 = data1[:, 0] / 60 / 24  # convert min to days
h1 = data1[:, 1]
r1 = 30
# time and drawdown of piezometer 90m away from pumping well
data2 = np.loadtxt("data/piezometer_h90.txt", skiprows=1)
t2 = data2[:, 0] / 60 / 24  # convert min to days
h2 = data2[:, 1]
r2 = 90
```

Maak Calibrate object, voeg parameters toe, voeg observatie reeksen toe, en fit het model

```
ca = ttm.Calibrate(ml)
ca.set_parameter(name="kaq0", initial=10) # k in layer 0
ca.set_parameter(name="Saq0", initial=1e-4) # S in layer 0
ca.series(name="obs1", x=r1, y=0, t=t1, h=h1, layer=0)  # Obs well 1
ca.series(name="obs2", x=r2, y=0, t=t2, h=h2, layer=0)  # Obs well 2
ca.fit() # fit model
```

```
....................................
Fit succeeded.
```

	optimal
kaq0	66.089291
Saq0	0.000025

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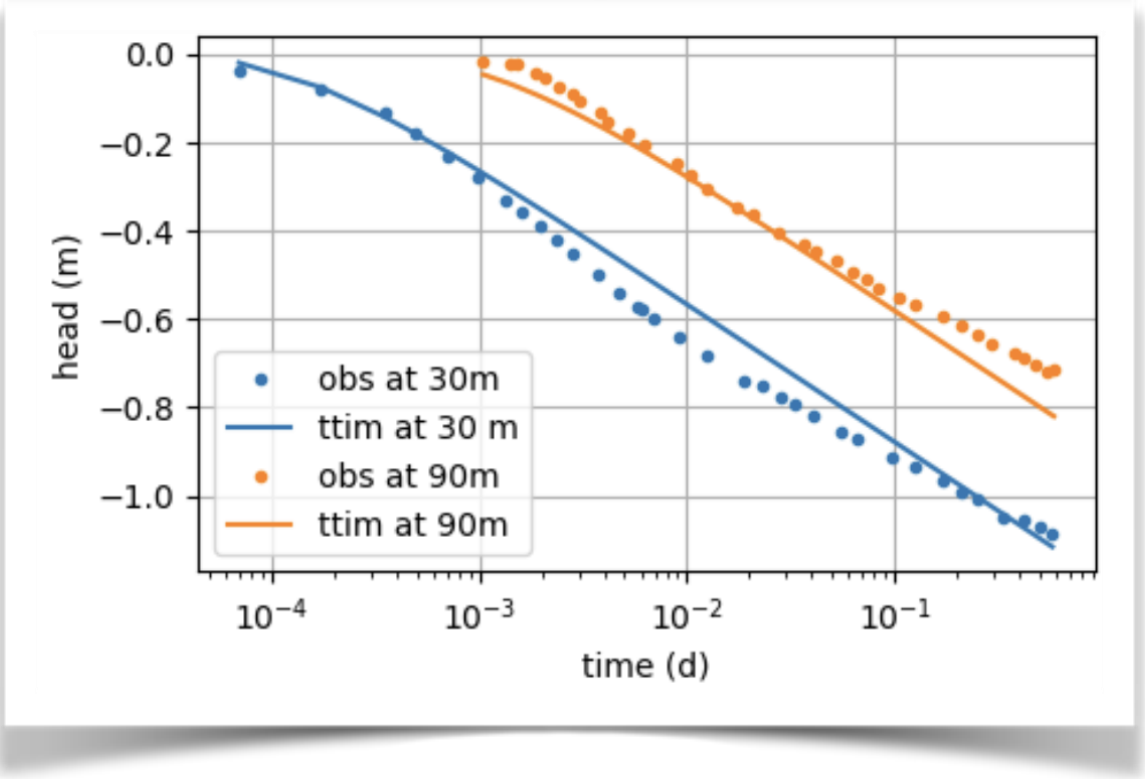
Resultaten pomptest Oude Korendijk



	k [m/d]	Ss [1/m]	RMSE
TTim	66.089291	0.000025	0.050060
AQTESOLV	66.086000	0.000025	0.050060
MLU	66.850000	0.000024	0.050830

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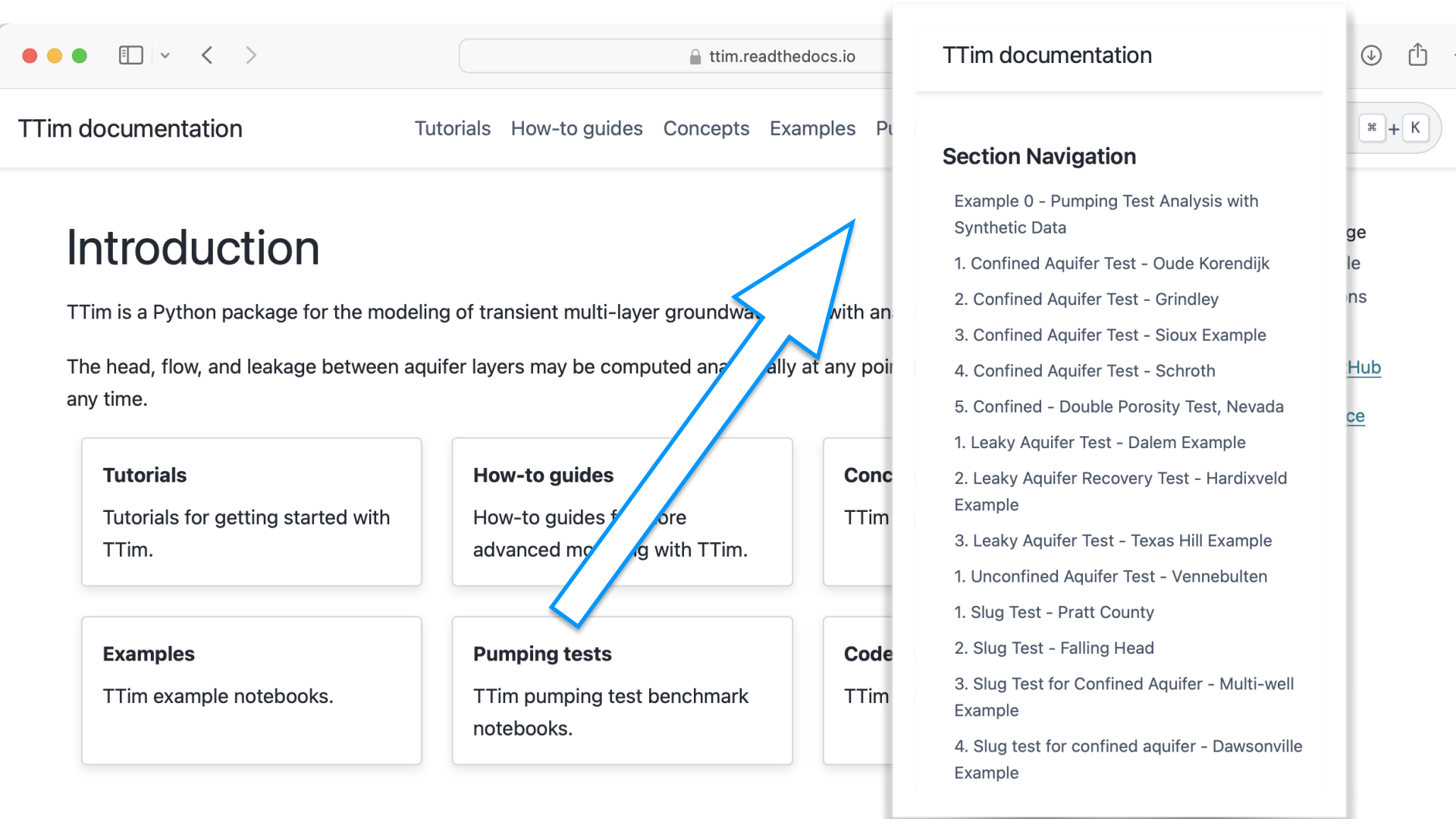
`ttim` heeft vele calibratie opties

- Pomptests en slug tests
- Arbitrair aantal lagen
- Zelfde parameters over meerdere lagen
- Putten en peilbuizen in meerdere lagen
- Alle `ttim` elementen kunnen toegevoegd worden


ttim.readthedocs.io
TTim documentation
Tutorials
How-to guides
Concepts
Examples
Introduction
TTim is a Python package for the modeling of transient multi-layer groundwa with an
The head, flow, and leakage between aquifer layers may be computed ana ally at any poi
any time.
Tutorials
Tutorials for getting started with TTim.
How-to guides
How-to guides f ore advanced mo g with TTim.
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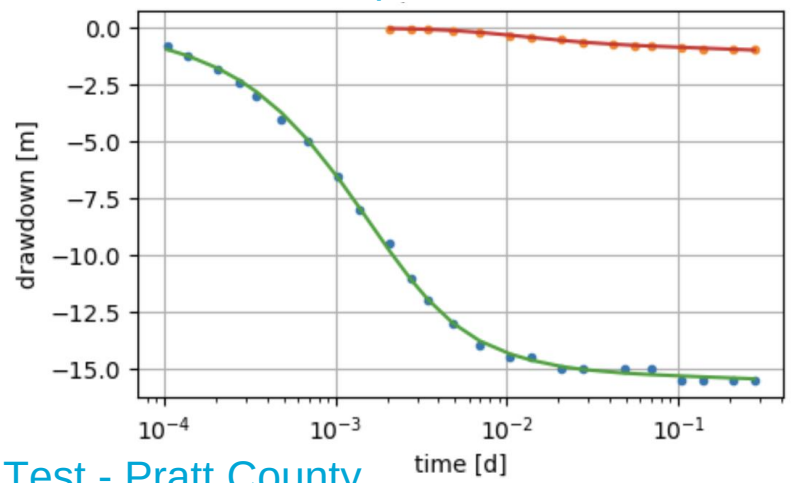
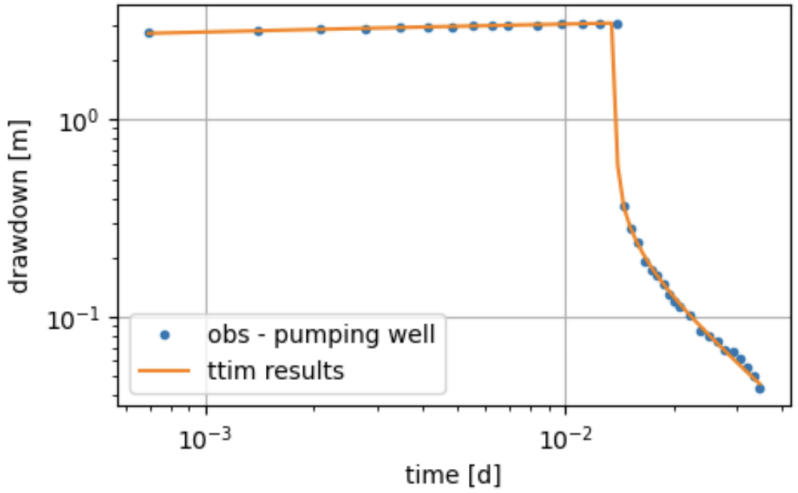
1. Slug Test - Pratt County
2. Slug Test - Falling Head
3. Slug Test for Confined Aquifer - Multi-well Example
4. Slug test for confined aquifer - Dawsonville Example

Examples from the website ttim.readthedocs.io

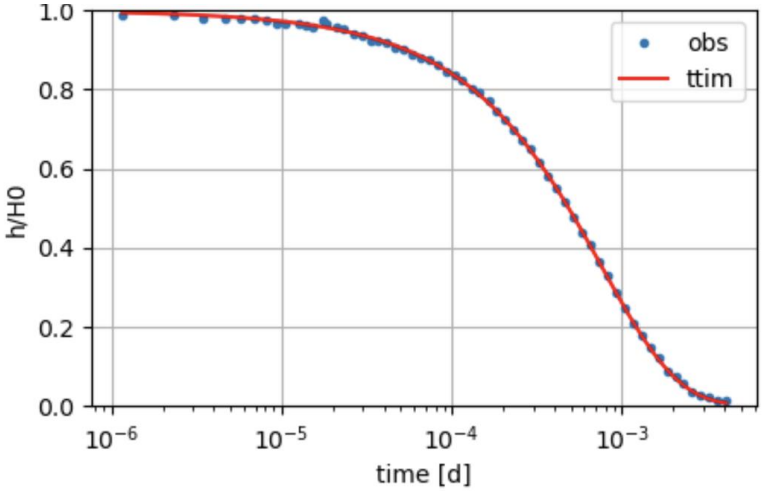
Confined Aquifer Test - Schroth



Leaky Aquifer Recovery Test - Hardixveld



Slug Test - Pratt County



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