We have 2 set of examples in the examples folder:

1. Settings\_case1 to settings\_case5:

These examples are from SCA2016-006 (“COMPARISON OF FOUR NUMERICAL SIMULATORS

FOR SCAL EXPERIMENTS”)

Case 1: Steady-state imbibition with smooth Pc curve

Case 2: Steady-state imbibition with sharp Pc curve

Case 3: Unsteady-state imbibition with smooth Pc curve

Case 4: Unsteady-state imbibition without capillary pressure (Buckley-Leverett)

Case 5: Primary Drainage centrifuge experiment

We have verified our simulator using these cases. The verification can be seen in our paper Amrollahinasab et al 2022.

1. Settings SCA2011\_35

As the name suggests these are the cases from SCAL2011\_35 simultaneous history matching of an unsteady state and centrifuge imbibition experiments. Simultaneous in the sense that both experiments are history matched at the same time to get a more comprehensive interpretation of Kr and Pc curve.

For further info and verification of history matching modules please refer to Amrollahinasab et al 2022.