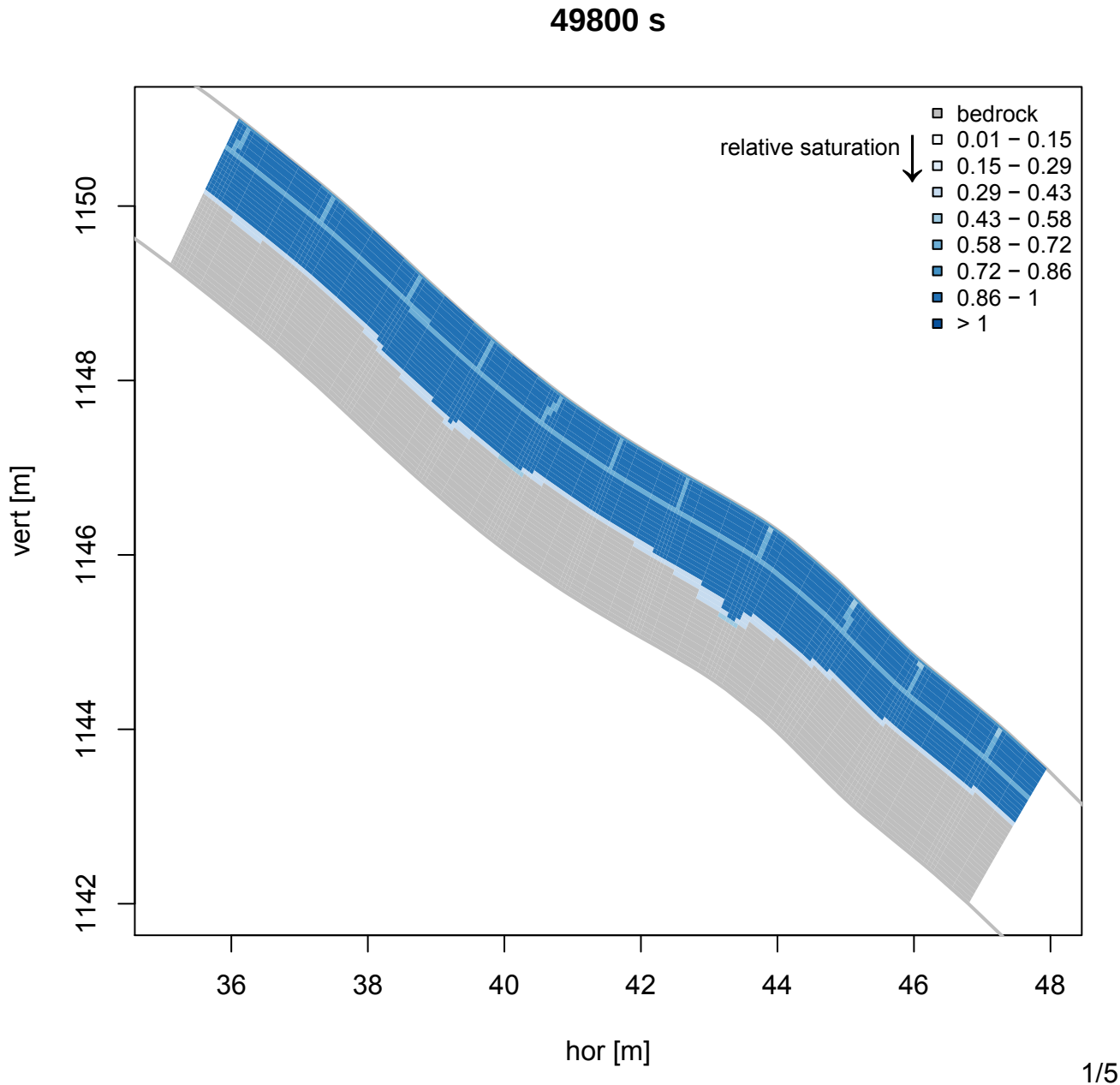
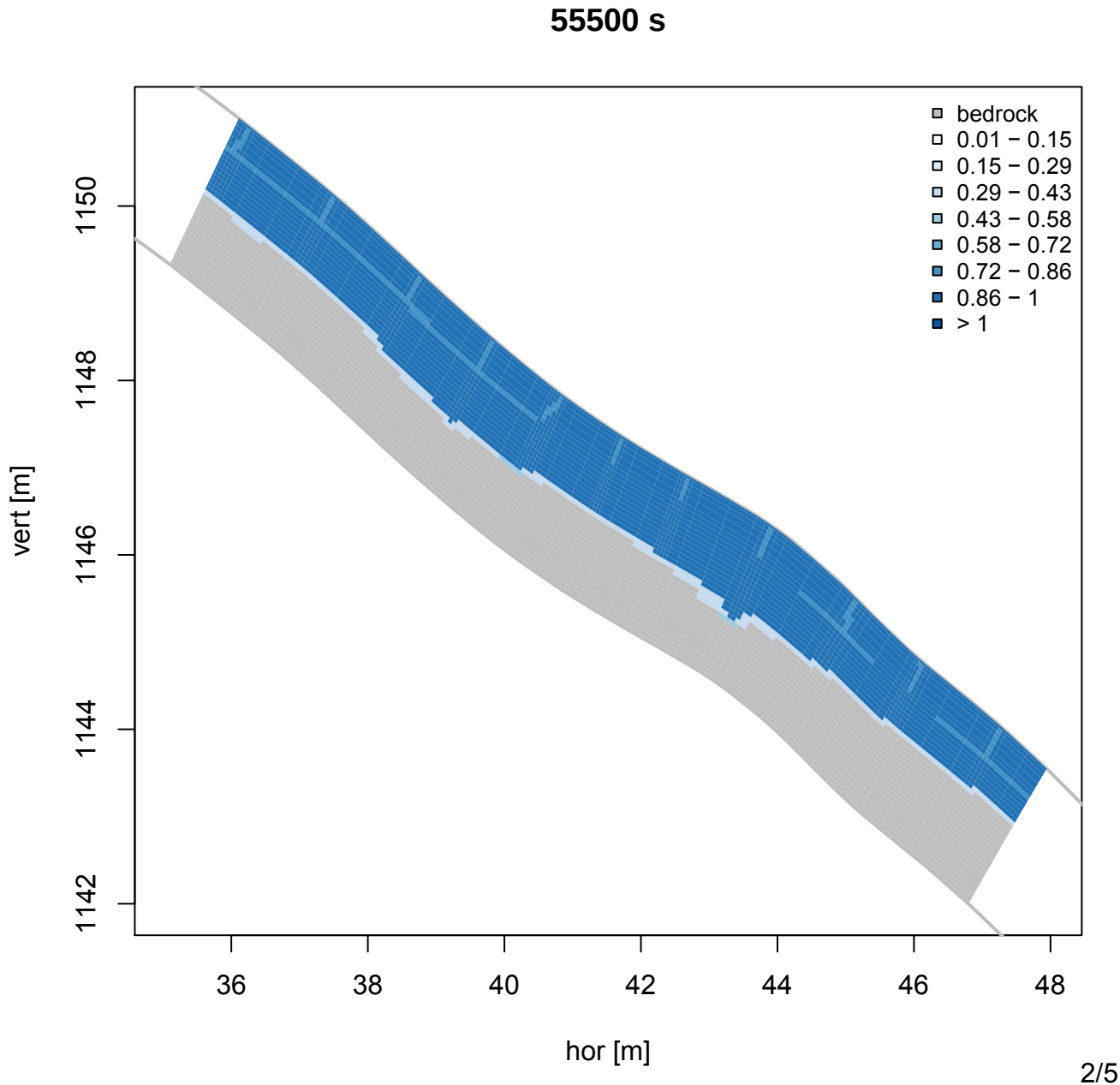
**J.Wienhöfer and E. Zehe**

**Predicting subsurface stormflow response of a forested hillslope – the role of connected flow paths**

## Supplement: Simulated hydrological dynamics in connected flow structures

This supplement presents a sequence of images to illustrate the water dynamics simulated with the approach of spatially explicit incorporation of distinctive preferential flow structures in the hydrological process model CATFLOW. The figures show the simulated development of relative water saturation using the example of a simulation with vertical and lateral structures, a litter layer, a soil-bedrock interface and variable bedrock topography.


49800 s
bedrock
relative saturation
0.01 − 0.15
0.15 − 0.29
0.29 − 0.43
0.43 − 0.58
0.58 − 0.72
0.72 − 0.86
0.86 − 1
> 1
vert [m]
1150
1148
1146
1144
1142
36
38
40
42
44
46
48
hor [m]


55500 s
bedrock
0.01 − 0.15
0.15 − 0.29
0.29 − 0.43
0.43 − 0.58
0.58 − 0.72
0.72 − 0.86
0.86 − 1
> 1
vert [m]
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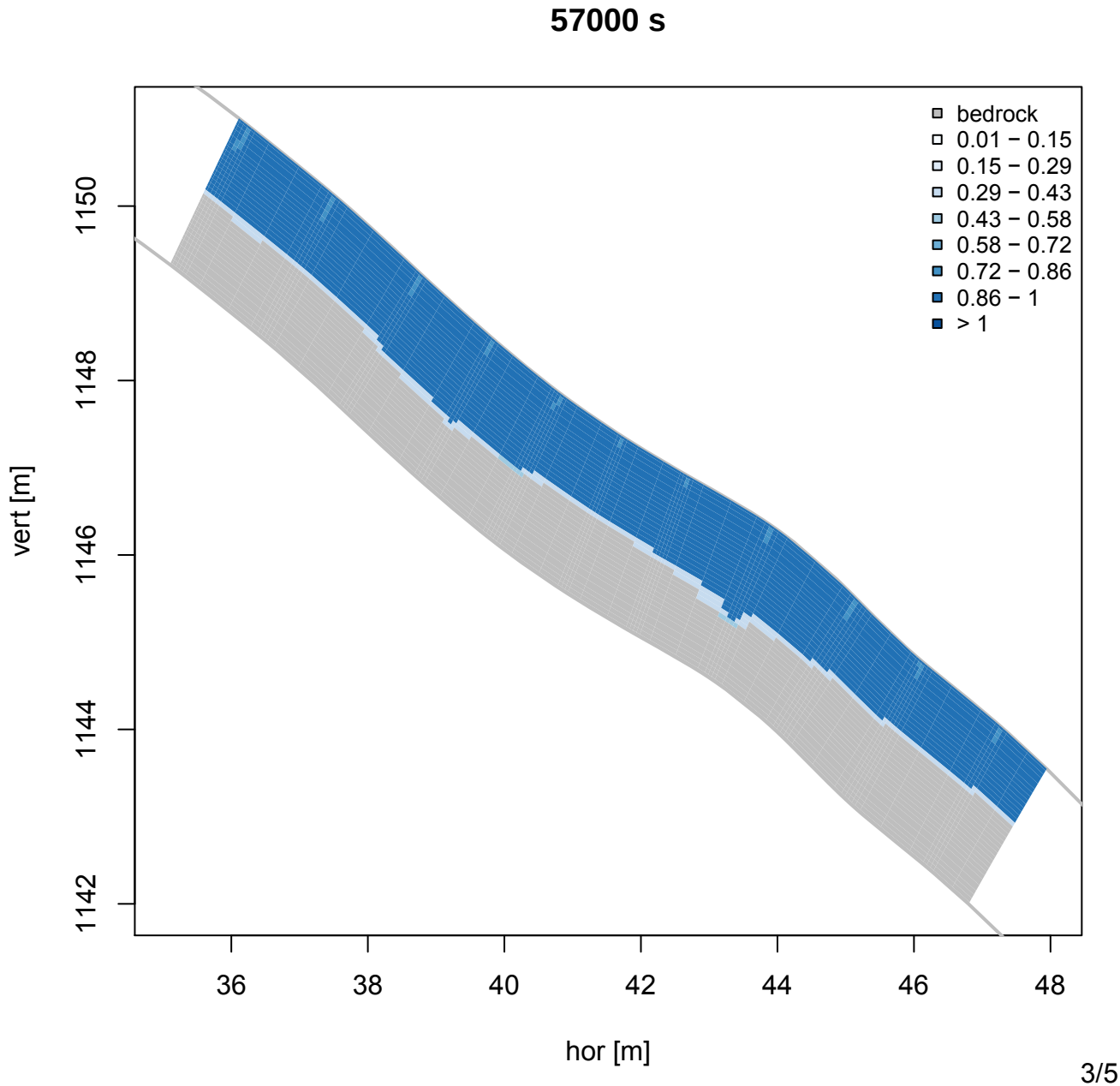
hor [m]


57000 s
bedrock
0.01 − 0.15
0.15 − 0.29
0.29 − 0.43
0.43 − 0.58
0.58 − 0.72
0.72 − 0.86
0.86 − 1
> 1
vert [m]
1142
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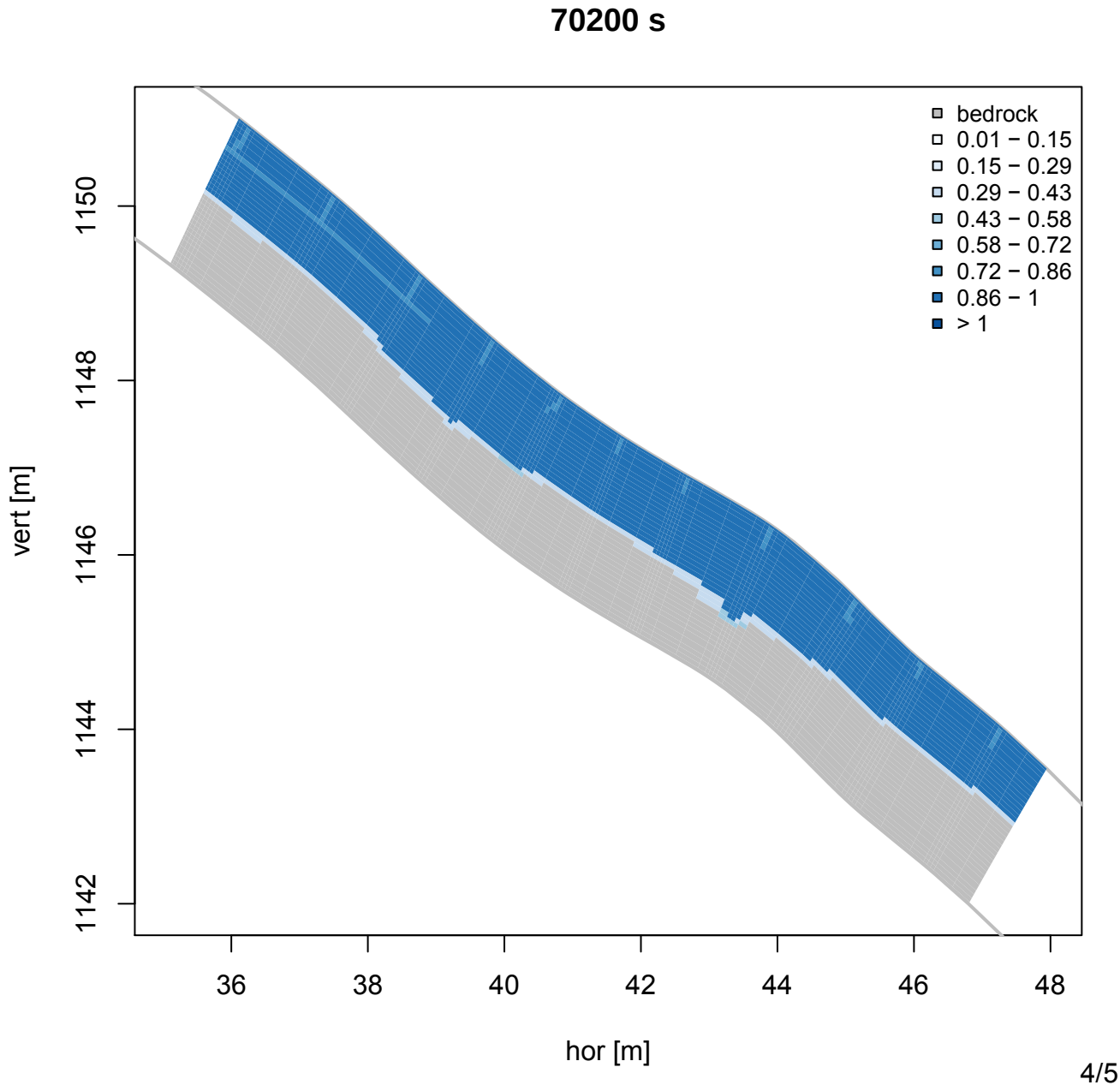
hor [m]


70200 s
bedrock
0.01 − 0.15
0.15 − 0.29
0.29 − 0.43
0.43 − 0.58
0.58 − 0.72
0.72 − 0.86
0.86 − 1
> 1
vert [m]
1142
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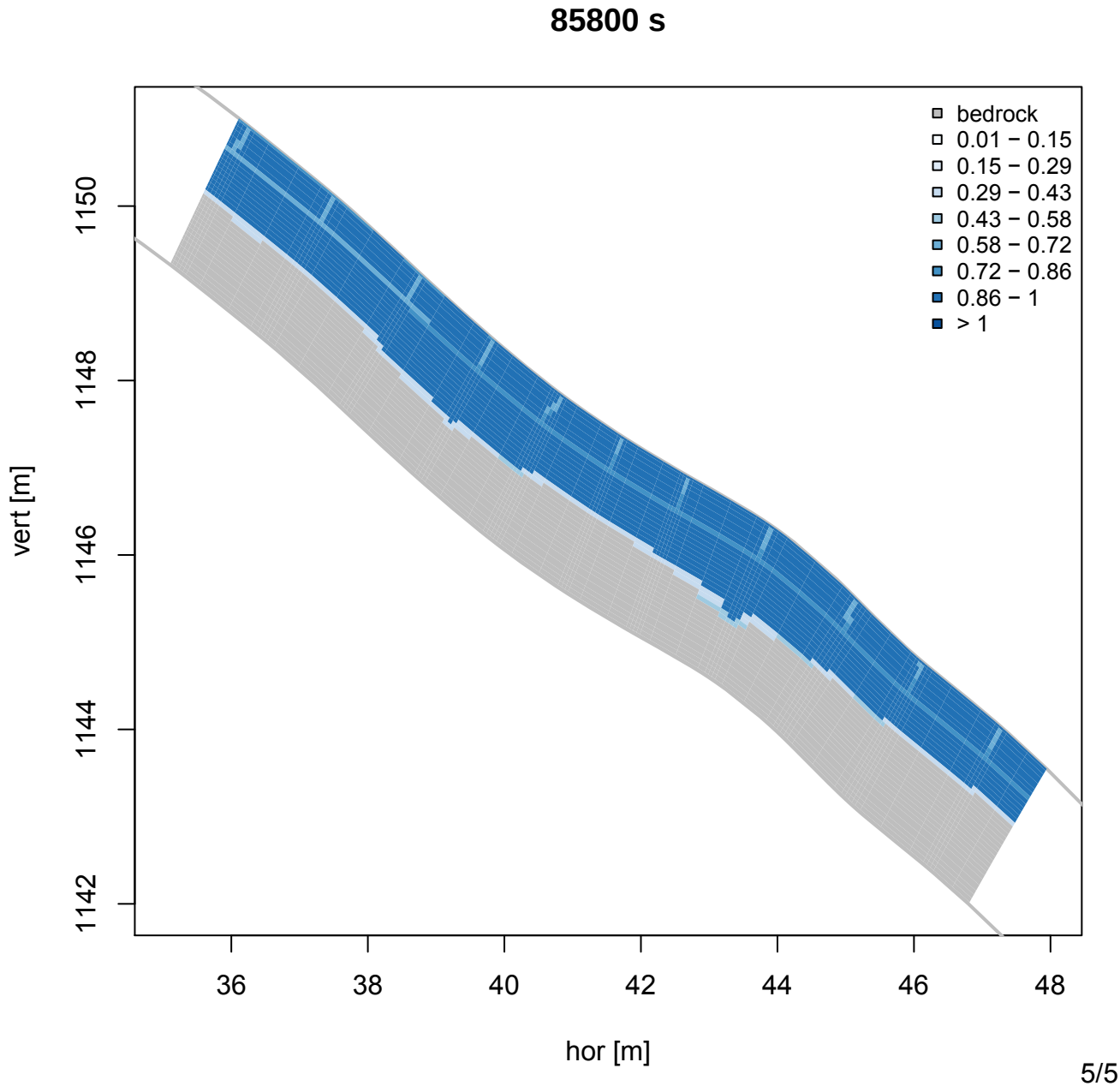
hor [m]


85800 s
bedrock
0.01 − 0.15
0.15 − 0.29
0.29 − 0.43
0.43 − 0.58
0.58 − 0.72
0.72 − 0.86
0.86 − 1
> 1
vert [m]
1142
1144
1146
1148
1150
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hor [m]