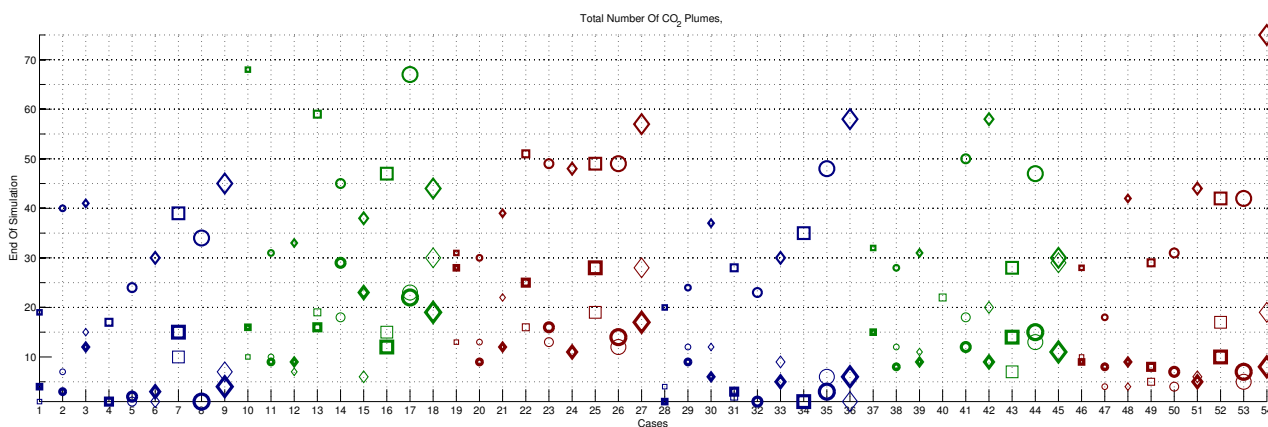


**Figure 6** CO<sub>2</sub> volumes. Left: residual versus mobile volume at the end of simulation. Most of the green coloured cases follow a linear trend, which is expected because the injected CO<sub>2</sub> must be conserved if no CO<sub>2</sub> leaves the system. For the rest of the cases, some CO<sub>2</sub> goes out of boundaries. Right: Total CO<sub>2</sub> volumes with time plotted for one case. Green curve is the residual volumes, dotted red denotes volumes that have left the domain, solid blue is mobile volumes, and the solid black shows the summation, which is the total volume and stays constant after injection because no more CO<sub>2</sub> is added to the system. The faulted cases are not included in this figure.



**Figure 7** CO<sub>2</sub> plume number at end of simulation, see explanation in Fig. 4.