In the first set of results we consider the weighted sum rate system utility optimization (1) and set all user weights to be unity. We use the network setting described above and focus on the out-of-band low load scenario (342 users). As will shortly be demonstrated the gains of DC are more pronounced for this choice. We suppose that there is no upper bound on the rate for any user so that the per-user maximum rate constraints are all vacuous. We set the minimum rates so that the admission control assumption is satisfied. We compare our proposed GELS algorithm with a baseline single point association scheme in which each user independently associates to the TP from which it can obtain the highest peak rate. This association scheme is also referred to as the maximum SINR association [1]. Furthermore, in this baseline scheme each TP adopts a round robin policy to serve its associated users. Notice that we cannot enforce any minimum rates on this baseline scheme. On the other hand, we implement our algorithm on three different cluster sizes: (i) each cluster of size 11 including one macro along with 10 pico TPs assigned to that macro, (ii) each clutser of size 33 comprising of three macros and 10 picos assigned to each macro, respectively, and (iii) one cluster of size 627 comprising of 57 macros and 10 picos assigned to each macro in that cluster. In Fig. 3 we plot the average cell spectral efficiency (SE) per macro cell for all the three different cluster sizes. The key takeaway is that compared to the baseline, DC offers a large improvement and that most of this improvement is captured by a small cluster size. We next report the performance of OSPA which optimizes the PF utility (2) and consider an in-band scenario as well as an out-of-band scenario. To benchmark the performance of this algorithm, we determine the average and the $5-$percentile spectral efficiency (SE) yielded by the single-point max-SINR baseline scheme. Next, we determine the average and $5-$percentile SE values yielded by the user association (UA) algorithm from [5] that optimizes the PF utility without exploiting DC (28). Finally, we use that algorithm as a module in OSPA to optimize (28), with the obtained output being further refined by exploiting DC. The obtained results are plotted in Figs. 4 and 5 as relative percentage gains over the respective baseline counterparts, for the in-band and out-of-band scenarios, respectively. In each figure we consider three different load points, such the first load point emulates a HetNet with 342 users, the second one has 684 users and the last load point has 1368 users, respectively. From the results in these figures, we see that DC can be quite beneficial at low to moderate loads, which is intuitively satisfying.