9 Appendix

Here, we report further results on the 2D image recovery problem. We remind that, for the purpose of this experiment, we set up an upper wall time of 10^4 seconds (*i.e.*, 2.8 hours) to process 100 frames for each solver. This translates into 100 seconds per frame.

9.1 Varying group size g

For this case, we focus on a single frame. Due to its higher number of non-zeros, we have selected the frame shown in Figure 6. For this case, we consider a roughly sufficient number of measurements is acquired where $n = \lceil 0.3 \cdot p \rceil$. By varying the group size g, we obtain the results in Figure 6.

9.2 Varying number of measurements

Here, let $g = 4$ as this group selection performs better, as shown in the previous subection. Here, we consider n take values from $n \in \lceil \{0.25, 0.3, 0.35, 0.4\} \cdot p \rceil$. The results, are shown in Figure 7.

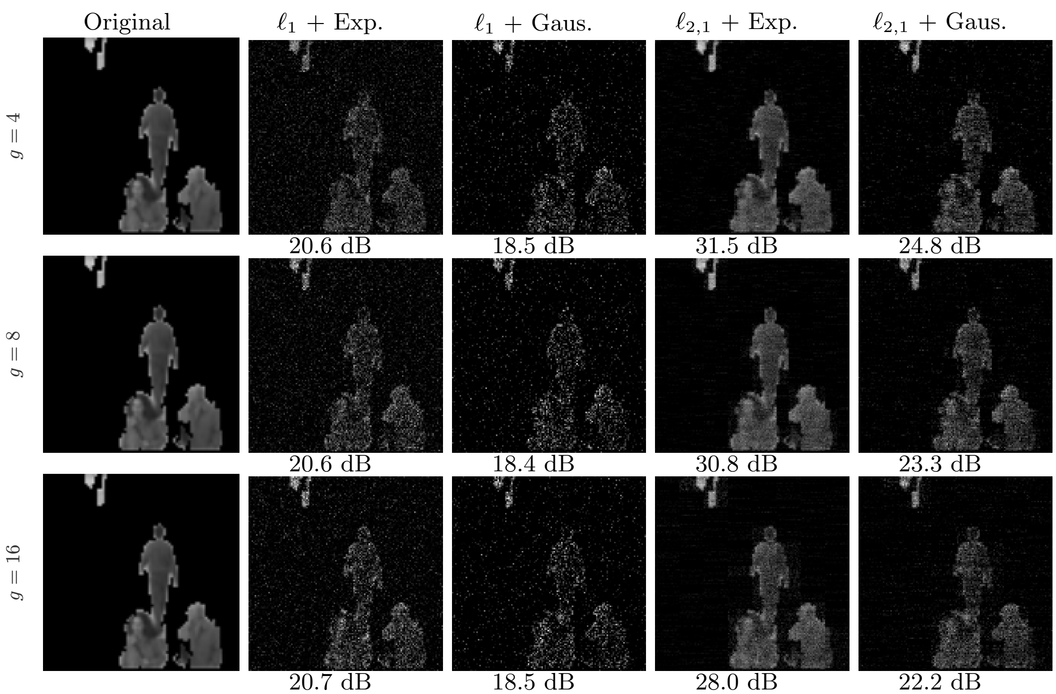

Figure 6: Results from real data. Representative examples of subtracted frame recovery from compressed measurements. Here, $n = \lceil 0.3 \cdot p \rceil$ measurements are observed for $p = 2^{16}$. From top to bottom, each line corresponds to block sparse model $\mathcal{M}$ with groups of consecutive indices, where $g = 4$, $g = 8$, and $g = 16$, respectively. One can observe that one obtains worse recovery as the group size increases; thus a model with groups $g = 4$ is a good choice for this case.

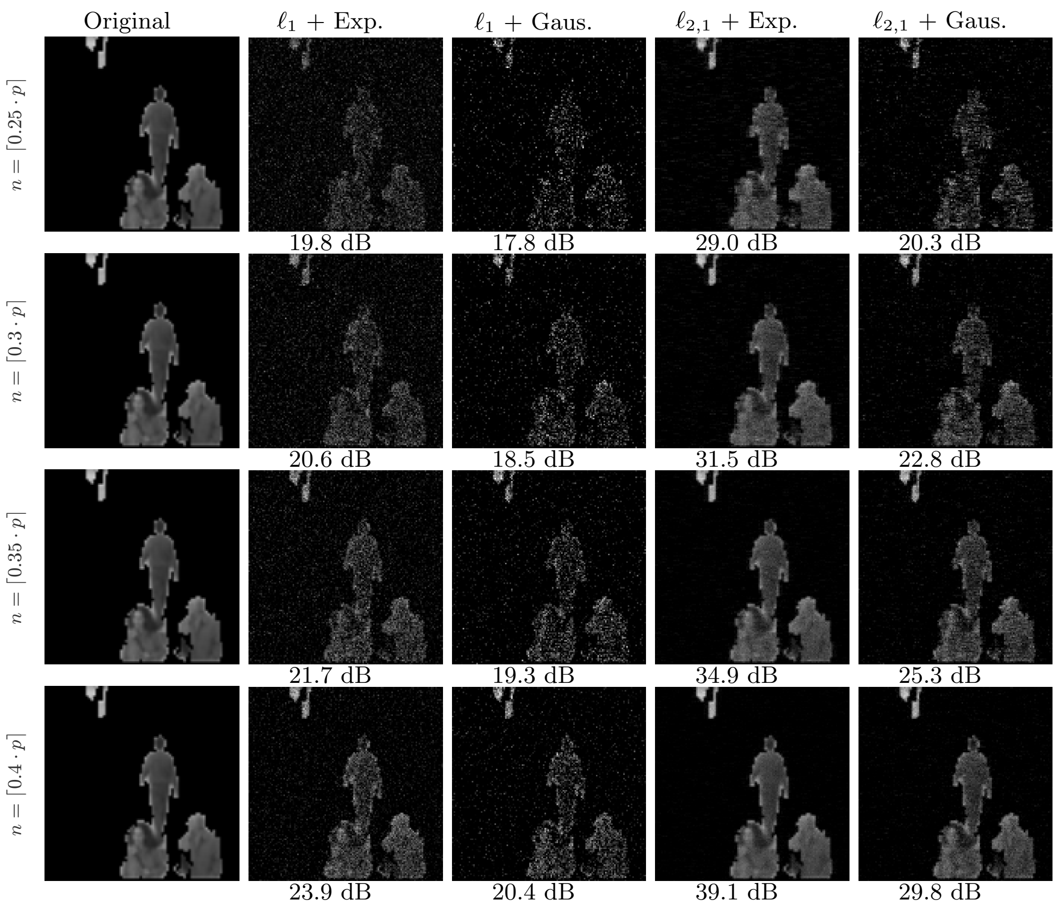

Figure 7: Results from real data. Representative examples of subtracted frame recovery from compressed measurements. Here, we consider a block sparse model fixed, with $g = 4$ block size per group. From top to bottom, the number of measurements range from $\lceil 0.25 \cdot p \rceil$ to $\lceil 0.4 \cdot p \rceil$, for $p = 2^{16}$. One can observe that one obtains better recovery as the number of measurements increases.