We are very grateful to you for the positive evaluations. The replies are as follows:

**Point 1:** Are there any statistical differences among the different comparison methods.

**Response 1:** There are no statistical differences among the different comparison methods (BM3D-AMP, LR-AMP, NLR-CS). Because these algorithms are based on non-local sparse model and are modeled the sparse coefficients of signals with Laplace distribution. But these algorithms are differences with the deep leaning method ADMM-Net.

**Point 2:** For the evaluation of the reproducibility, the Matlab implementation should be published on Github. How reliable is the proposed method?

**Response 2:** Although we know it’s more convincing to put the code online, we haven’t planned to do this yet. Because we want to come up with something new. To be honest, it is very easy to implement our method. Forget about the signal modeling and the EM method, one wants to do are:

(a) to implement the D-AMP algorithm which has two simple steps: a denoising and a residual update step. By the way, the D-AMP algorithm is available on line.

(b) to modify the denoising step of the D-AMP algorithm, i.e., computing (9). By the way, constructing the low-rank matrix and the thresholding operation is very similar to the NLR-CS method, which is also available on line.

If some people are interested in asking us about the implementation details of our algorithm by e-mail, I promise to provide more details. Because we also benefit from these open codes.

Our method is based on the D-AMP algorithm, and inherits its reliability.

**Point 3:** The authors should show the undersampling pattern.

**Response 3:** According to your suggestion, we provide the undersampling pattern in Fig 17. Several modifications have been made in page 18 and page 19 and marked by yellow. The modifications are as follows:

We also provide the sampling mask image at 20% sampling ratio with these two sizes in figure 17, from which we can see that our sampling strategy randomly chooses more Fourier coefficients from low frequency and less on high frequency. It is consistent with the sampling strategy in previous works [12,17].
Point 4: Recently, deep learning based compressive sensing have been used in many applications. The novelty of the proposed method seems limited. The following papers must be cited for the state-of-the-art comparison.

Response 4: Our experiments contain a method of deep learning. Although it did not perform well for some reason, we have realized that this is an era of deep learning. We wanted to add more depth-based learning methods, but there are some reasons why we can’t realize this. Some of these methods are implemented with Python language. Some are trained for different sampling matrix.

We are interested in studying depth-based learning algorithms. The references are useful and have been added.

Point 5: The English writing of the manuscript must be checked thoroughly. There are lots of writing style problems, for example: “When these exits noises in the process of CS measurement, the propose algorithm can estimate the amplitude of noises, then automatically adjusts the threshold of regularization to reduce the noise effectively.” The sentence needs to be rephrased.

Response 5: We have done our best to improve our English writing. Several changes have been made. We’ll do our best to check again and again. We plan to find a doctor who has returned from abroad to check again before final edition.

The mentioned sentence has been rephrased as: “When these exits noises in the process of CS measurement, the amplitude of noises which is relevant to the threshold of regularization (see (21)) can be estimated by the propose algorithm, thus, our method can reduce the noise effectively.”

Figure 17. The sampling mask at 20% sampling ratio with different sizes. (a) 256 × 256; (b) 128 × 128.