OPTIMAL RECOVERY OF THE SOLUTION OF THE POISSON EQUATION FROM INACCURATE INFORMATION

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The optimal recovery of the solution of the generalized Poisson equation on $\mathbb{S}^{d-1}$ is considered. We assume that the right side of the Poisson equation is the function from the Sobolev class $W_2^{\beta}(\mathbb{S}^{d-1})$. The finite number of Fourier coefficients of this function are given with some error. We calculate the error of optimal recovery of the solution and find an optimal method of recovery.

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