Response to reviewers' comments.

First, the authors greatly appreciate reviewer's valuable comments. Reviewer's comments are colored as "black" whereas the answers or comments by the authors are given as "blue".

This paper focuses on the study of a contact problem for a KirchhoffLove plate that may come into contact with a non-deformable obstacle in proximity of its lateral surface. The main contribution consists in establishing the existence and uniqueness of solutions for the problem under consideration. The corresponding boundary-value problem is recovered under suitable additional regularity assumptions. The paper is well-written and the results are interesting. I recommend the Authors to perform a **MINOR REVISION** by taking into account the comments below

1. On page 147, line 1, the Authors should clearly specify that the number $0 < l \leq 2h$ is fixed.

We have added a phrase about a fixed number: "The obstacle has a special shape such that the plate in the initial state is in contact along a strip of the width l, where $l \in \mathbb{R}$ is a fixed number such that $0 < l \leq 2h$."

2. On page 147, formula (3) should be commented more in detail. In particular, I would like the Authors to say more about the physical interpretation of this formula.

We have added relations for the Kirchhoff-Love model, and have pointed out that this condition restricts vector of displacements. Our clarification is as follows.

"In order to introduce boundary conditions of the Signorini type, we recall the well-known relations of the Kirchhoff-Love model for displacements of points $(x, z) \in \Omega \times [-h, h]$

$$W^z(x, z) = W(x) - z\nabla w, \quad |z| \leq h, \quad w^z(x, z) = w(x). \tag{3}$$

Taking into account (3) and arguing as in [5,22], we impose the following condition for displacements on Γ_1 describing the non-penetration of plate

points into a non-deformable obstacle. We require the following relations to be satisfied

$$W\nu - z\frac{\partial w}{\partial \nu} \leq 0 \quad \text{on} \quad \Gamma_1, \quad z \in [-h, -h + l], \tag{4}$$

..."

3. On page 148, at the beginning of Section 3, the Authors should clearly indicate what additional smoothness is needed to recover the boundary-value problem starting from the weak formulation.

According to this comment, we have added the following sentence: "Namely, in addition to the prescribed properties of the solution, it is sufficient to require that $\xi \in H^2(\Omega)^2 \times H^4(\Omega)$."

4. On page 151, I believe that there is a typo in the title of Section 4. I believe that the Authors meant to write that $l \to 2h$. Indeed, on page 152 and onward, the limit is considered for a sequence $\{l_n\}_{n\geq 0}$ such that $l_n \to 2h$, as $n \to \infty$.

Yes, the former title "Passage to the limit as $l \to 0$" is changed to "Passage to the limit as $l \to 2h$"

5. In order to complement the bibliography on obstacle problems for elastic structures, I recommend the Authors to cite the following references.

We have added 4 references for articles in the introduction from the recommended list of 14 references, so that:

"For studies of the regularity of solutions to obstacle problems we refer to [12,13,14]. Asymptotic analysis for problems of solid mechanics with inequality type constraints can be found, for example, in [15, 16, 17].", where 2 references (namely, [14] and [16]) are not from the recommended list.