The motion of the rigid body with collisions in a bounded domain. Global solvability result

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We consider the problem of motion of a rigid body in an incompressible viscous fluid, filling a bounded domain. This problem was studied by many autors, see for instance: [2]–[5]. They considered classical non-slip boundary conditions, which gave them very PARADOXICAL result of no collisions of the body with the boundary of the domain.

In this work [1] we study when Navier slip conditions are prescribed on the boundary of the body (instead of non-slip conditions). We prove for this model the GLOBAL existence of weak solution, which permits COLLISIONS with the boundary of the domain.

References

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