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Scientific Objectives of Hayabusa2 Impactor

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An asteroid mission "Hayabusa-2" has been planned as the immediate follower of "Hayabusa" in the exploration program of solar system small bodies. An impactor device was proposed in addition to the sampler and onboard scientific instruments for Hayabusa-2 spacecraft. A projectile of 2 kg in mass will be impacted to the asteroid surface with 2000 m/sec by EFP (explosively formed projectile).

The impact sub-team in Hayabusa-2 pre-project team investigated scientific objectives of the impactor. The results of investigations will be presented in the paper. The results of estimations of the size of formed crater and surface vibration induced by the impact will be presented also.

Keywords: asteroid exploration, impact crater, internal structure exploration