

## Defect of Hayabusa project: Electric charge and magnetic field of Asteroid Itokawa should have been investigated

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Gravity of the surface of Asteroid Itokawa is estimated almost 0.001% of the Earth. So, even if Itokawa has small electric charge, Coulomb's force may be stronger than the gravity of Itokawa. Actually by photoelectric effect Itokawa may be charged plus. And if there is magnetic field around Itokawa, the Hayabusa spacecraft which is made of light metal (non-steel) is not free from electromagnetic force for electromagnetic induction will occur. And even if the sample of Itokawa could be got, only the data would be got whether the sample would be magnetized or not, and we could not know the magnetic field of Asteroid Itokawa. For one reason is the defective method of Hayabusa of sampling and other reason is the possibility that Itokawa may be an electromagnet. So, electric charge and magnetic field around Asteroid Itokawa should have been investigated. But the Hayabusa did not investigate electric charge and magnetic field of Itokawa. For Hayabusa does not have instruments to investigate electric charge and magnetic field of Itokawa. But if aluminium foil tapes had been attached to the target-marker which was dropped to Itokawa, electric charge of Itokawa would have been investigated simply. And simple investigation of magnetic field is easy too.

So, not to investigate electric charge and magnetic field of Itokawa was the defect of Hayabusa project.

And moreover Hayabusa did not take pictures of the place where it would collect sample from Itokawa. But some rocks and some regolith maybe meteorite came from other planet. So, pictures of the place where the sample would be collected from Itokawa to distinguish meteorite-origin rocks and regolith came from other planet from original rocks and regolith of Asteroid Itokawa of its own should be taken.

So the proof of touchdown of Hayabusa to Itokawa at the 1st trial is not sufficient. For we can not know whether the bounds were caused by collision or Coulomb's force. And incidentally, at the 2nd trial, there is a possibility that Hayabusa project team of JAXA misunderstand that the bend of the flexible horn-shaped collector which was caused by sudden deceleration as the bend which was caused by touchdown, for the kinetic energy of touchdown was very small.

Those defects of Hayabusa project are caused from irresponsible attitude of Hayabusa project team of JAXA towards planetary Science.