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Structure changes in dust grains invoked by particle bombardment

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While the interplanetary dust as well as dust in any other plasma environments (e.g., fusion devices) is continuously bombarded by energetic particles (ions, electrons, photons), its surface is more or less modified. The changes could be related either to its mechanical properties (e.g., shape and roughness) or to its electronic state (e.g., surface recrystallization, chemical composition). Because both mechanical and electronic states of dust grains play a key role in their charging and further behavior, we have performed a casual study of possible changes. We discuss our observations of dust exposed to electron/ion beams carried out on a special dust-charging experiment as well as by scanning electron microscope (SEM). The material of grains is chosen with respect to space applications, however, the ability of comparing with commonly known data is also important.