Restoration images with a different digitization of them .

The different detailing of image digitization gives the different quality of image restoration . Here it is possible to see that restoration of the distorted images received from a telescope depends on the images quantization at the output of a telescope.

At Figs.1-2 the real input images are shown. These are the American satellite Lacrosse-3 (Fig.1) and the Russian satellite Meteor-1(Fig.2) that were observed by a telescope in the solar incoherent light.

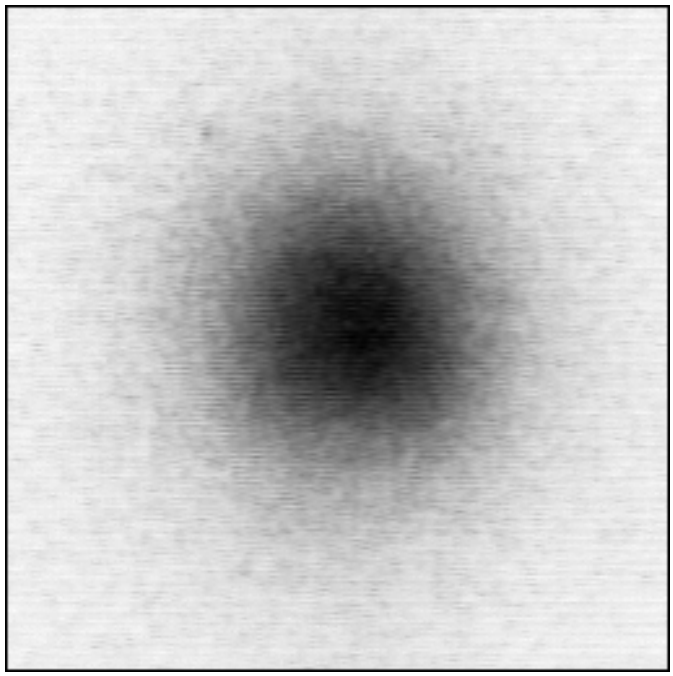

Fig.1 Real image of satellite "Lacrosse-3".

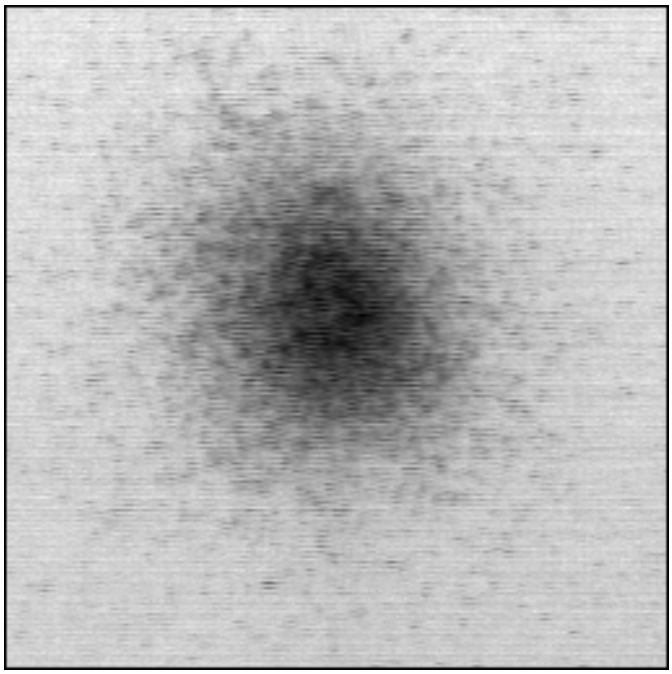

Fig.2 Real image of satellite “Meteor-1”.

At Fig.3 the restored image of Lacrosse-3 obtained with the 12 bits/pixel camera is shown. The restoration was done with using 19 frames from telescope .

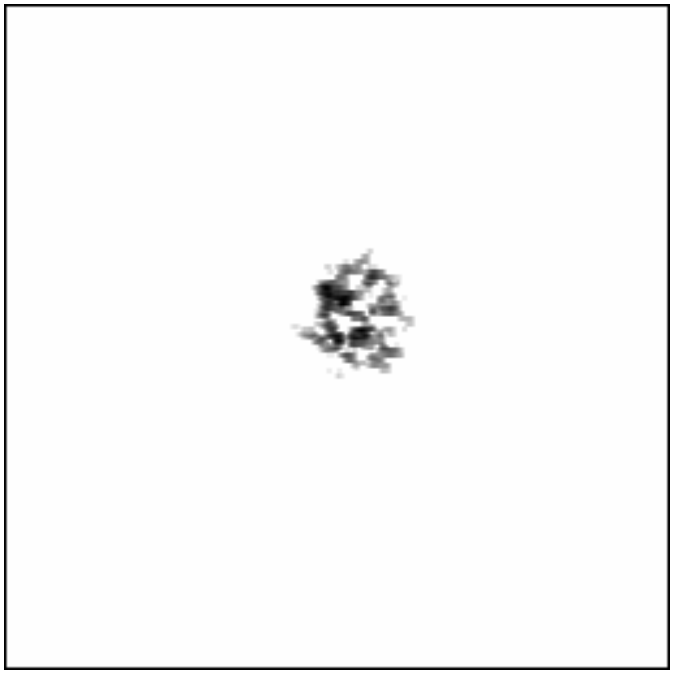

Fig.3 Restoration of satellite “Lacrosse-3”, 61-st iteration,12 bit depth.

After restoration the initial images were compressed to the 8-bits images , and restoration also was made (Fig.4).

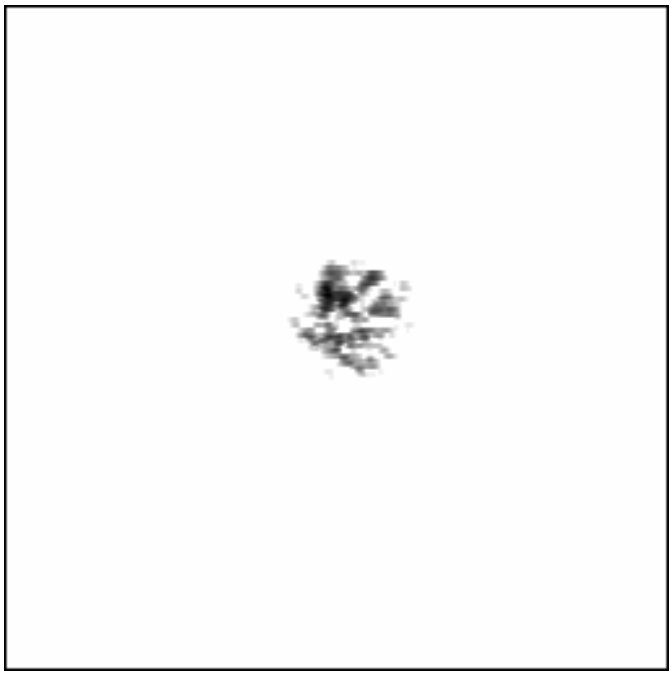

Fig.4 Restoration of satellite “Lacrosse-3”, 60-th iteration,8 bit depth..

At Fig.5 the restored image of the satellite Meteor-1 obtained with the 12 bits/pixel camera is shown. The restoration was done with using the 25 frames from a telescope .

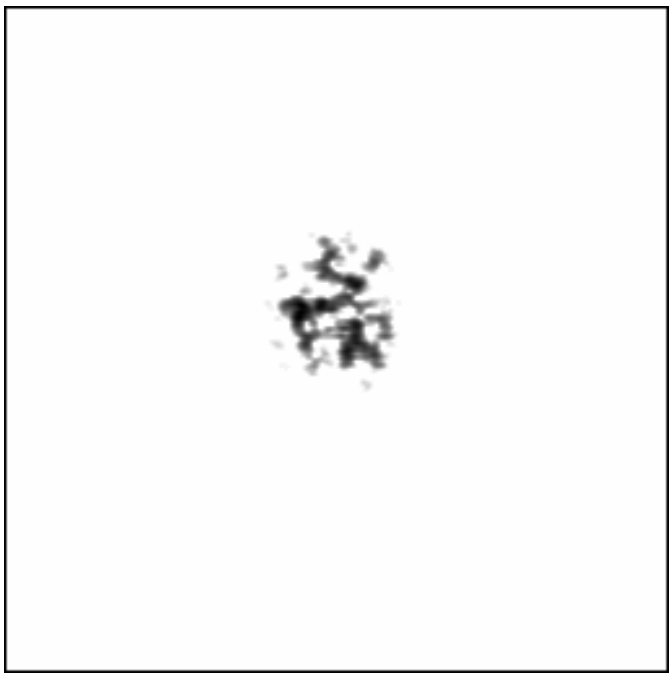

Fig.5 Restoration of satellite “Meteor-1”, 13-th iteration,12 bit depth.

After this the input frames have been compressed to the one-byte frames, and restoration was made with them (Fig.6).

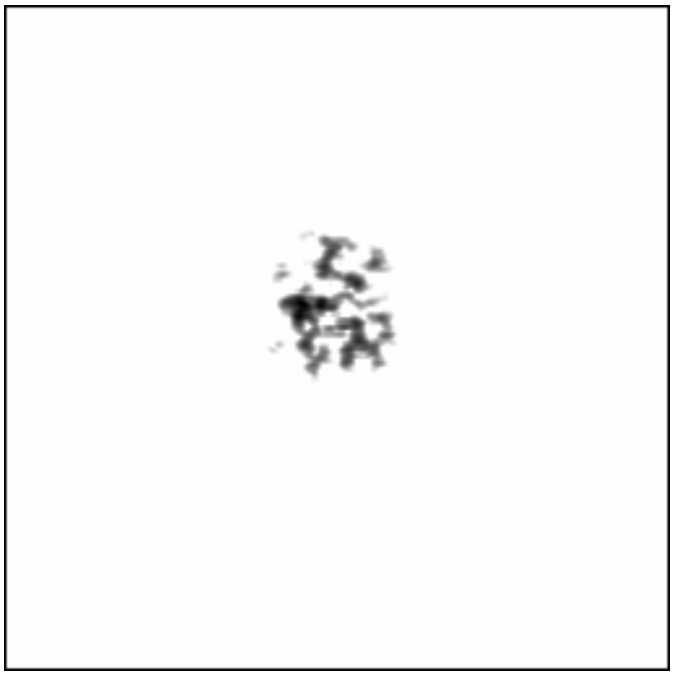

Fig.6 Restoration of satellite “Meteor-1”, 14-th iteration,8 bit depth.

It is evident from comparison of the frames , that after recording the input images to more than one byte, the quality of image restoration, obtained through the atmosphere, appears to be better.