

About a large-scale landslide disaster of Hiroshima by the Airbone Lidar

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In a large-scale debris flow disaster stricken area in Hiroshima-City that occurred on the early morning of August 20, 2014, I carried out an aviation laser measurement and considered the characteristic of the mountain stream which produced the topography, a geological feature and a mud flood. The southwestern part was the sedimentary rock distribution area that rough grain - infinitesimal grain granite distribution area, the northeast side made a hornfels, and it became clear depending on geological feature distribution in the detailed topography model in Yagi, the Midorii district in investigation places that valley density, the relative height distribution of the basin were different clearly. Similarly, in the Kabehigashi district, middle grain - infinitesimal grain granite distribution area, the eastern part were Takada rhyolite distribution area the western part, and valley density, the relative height distribution of the basin were different depending on geological feature distribution clearly. Furthermore, it was revealed that a real geological feature border was different from existing geologic map width (product research institute), but was able to estimate it from a characteristic of the topography. The sections of a slow incline continued in the whole in the granite distribution area of Yagi, the Midorii district when I compared the longitudinal section shape of the mountain stream in each geological feature distribution area, and only the most upper reaches region where the basin world was near became the steep grade. On the other hand, an incline changed in the whole exponentially in the hornfels distribution area. Is the down stream from the neighborhood of valley exit; as for neither of the mud flood knew that flowed down, and sedimentation section considerable inclines continued for a long time. After all, in the Kabehigashi district, the sections of the incline that the middle down stream part was gentle continued with the granite distribution level, but the most upper reaches region was a steep grade very much. On the other hand, in the rhyolite distribution area, I showed a characteristic like the hornfels distribution area. Is the down stream from the neighborhood of valley exit; as for neither of the mud flood flowed down, and had a long it, and sedimentation section considerable inclines continued, but tended to be slightly in comparison with Yagi, Midorii district loose. At each mountain stream, it reflects that an alluvion drill develops from the neighborhood of valley exit that an incline of the down stream side is slow. In addition, at the mountain stream which faced Otagawa of the district at the north end directly in Yagi, Midorii districts, I show a constant sudden vertical section incline, but, as for this, the end receives erosion of Otagawa, and it is thought that I am connected with having been the environment that cannot form an alluvion drill. The above-mentioned mountain stream properties are greatly related to the production situation of the earth and sand, the transportation situation, the sedimentation situation in this disaster.

Keywords: granite, hornfels, rhyolite, longitudinal profile of ravine, debris flow