

Application of Terrestrial Lidar for 3D Modelling of the Bulgarian Antarctic Station “st. Kliment Ohridski”

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SUMMARY

During the 25th Bulgarian Antarctic Expedition (2016/2017), a joint international project in the field of geospatial 3D modeling between the University of Mining and Geology "St. Ivan Rilski" - Bulgaria, the Bulgarian Antarctic Institute, the Association of Polar Early Career Scientists – Bulgaria, and the Istanbul Technical University took place on Livingston Island. A field campaign of LiDAR 3D and GNSS data collection activities was organized, resulting in the development of precise georeferenced 3D models of the interior and exterior of the Bulgarian Antarctic Station "St. Kliment Ohridski", and evaluation of the short-term movement of the Perunika Glacier. The paper reveals some key field data collection and data processing details, illustrated with 3D examples from the Livingston Island chapel “St. Ivan Rilski” and parts of the main buildings.

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