Broadband Seismic Deployments in East Antarctica: AGAP/GAMSEIS; IPY#147

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The 'Antarctica`s GAmburtsev Province / GAmburtsev Mountain SEISmic experiment (AGAP / GAMSEIS) (IPY # 147)' is an internationally coordinated deployment of more than 35 broadband seismographs over the crest of the Gambursev Mountains (Dome-A) – Dome-F area. The seismological investigations provide detail information on crustal thickness and mantle structure and make key constraints on the origin of the Gamburtsev Mountains, and more broadly on the structure and evolution of the East Antarctic craton and subglacial environment. From GAMSEIS data obtained in 2008-09, local and regional seismic signals associated with ice sheet movement and meteorological variations were recorded; together with significant number of teleseismic events. The detection of seismic signals from phenomenon at the base of the ice sheet, such as outburst floods from subglacial lakes could be expected from detailed analyses. In this presentation, in addition to the study of the Earth's deep interior, several remarkable detected signals are demonstrated involving subglacial environment.