Telemetry from the Russian INTERCOSMOS 24 satellite recorded ELF and VLF electromagnetic disturbances in the outer ionosphere from an underground nuclear explosion that was detonated at Novaya Zemlya Island on 24 October 1994 \cite{Mikhailov et al., 2000}. The IC24 satellite observations were obtained at about 900 km altitude within a few degrees of ground zero. The disturbances were attributed to magnetohydrodynamic excitation of the ionosphere's E layer by the acoustic wave (Fig. 1). Electrons accelerated along magnetic force lines amplify longitudinal currents and generate magnetic disturbances that may be measured by geomagnetic observatories and satellite magnetometers. The underground nuclear tests in the vicinity of Punggye, North Korea (Fig. 2) on 9 October 2006 and 25 May 2009 provide important opportunities for studying the utility of ionospheric disturbances for characterizing ground zero. In particular, we investigate this effect in the magnetic records from the nearby Daejon geomagnetic observatory (Fig. 3) of the Korea Institute of Geosciences and Mineral Resources (KIGAM) and the CHAMP and Ørsted satellite orbits (Fig. 4) that crossed near ground zero at altitudes of about 400 km and 650 km, respectively. GPS signal delays at receivers near ground zero were also checked for correlative ionospheric total electron count (TEC) variations (Fig. 5). In addition, superconducting microgravity records are being investigated for pore pressure and related ground water level effects and other mass changes of the ground related to the North Korean explosions.