**Age of emplacement and paleolatitude of the Agulhas Plateau – IODP Expedition 392, Site U1582**

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The Agulhas Plateau (AP), along with Maud Rise (MR) and Northeast Georgia Rise (NEGR), is part of the greater Southeast African Large Igneous Province (LIP) that is hypothesized to have been emplaced above the Bouvet hotspot during breakup of Africa and East Antarctica. Since their emplacement in the Late Cretaceous, these prominent submarine plateaus have been rifted along a triple junction and have controlled connectivity between the South Atlantic, Southern Ocean, and southern Indian Ocean basins. Igneous rocks recovered on a basement high at Site U1582 (located at ~37°S) on the northern Agulhas Plateau hold clues to the age, paleolatitude, nature of LIP basement, and its relation to the mid-ocean ridges that separated the AP from MR and NEGR. At Site U1582, a pillow basalt sequence with intercalated sediments was recovered. Based on initial shipboard biostratigraphy, a Santonian age (~85 Ma) was assigned to this unit. The moderately altered, mildly porphyritic mafic igneous basement rocks recovered at Site U1582 contain abundant veins and carbonate-filled voids. We report *in situ* U-Pb ages of carbonate vein and void fills (n=20) along with paleomagnetic directions (n=25) from the basaltic basement. The oldest carbonate formed at ~95 Ma (Cenomanian), which we interpret as early diagenetic ages that immediately postdate LIP emplacement during cooling and associated fracturing. Younger vein generations reflect basement carbonation due to seawater circulation, which prevailed until long after LIP emplacement. Basaltic basement rocks at Site U1582 record magnetic field directions reliably. Paleomagnetic analysis yields a negative inclination (normal polarity), which we correlate with Chron C34n (Cretaceous Normal Superchron). We calculate a ~45-50°S preliminary mean paleolatitude that allows us to refine plate kinematic reconstructions and to test the genetic relationship between the AP, MR and NEGR. Our combined age-paleolatitude dataset has implications for Cretaceous paleogeography, ocean circulation, and oceanic crust carbonation timescales.