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**SEAMOUNTS OFF THE WEST ANTARCTIC MARGIN: A CASE FOR NON-
HOTSPOT DRIVEN INTRAPLATE VOLCANISM**

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ABSTRACT

New radiometric age and geochemical data of volcanic rocks from the guyot-type Marie Byrd Seamounts (MBS) and the De Gerlache Seamounts and Peter I Island (Amundsen Sea) are presented. $^{40}\text{Ar}/^{39}\text{Ar}$ ages of the shield phase of three MBS are Early Cenozoic (65 to 56 Ma) and indicate formation well after creation of the Pacific-Antarctic Ridge. A Pliocene age (3.0 Ma) documents a younger phase of volcanism at one MBS and a Pleistocene age (1.8 Ma) for the submarine base of Peter I Island. Together with published data, the new age data imply that Cenozoic intraplate magmatism occurred at distinct time intervals in spatially confined areas of the Amundsen Sea, excluding an origin through a fixed mantle plume. Peter I Island appears strongly influenced by an EMII type mantle component that may reflect shallow mantle

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