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The influence of a subduction component on magmatism in the Okinawa  
Trough: Evidence from thorium and related trace element ratios

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**Abstract:** The Okinawa Trough (OT) is a back-arc, initial continental marginal sea basin located behind the Ryukyu Arc-Trench System. Formation and evolution of the OT have been intimately related to subduction of the Philippine Sea Plate (PSP) since the late Miocene; thus, the magma source of the trough has been affected by subduction components, as in the case of other active back-arc basins, including the Lau Basin (LB) and Mariana Trough (MT). We review all the available geochemical

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