

## Forearc stress fields in the arcs whose backarcs are opening: Ryukyu, Mariana, Hellenic arcs

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We compare forearc stress fields in the arcs whose backarc are opening to discuss the dynamics of backarc opening in the tectonic setting of subduction zone. Distinct stress provinces from those of backarcs are commonly found in forearc regions. Most of these show arc-parallel extension, but oblique extension axis is also recognized for Hellenic arc. Geologic studies sometime provide stress fields with arc-parallel extension and arc perpendicular extension. Because the coupling of plate boundary is generally weak for the cases of active backarc opening, important factors of forearc deformation are slab rollback and stretching of arc due to increasing curvature. If these are composed as temporally steady state, oblique or radial extension state is formed, if these are temporally partitioned, both arc-parallel and arc-parallel extension are formed in forearc. We should treat flexible model to express such variability.