

README for basin kinematics

Electronic supplement accompanying Heine et al., Kinematics of the South Atlantic Rift, **Solid Earth**, 2013.

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Supplementary maps in this PDF show the computed stretching factor grids and extension for individual rift segments of the 4 major deforming zones utilised in the plate kinematic model:

1. Central African Rift System including the Melut, Muglad, Doba, Doseo and Bongor rift basins.
2. West African Rift System including the Tefidet, Tenere, Termit, Grein-Kafra and Gao rift basins
3. Salado Basin
4. Colorado Basin

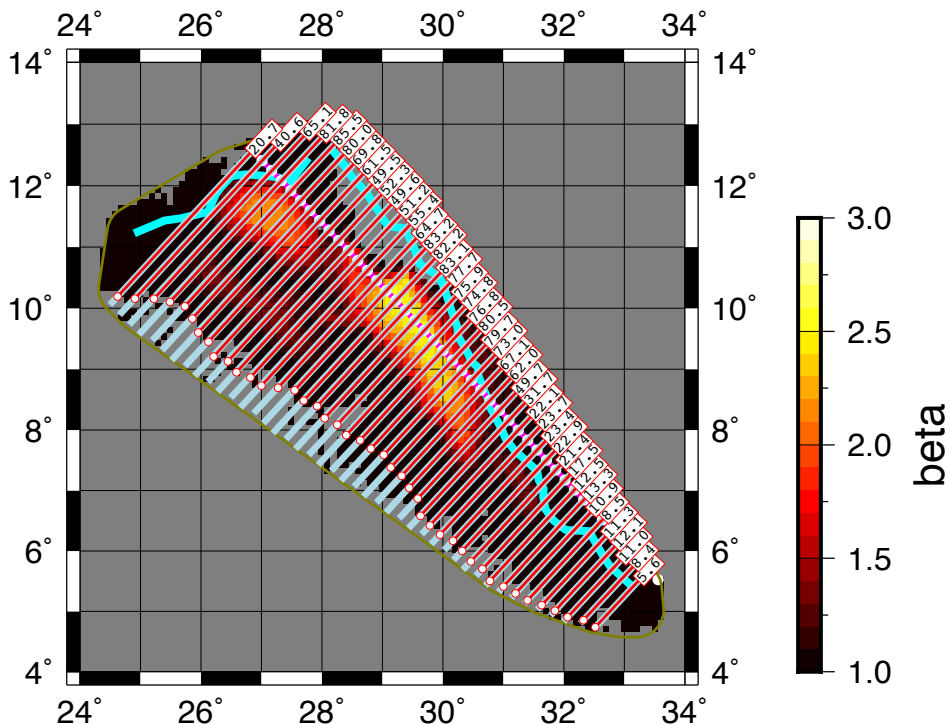
Maps show stretching factor grids and computed amount of extension using the method of Le Pichon & Sibuet (1981; see main text for details) utilising total sediment thickness model from Exxon's Tectonic map of the World (1985, sediment isopachs). Cyan colored lines are main rift bounding faults, light blue lines are profile lines with original length, red lines are restored length based on extension estimates from sediment thickness. Number indicate individual amount of computed extension along each line in kilometers.

The method is providing a maximum estimate for horizontal extension and only utilises total sediment thickness, meaning that individual rift phases in multiple rifted basins are not considered. Please refer to the text for the details and limitations.

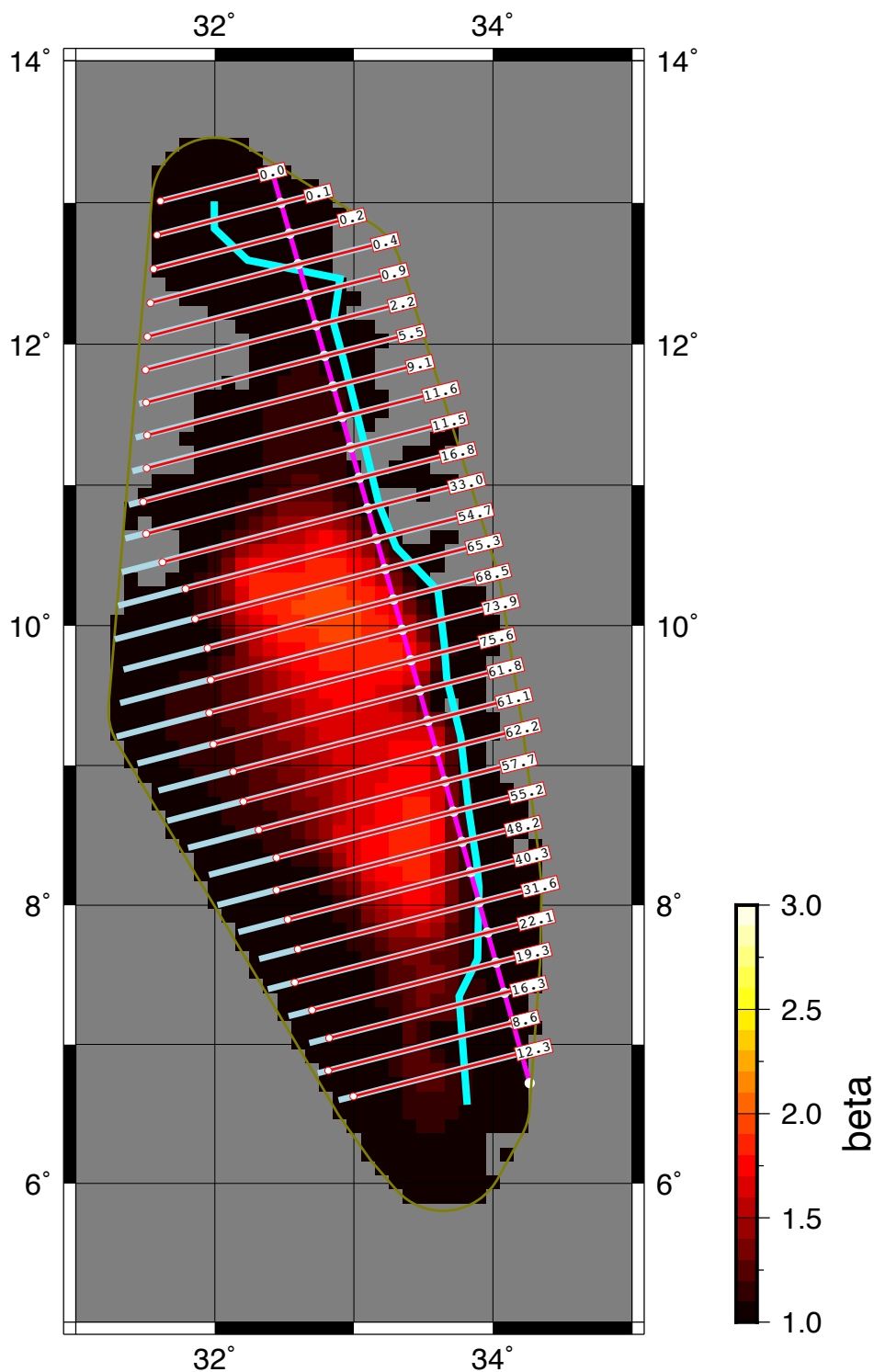
Christian Heine, 2013-06-15

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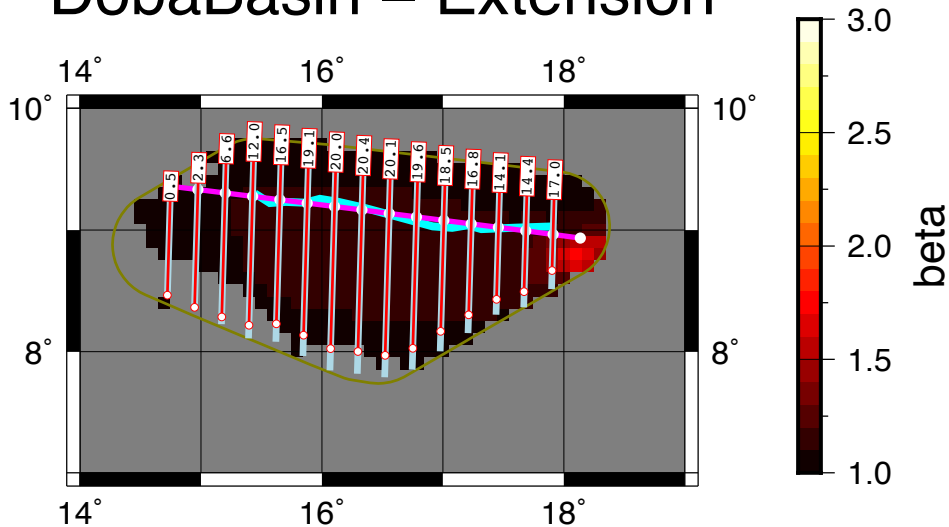
MugladBasin – Extension



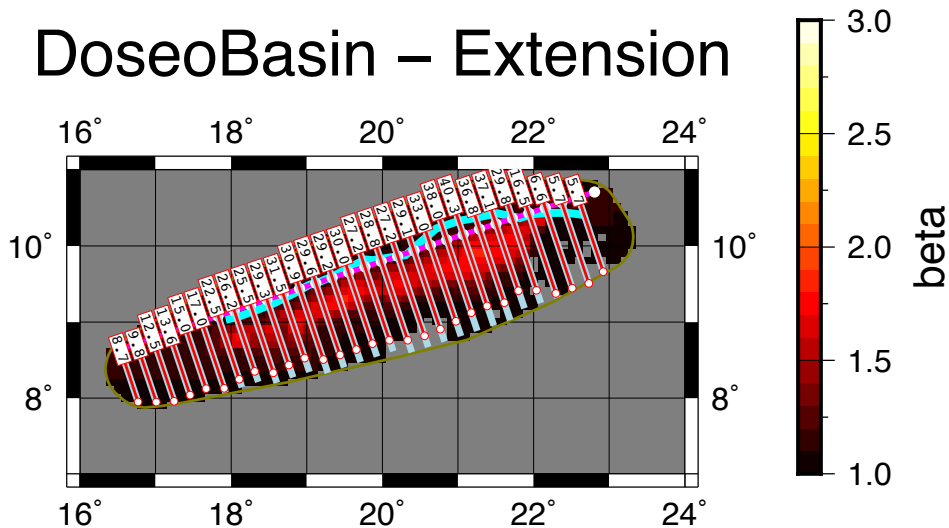
Melut Basin – Extension



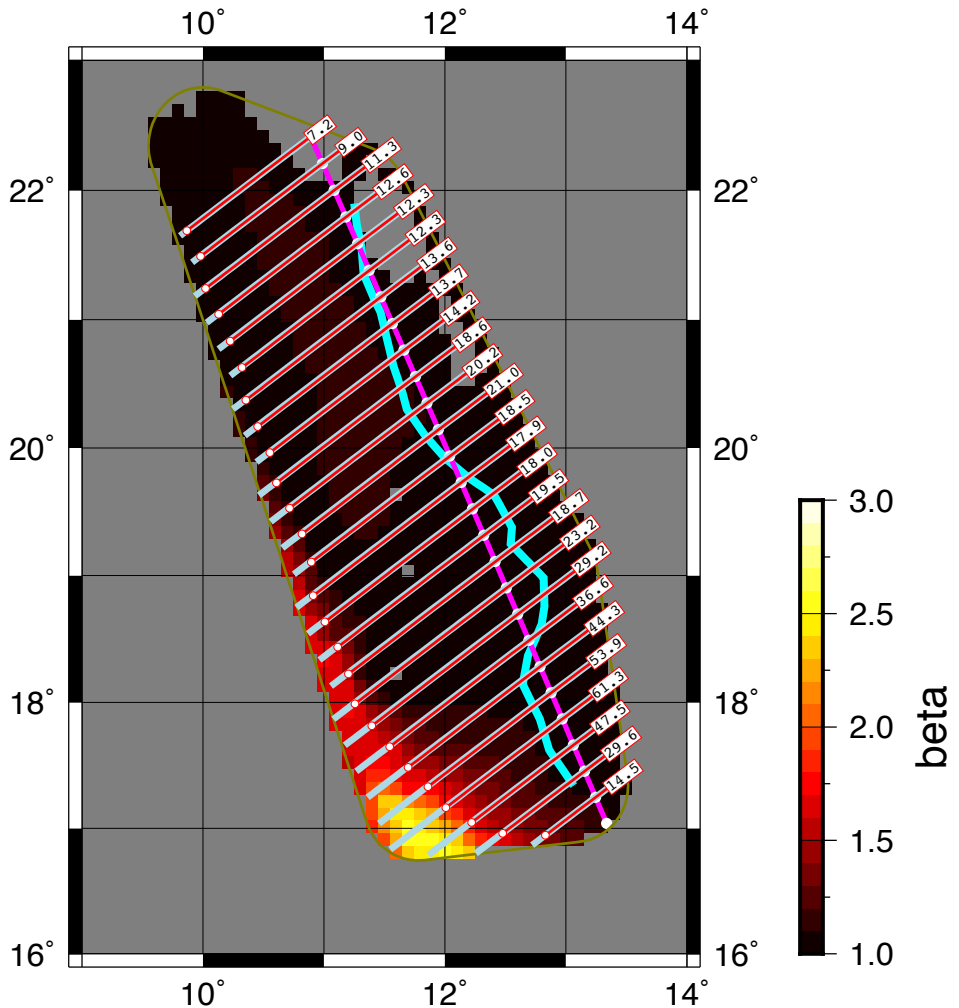
DobaBasin – Extension



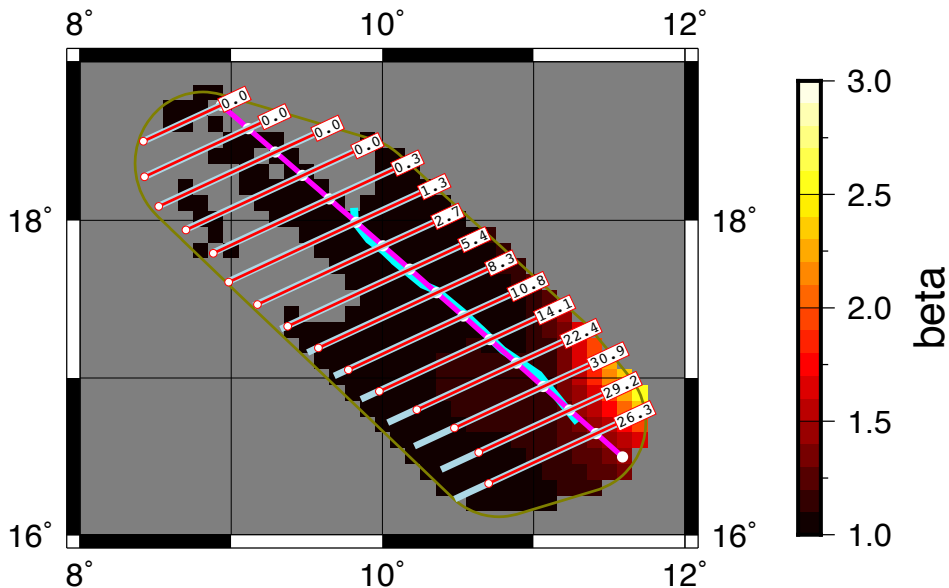
DoseoBasin – Extension



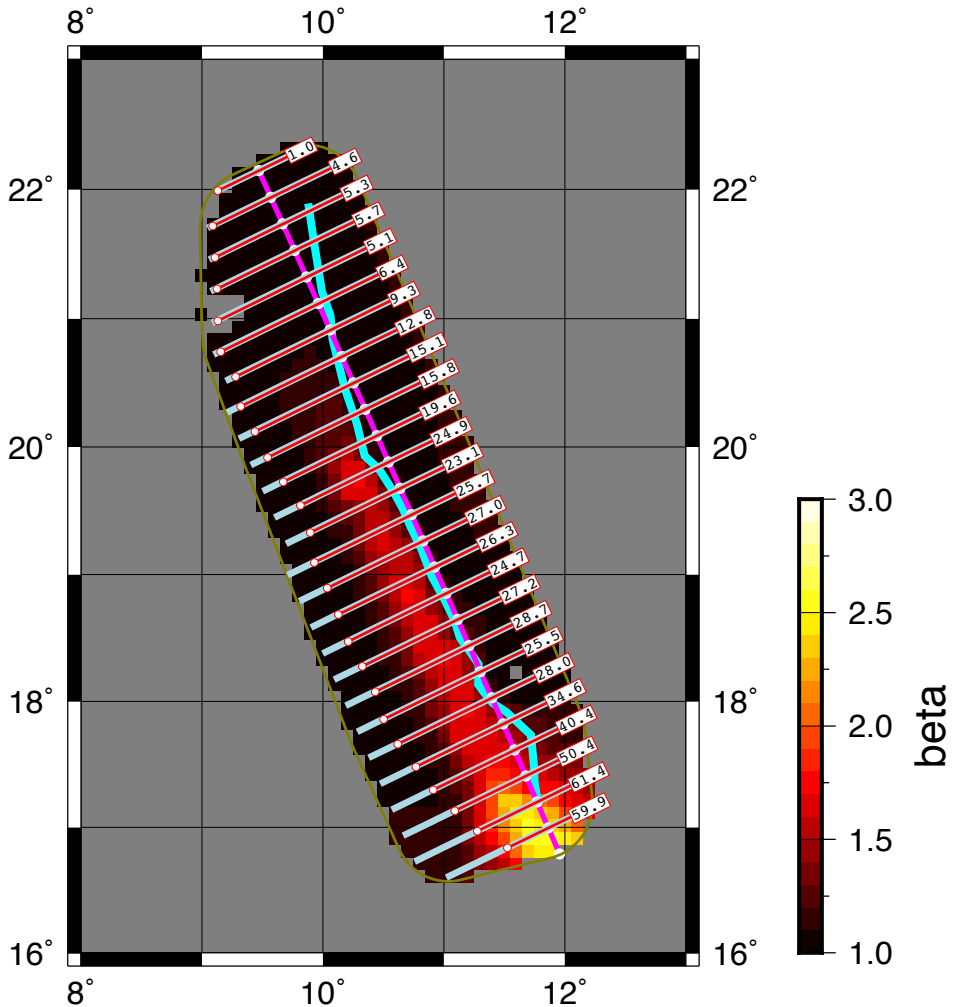
Grein–KafraRift – Extension



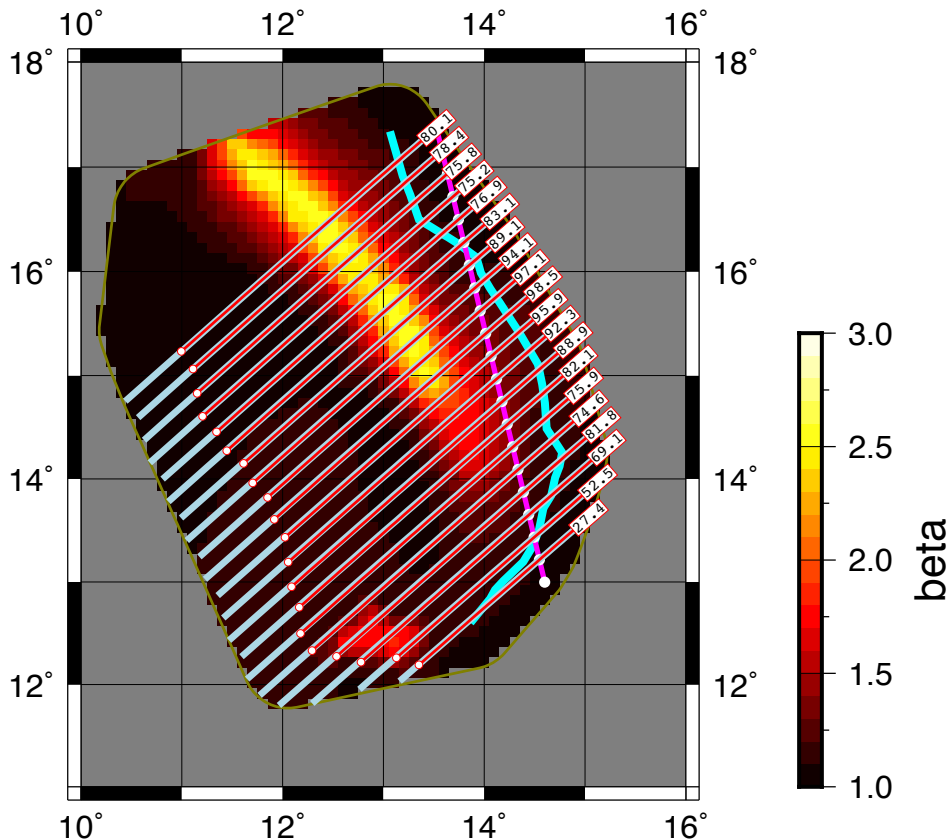
TefidetRift – Extension



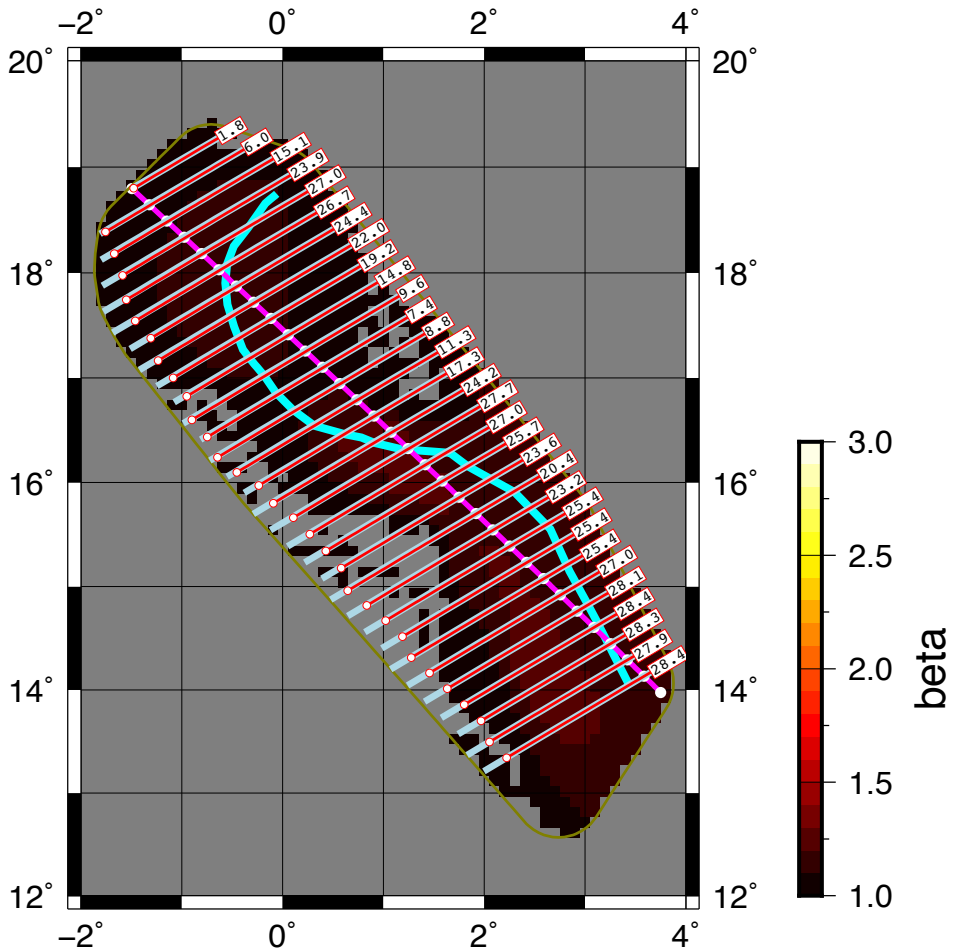
TenereRift – Extension



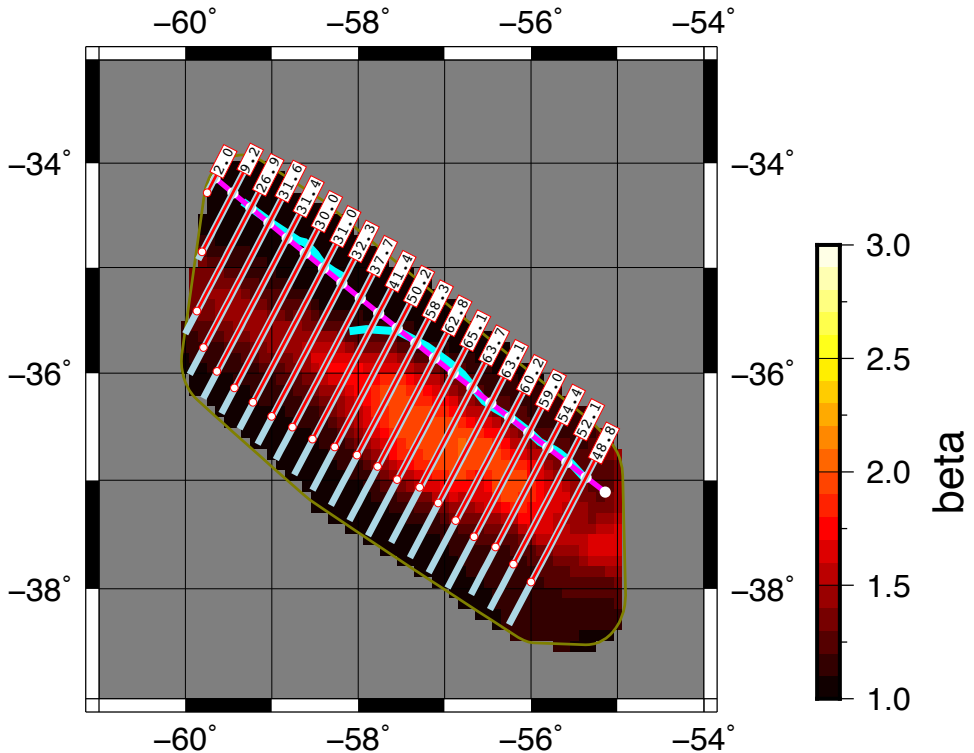
TermitRift – Extension



Gao – Extension



SaladoRift – Extension



ColoradoRift – Extension

