#All NZ focal mechanism 1976-2020

gmt begin NZ png

gmt basemap -Bf1a4 -JM6i -R160/184/-50/-30

gmt coast -Df -A20 -N1 -W0.5 -Glightgreen -Slightblue

gmt plot bird\_plates.xy -W1 -Sf0.45/3p

gmt meca meca.rtf -Sm0.3c/-1 -Gred

gmt end show

#Cross-section of Taupo

lo1=”174.16”

la1=”-38.68”

lo2=”178.50”

la2=”-38.68”

gmt begin Taupo\_CS png

gmt coast -JM10c -R170/180/-41/-35 -BWSen -Ba2f1 -Ggrey -Wthinnest,black

gmt meca meca.rtf -Sm0.3c/-1 -Gred -Wthinnest -T0

gmt plot -W2p,black << EOF

174.16 -38.68

178.50 -38.68

EOF

gmt coupe meca.rtf -JX10/-6 -BNesW -Bxa100f50+l"Distance, km" -Bya100f50+l"Depth, km" -Aa174.16/-38.68/178.50/-38.68/90/40/0/400+f -Sm0.4c/-1 -Gred -Wthinnest -T0 -X13c

gmt end show

#GMT velo

begin velo\_strain png

gmt basemap -Bf1a4 -JM6i -R160/184/-50/-30

gmt coast -Df -A20 -N1 -W0.5 -Glightgreen -Slightblue

gmt plot bird\_plates.xy -W1 -Sf0.45/3p

gmt velo -R160/184/-50/-30 -JM6i -W1 -Sx2 <<END

164.5 -48.5 17.54 -17.22 30

166.5 -45.5 7.64 -7.3 30

169.5 -43.5 0.019 -0.0229 30

172.5 -43.5 0.39 -0.45 30

172.5 -42.0 6.32 -7.62 30

176 -41.0 0.0777 -0.0976 30

176 -39.0 0.0283 -0.0275 30

178.5 -38.5 1.7 -1.37 30

179 -35 0.31 -0.23 30

-179.5 -31 0.128 -0.123 30

-178.5 -33 4.4 -4.53 30

-177.5 -34.5 1.58 -1.59 30

179.5 -40 0.0138 -0.0081 30

END

gmt end show

begin velo\_straintrial png

#Velocity

begin velocity png

gmt basemap -Bf1a4 -JM6i -R160/184/-50/-30

gmt coast -Df -A20 -N1 -W0.5 -Glightgreen -Slightblue

gmt plot bird\_plates.xy -W1 -Sf0.45/3p

gmt psvelo -R160/184/-50/-30 -JM6i -W5 -Se0.15/0.39+f3p <<END

164 -48.5 69.34479809 48.12704934 0 0 0

166 -45.5 17.28644418 9.003295115 0 0 0

169 -43.5 0.355718501 0.139490671 0 0 0

172 -42.0 32.85297776 9.546025736 0 0 0

175 -41.0 0.784996119 0.151199573 0 0 0

175 -39.0 0.105863668 0.018613969 0 0 0

178 -38.5 1.562720338 0.182262998 0 0 0

178 -35 0.756143734 0.069646199 0 0 0

180.5 -31 0.74878781 0.041110783 0 0 0

181.5 -33 6.324470055 0.253197351 0 0 0

178 -48 20 0 0 0 0 20mm/year

#Velocity

begin velocity\_gps png

gmt basemap -Bf1a4 -JM6i -R160/184/-50/-30

gmt coast -Df -A20 -N1 -W0.5 -Glightgreen -Slightblue

gmt plot bird\_plates.xy -W1 -Sf0.45/3p

gmt psvelo -R160/188/-50/-30 -JM6i -W10 -Se0.05/0.39+f3p -Gred <<END

164 -48.5 27.9484925 19.3969629 0 0 0

166 -45.5 33.4899244 17.4425503 0 0 0

169 -43.5 36.8853971 14.4641585 0 0 0

172 -42.0 39.400415 11.4485018 0 0 0

175 -41.0 40.9768158 7.89262126 0 0 0

175 -39.0 44.8815014 7.89149736 0 0 0

178 -38.5 45.6803547 5.32778527 0 0 0

178 -35 52.3484144 4.82166013 0 0 0

180.5 -31 59.7000892 3.27772087 0 0 0

181.5 -33 56.0051364 2.24214077 0 0 0

178 -48 40 0 0 0 0 40mm/year