

Current plans for
implementing eastern edge of
Cascadia rupture zone for
Canadian hazard maps

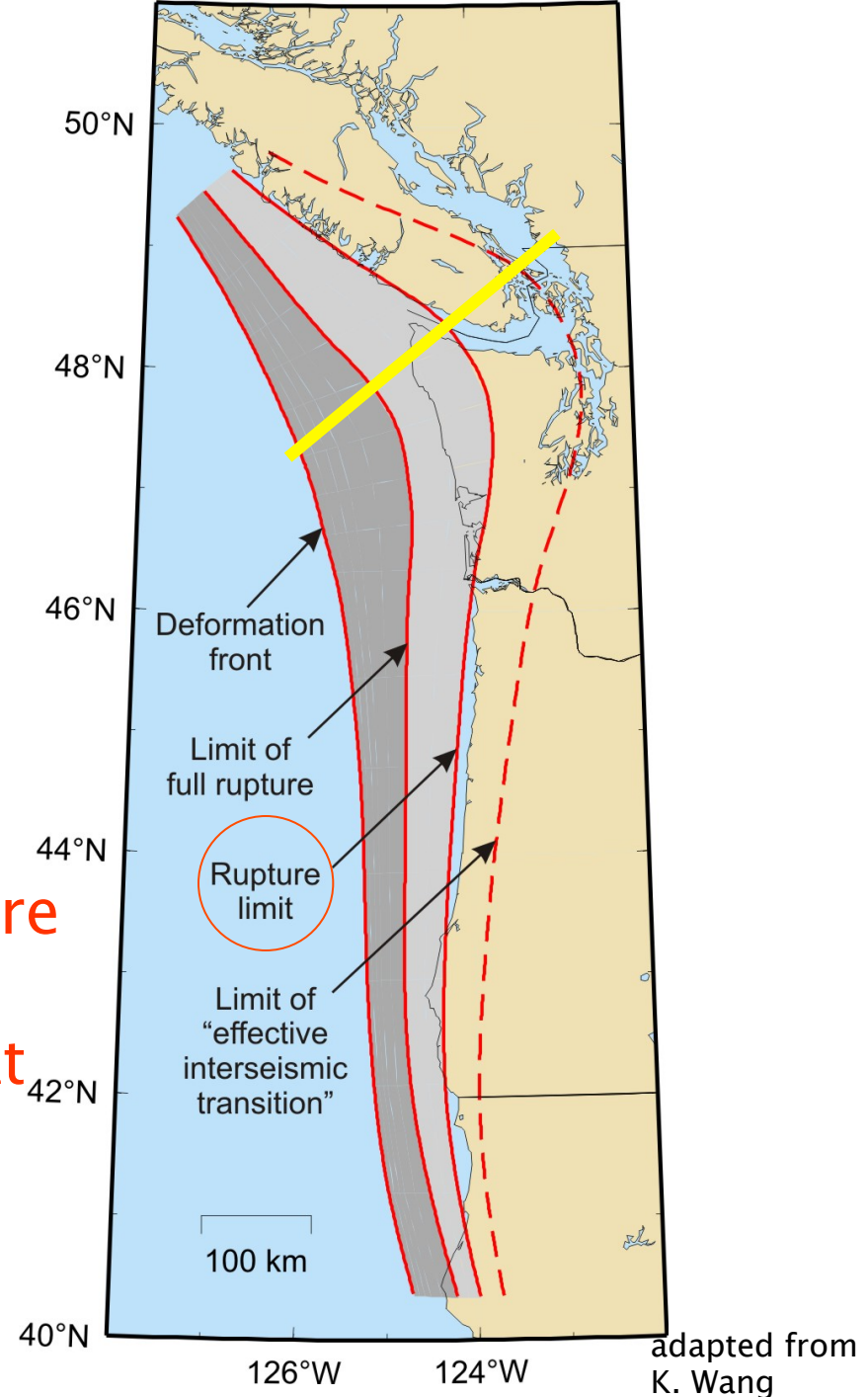
Garry Rogers
Geological Survey of Canada
Pacific Geoscience Centre

We are considering 3 models in a logic tree approach:

- Eastward limit of thermal/geodetic defined transition zone (450 degrees C)
- Upper limit of ETS zone
- Significant seismogenic rupture may not extend to 450 degree C limit

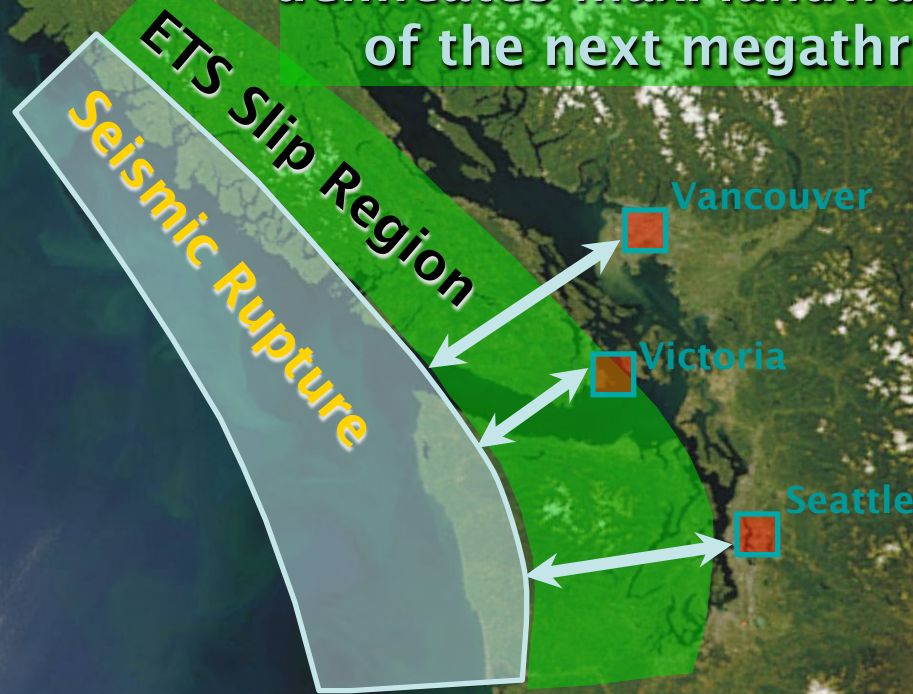
Thermal/geodetic model

Positional uncertainty of rupture limit
(450 degrees C) is estimated at
about +/- 20 km



Region of ETS Slip Episodes for Northern Cascadia

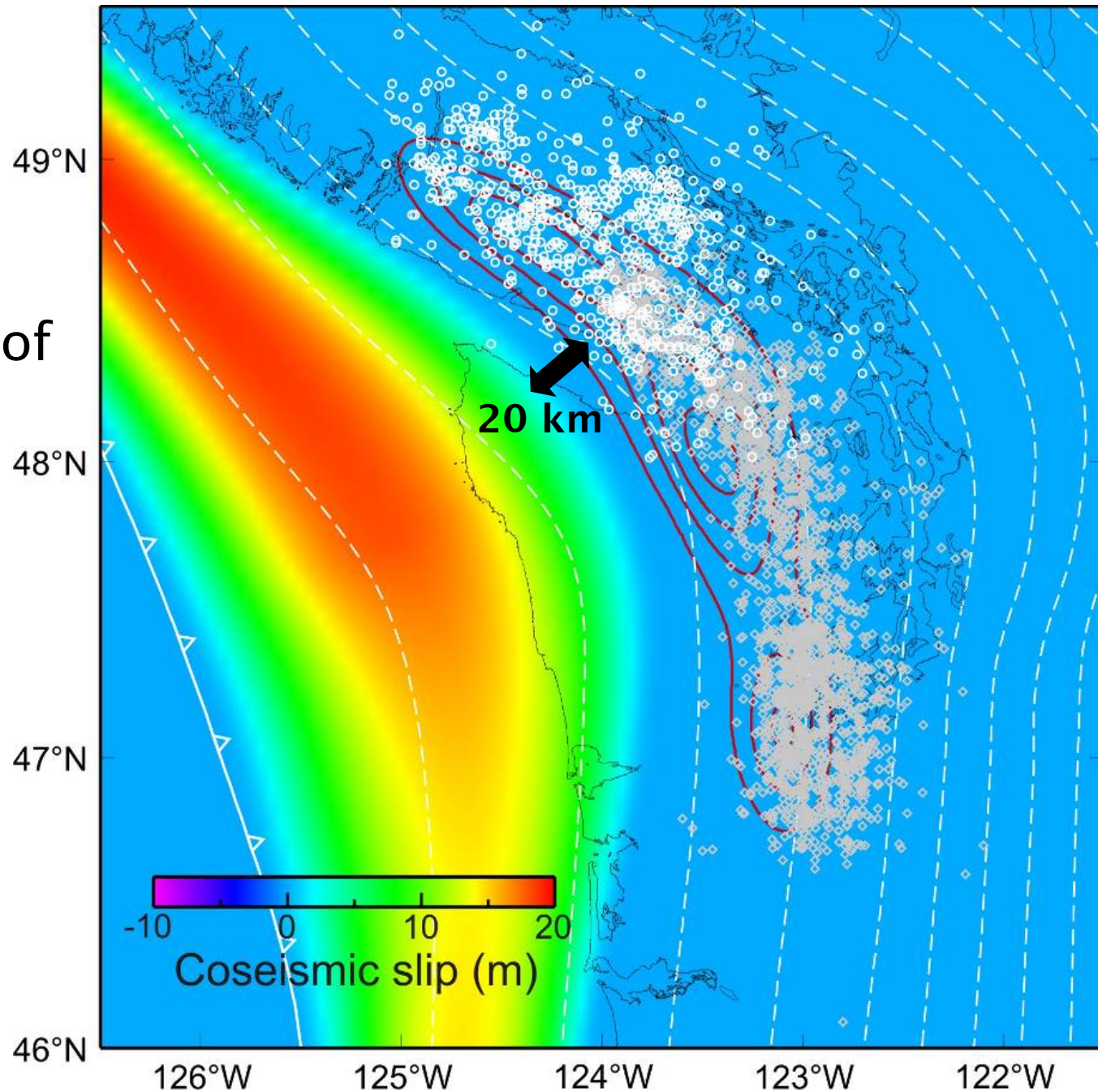
Upper (seaward) edge of ETS slip zone
delineates max. landward penetration
of the next megathrust rupture



ETS

model

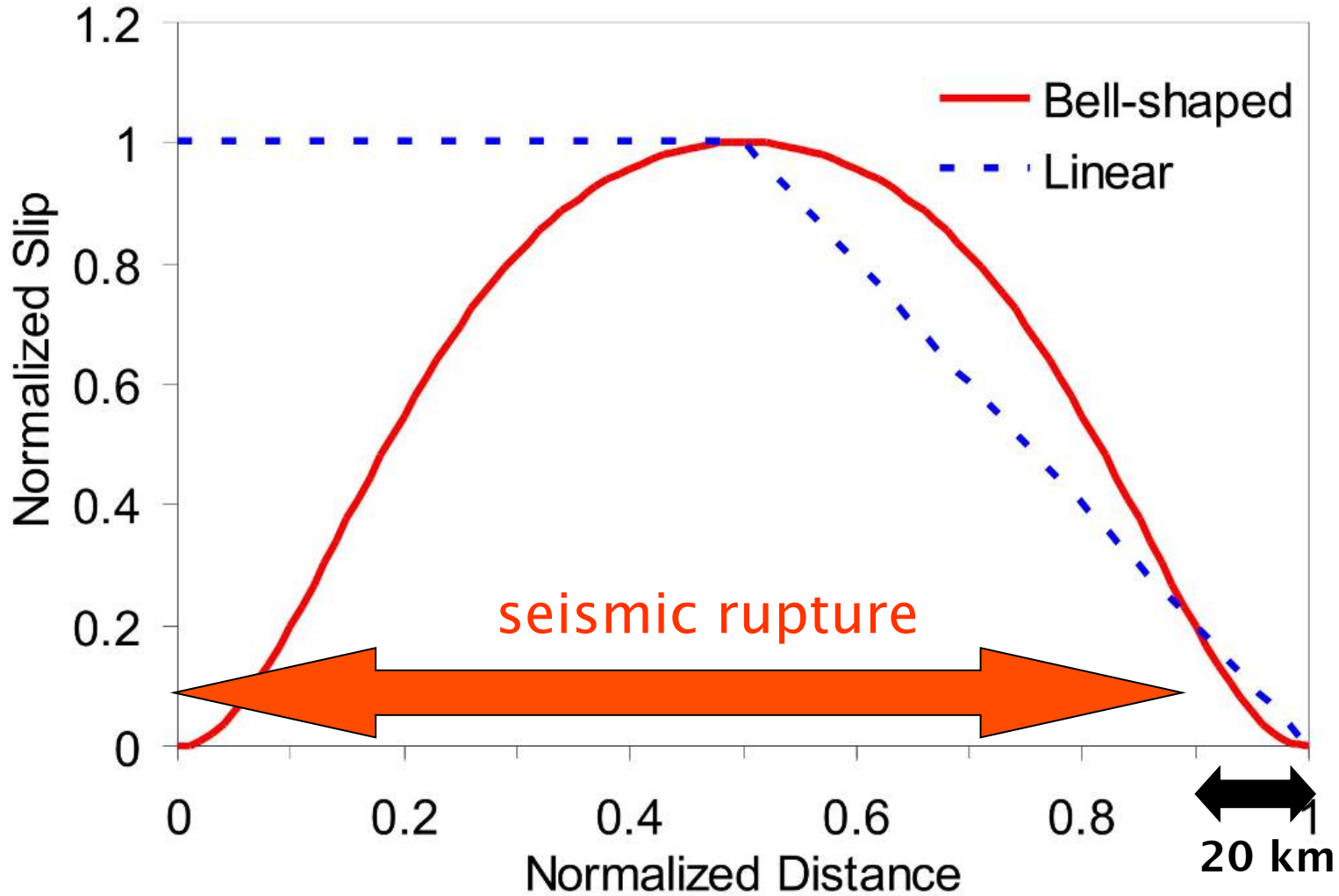
Seaward edge of
ETS zone defines
Landward extent of
seismic rupture



Adapted from
K. Wang

“Locked”

“Transition”



logic tree weights

- Eastward limit of thermal/geodetic defined transition zone (450 degrees C position) 50 60
- Upper limit of ETS zone (+20 km down-dip) 25 20
- Significant seismogenic rupture may not extend to 450 degree C limit (-20 km up-dip) 25 20