

# Geology in New Zealand Seminar Winter Term 2010



# Curriculum and Participation

18 credits toward graduation, 6 credits toward Geo Major

21 student participants

Plus: me, NZ Geologists, one or two Carl alums as TAs/Camp Managers

Candidates: geology majors and those considering it.

We anticipate some Seniors (especially as mentors), a good number of Juniors, and some Sophomores... (at least one 200-level geology course required)

Interviews and applications this Spring Term- so watch for announcements from OCS. Applications: April 17th.

# Focus will be *Field Work*

- we will investigate all types of rock, structures, stratigraphy, geomorphology, using both ancient and modern examples
- problem-based inquiry, honing our skills of observation and spatial reasoning, and some event analysis
- we'll use readings from the primary literature, and have evening seminars
- we'll also visit to cool geological sites without guilt of doing so...
- we'll explore cultural topics (Maori and European) and environmental issues: geothermal energy, geohazards, land-use, etc.



Darren Gravely & Dan Hikuroa -Frontiers Abroad  
Lorna Strachlan U-Auckland  
Amy Greene U-Auckland  
Kathy Campbell U-Auckland  
John Bradshaw U-Canterbury

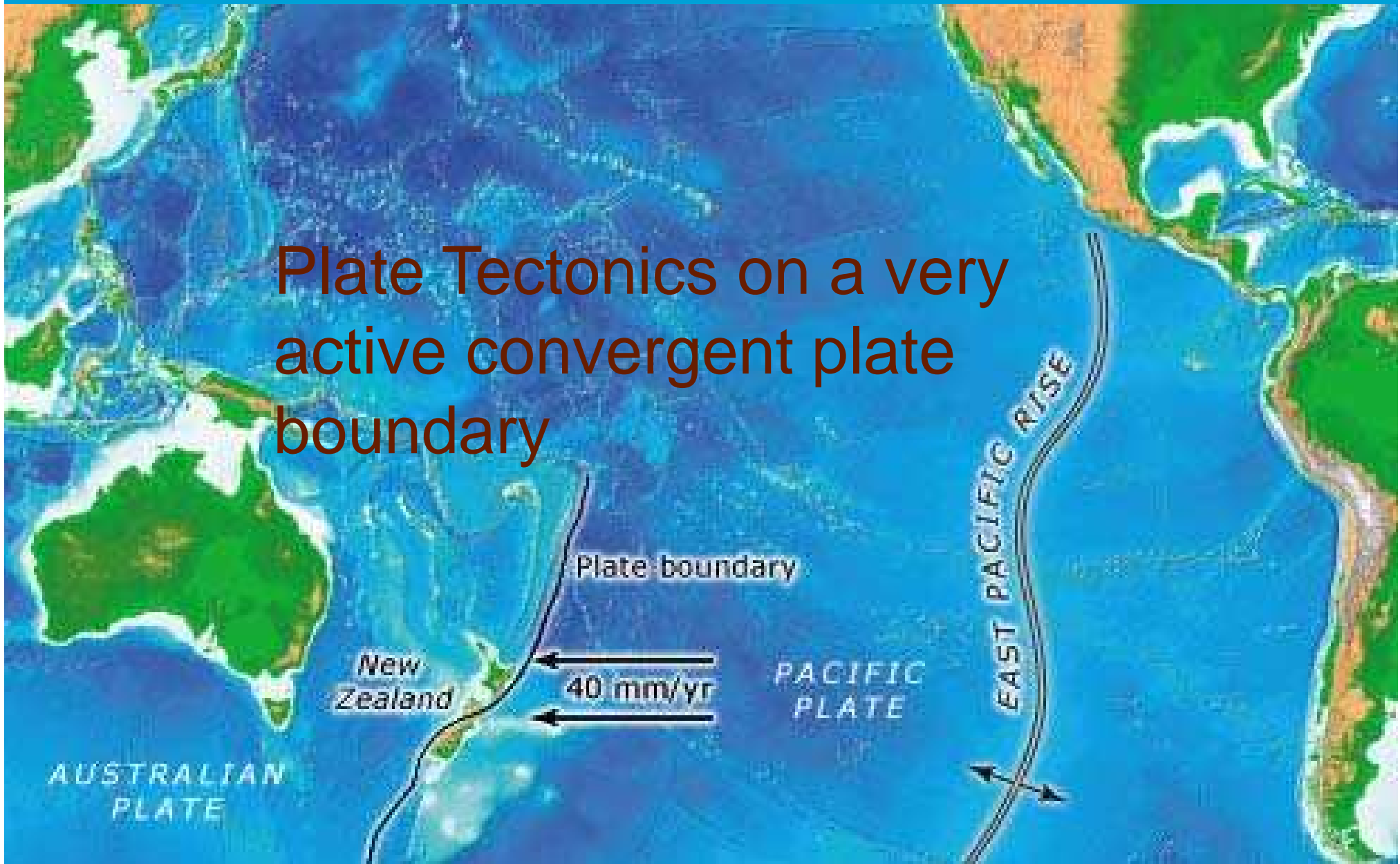




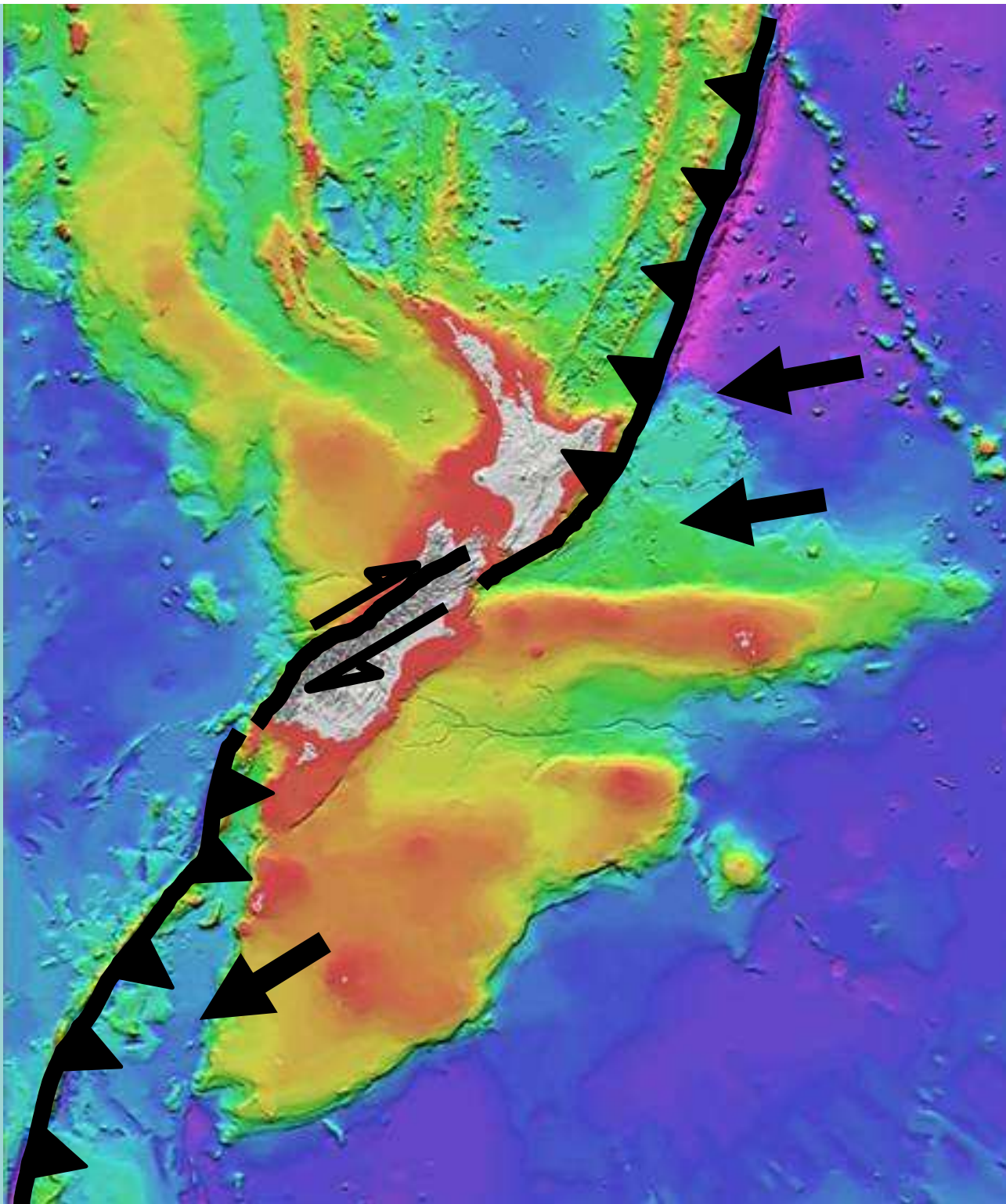
# New Zealand: A Geologist's Paradise

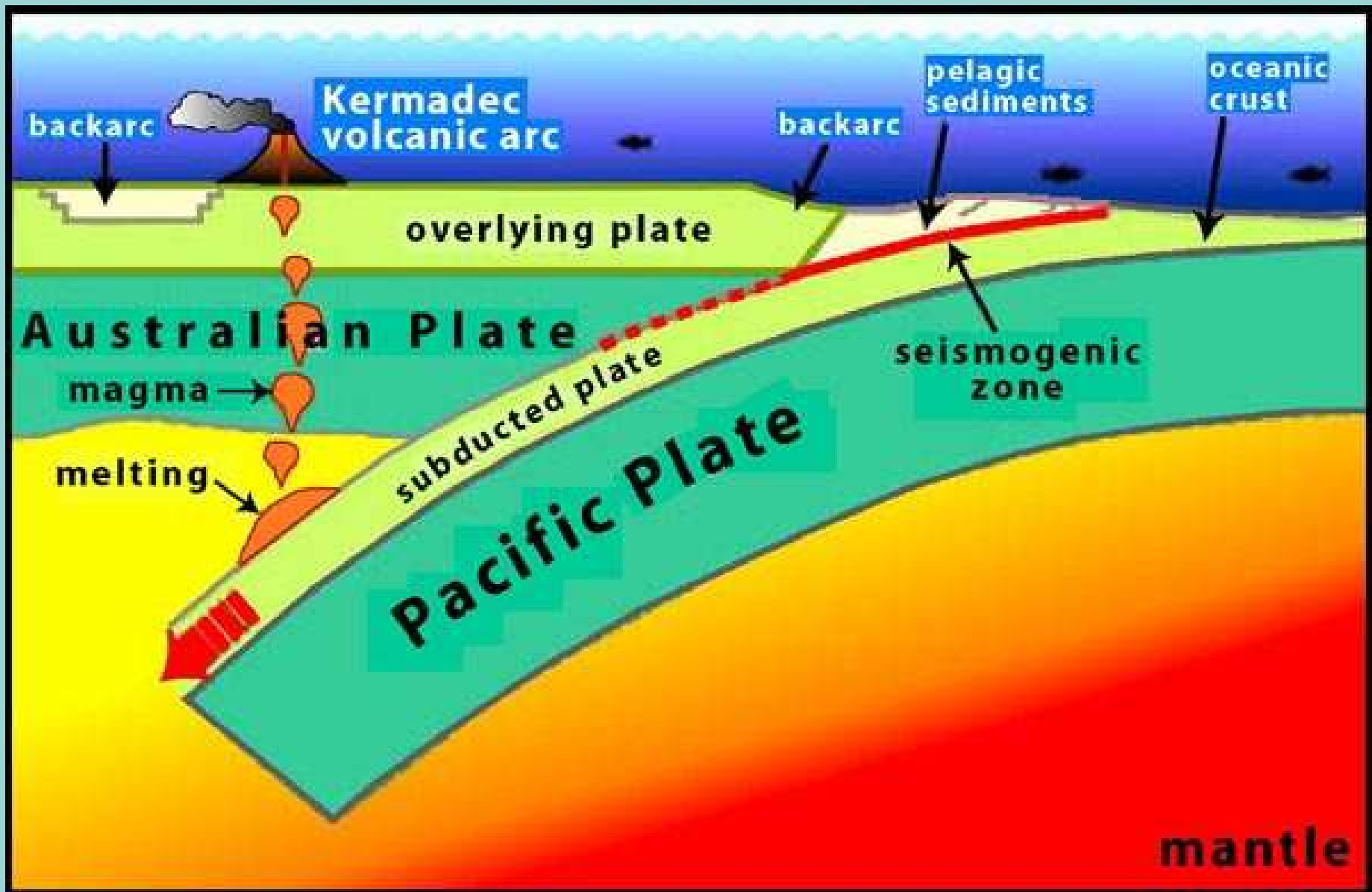


Plate Tectonics on a very active convergent plate boundary

























# Local Experts in field with us: Darren Gravley





# Other random Kiwis

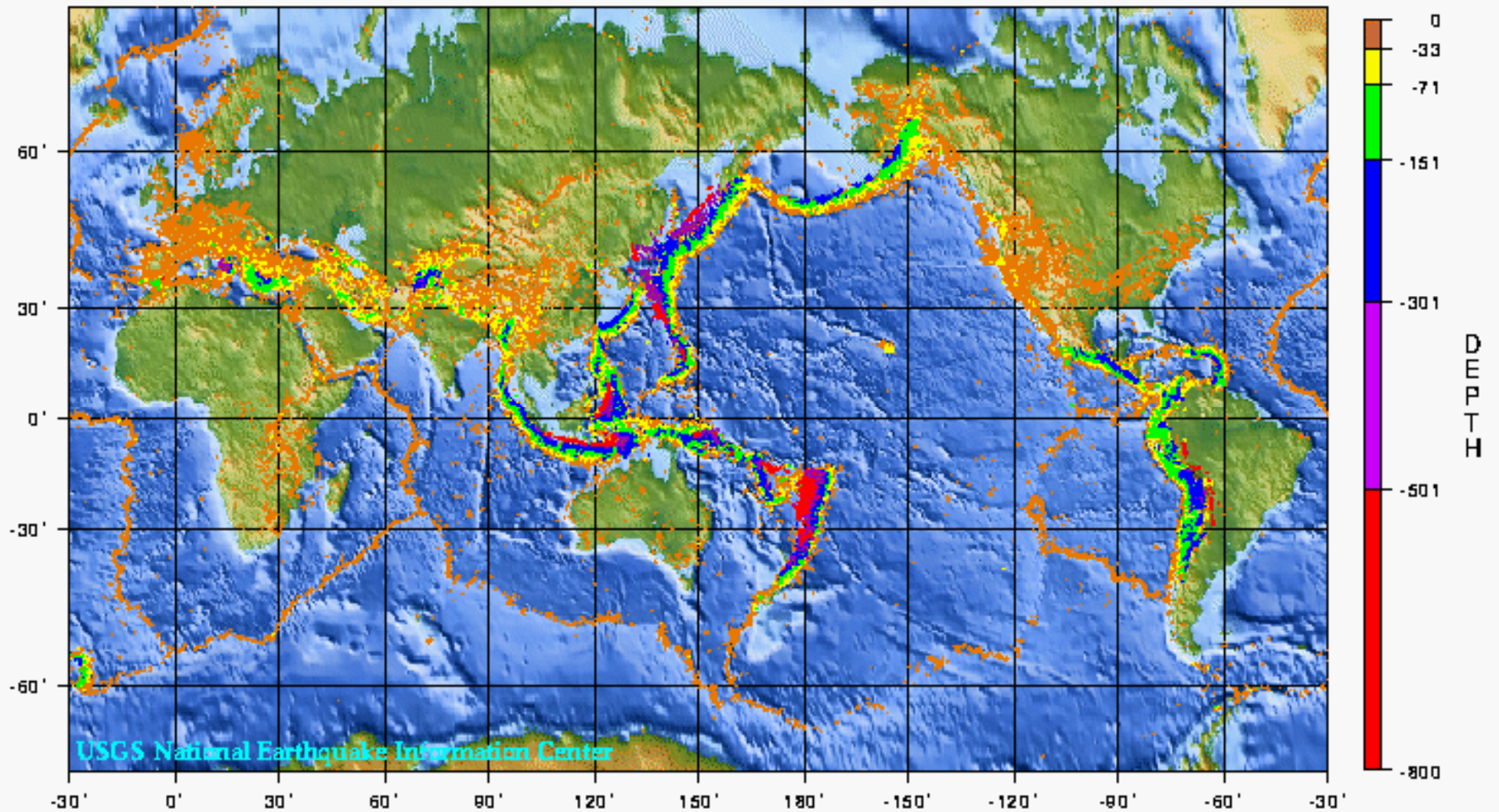


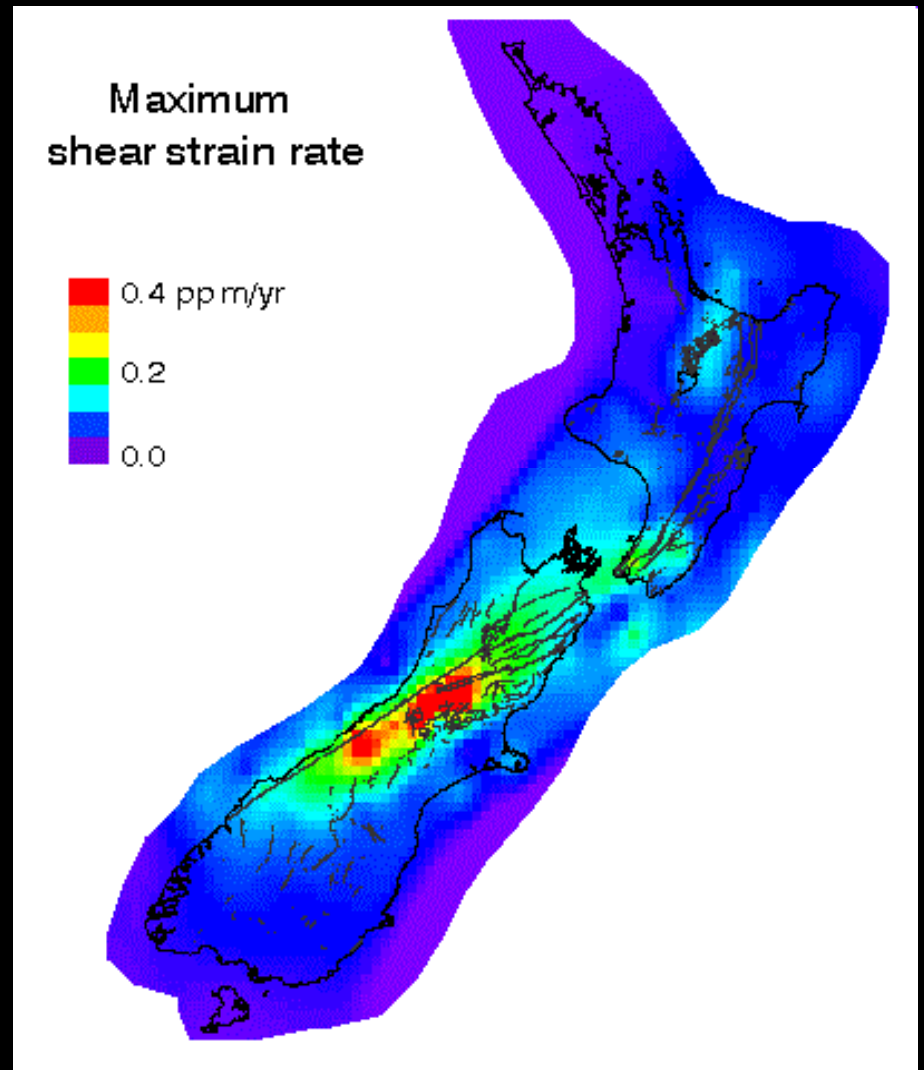
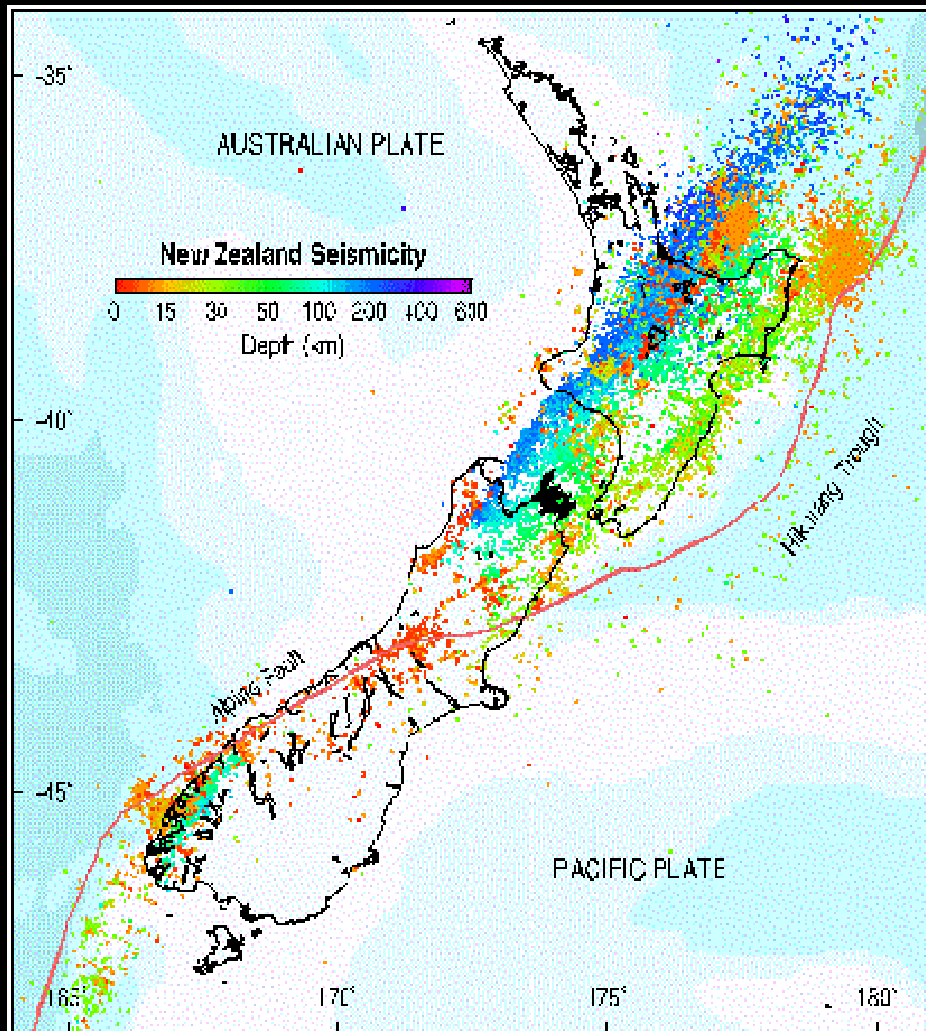
Exposure to new types of rock, and problems to solve...





## World Seismicity: 1975 - 1995





























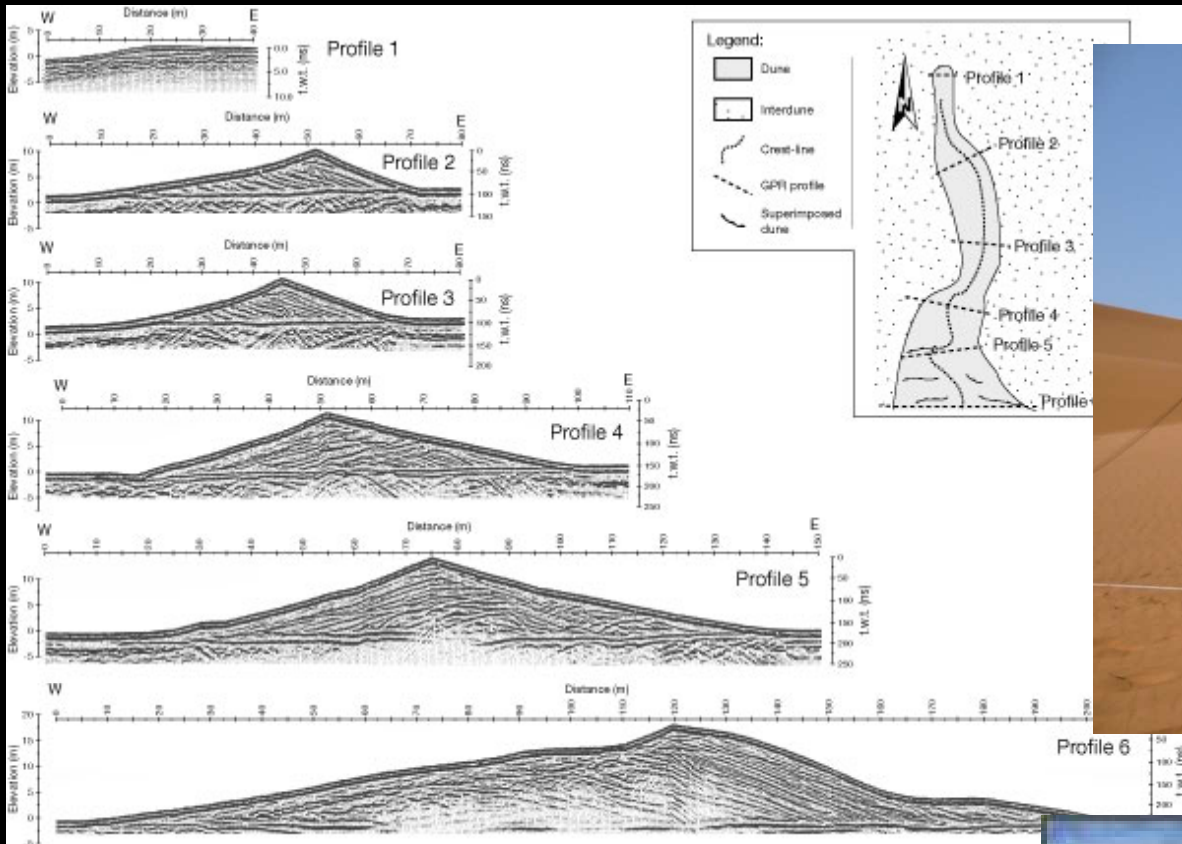






















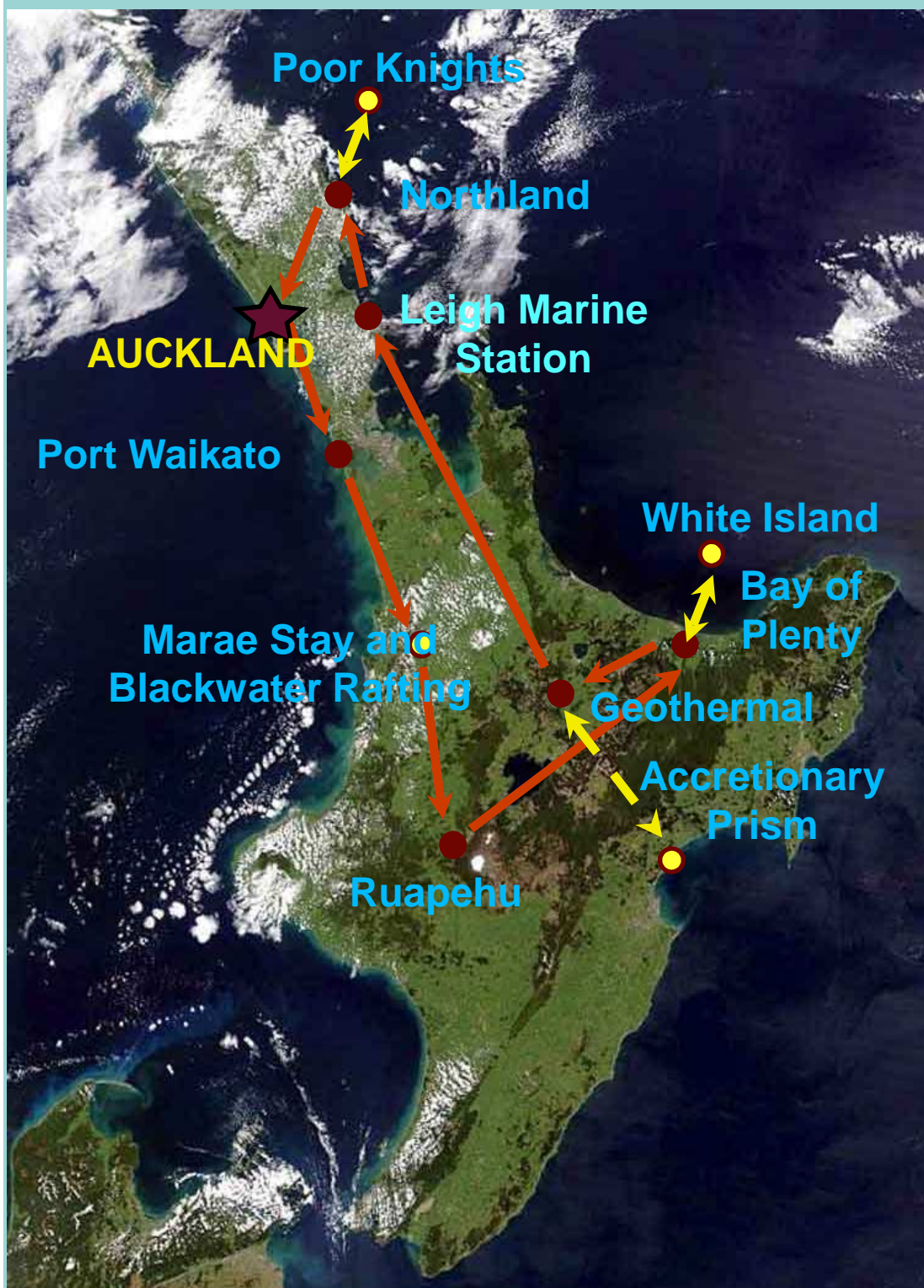
Programme starts  
in Auckland



Programme ends  
in Christchurch







## ITINERARY & PLAN

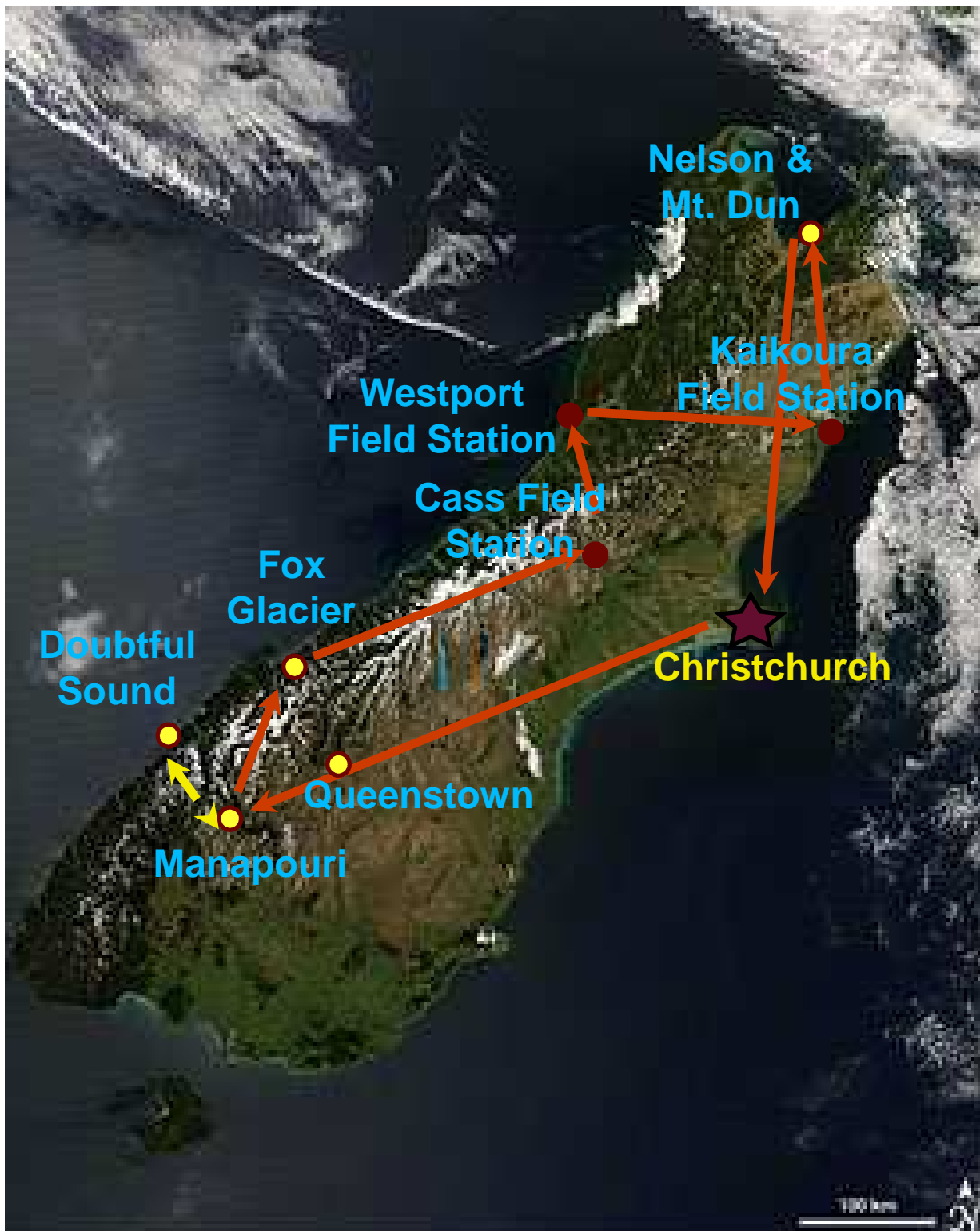
First four-weeks on  
North Island:

developing skills

back arc tectonism

volcanism and  
geothermal energy

coastal sedimentology,  
geomorphology &  
marine habitats



Second four-weeks  
on South Island:

honing skills

structures mapping

stratigraphy

igneous-  
metamorphic  
mid-crustal &  
mantle rock





Working 6 days per week  
(rain or shine), maybe  
even  
7 some weeks !

Some odd hours (low tide)  
and some odd down-time

Some rugged terrain

Bunk style dorms or  
rustic cabin quarters

Communal and small  
group  
cooking for ourselves



You might be hot and sunburnt, or cold and wet....You might be hiking across a hillslope, or jumping in the surf....



## **Dates and Destinations:**

**Sunday January 3:** students due in Auckland  
*-arrive at start separately, but we leave Auckland as a group the next morning, Monday January 4. You can use the Winter & Spring Breaks for personal travel.*

**January 4 - 30:** Four weeks of intense field work and travel across the North Island

**January 30 - February 5:** Mid-Programme Break

**Friday February 5:** Group reconvenes on South Island  
(various rendezvous points to meet up with group)

**Saturday March 6:** Programme ends in Christchurch *after breakfast. Three weeks to start of Carleton term...*