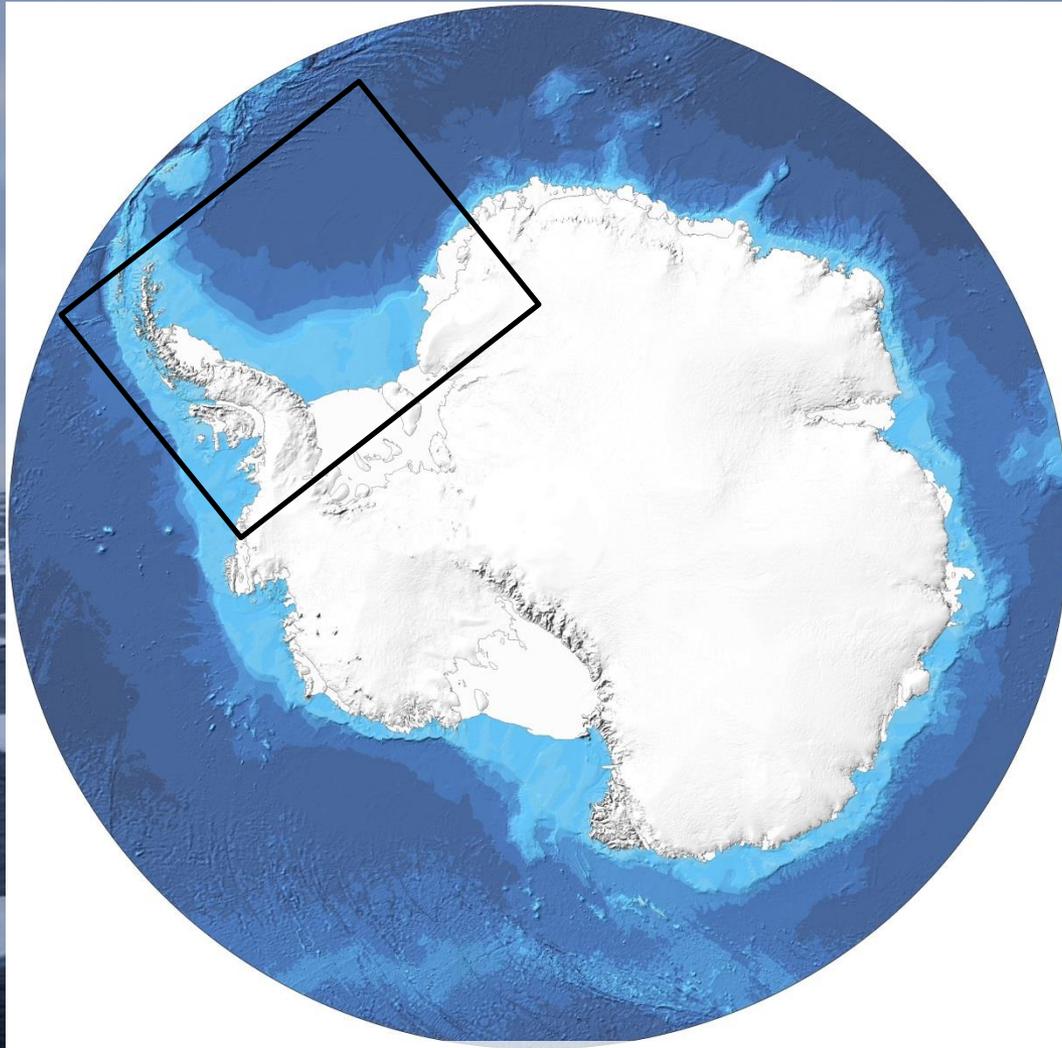


Weddell Sea benthic communities under the influence of different ice regimes

S. Pineda-Metz
O. Kuvshinova
D. Gerdes



Arndt, J.E. *et al.* 2013

Aims

- To show benthos distribution patterns in the Weddell Sea, and
- How these patterns relate to sea ice regimes



Benthos



Sea Ice

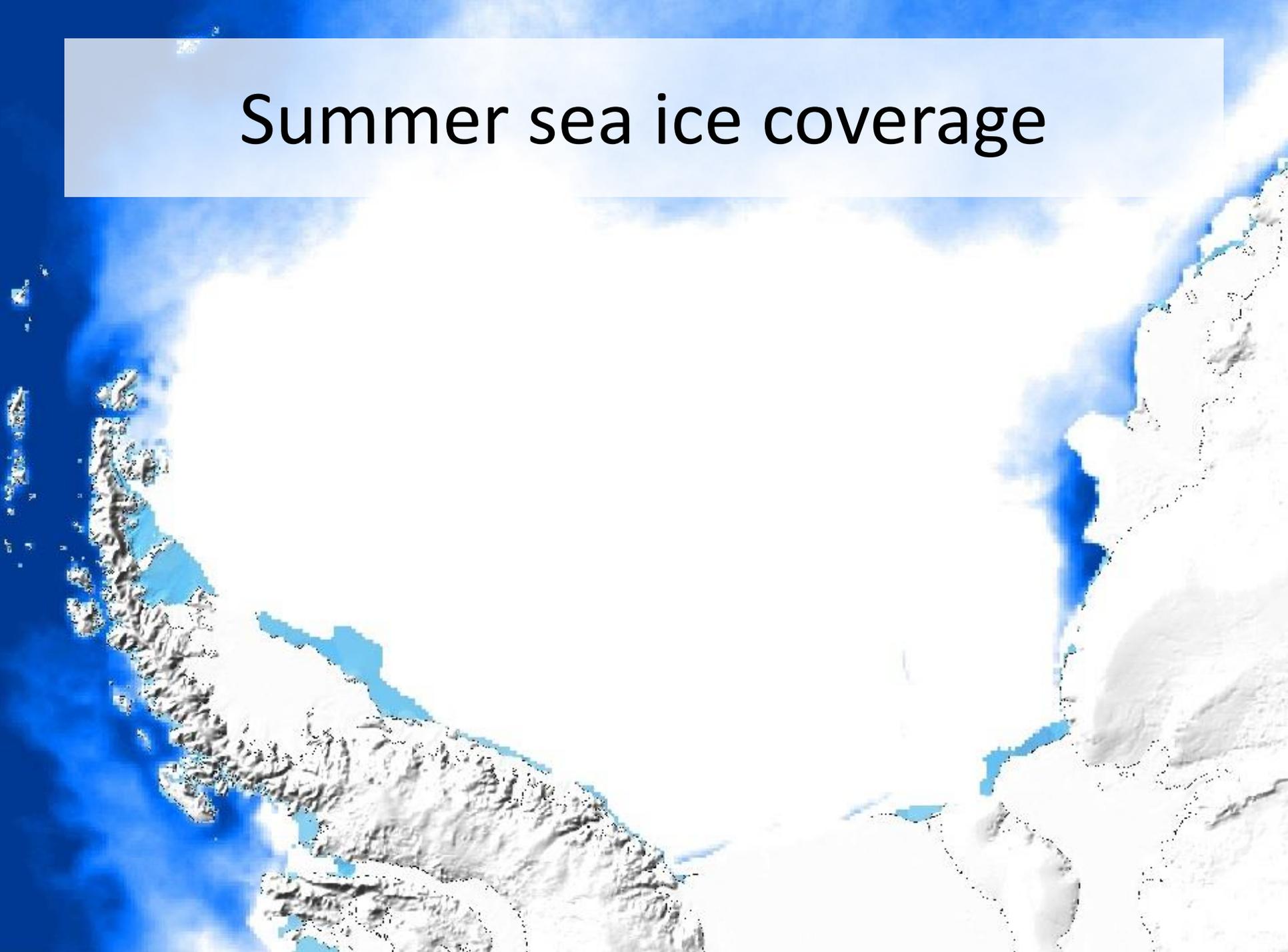


Ice & Benthos

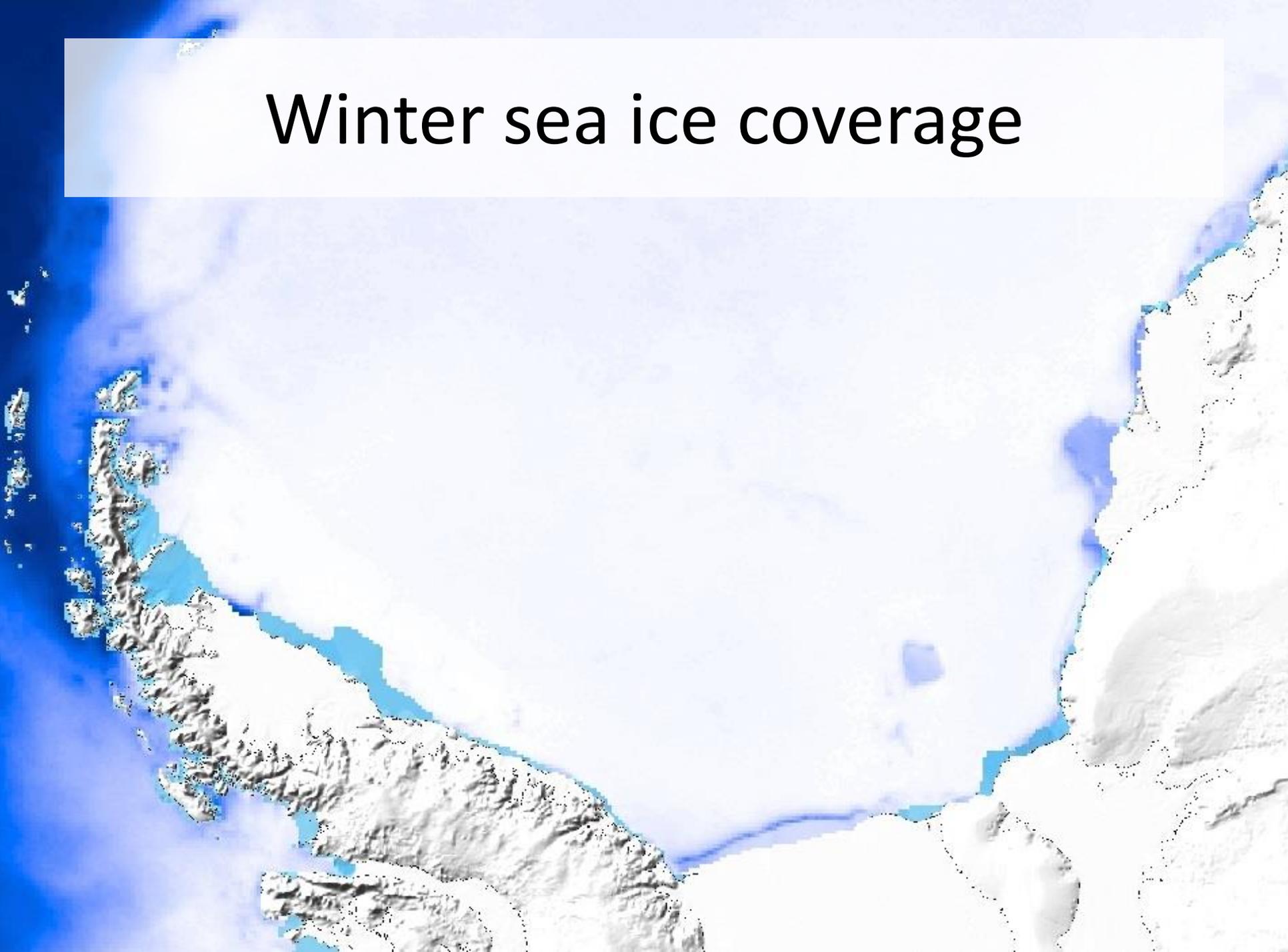
- Ice disturbs benthos
 - Limits sea surface for production
 - Sea ice modifies water characteristics



Summer sea ice coverage



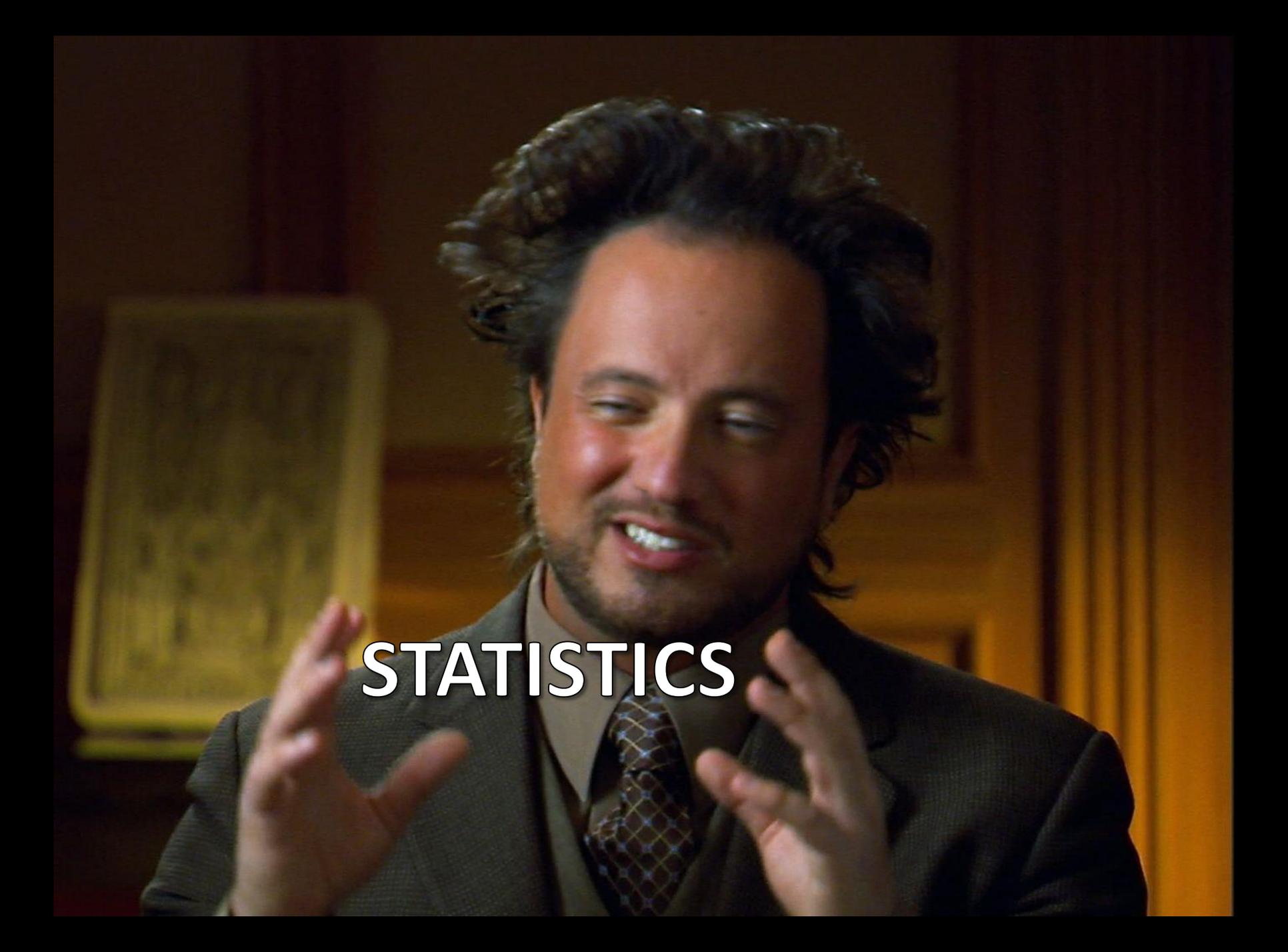
Winter sea ice coverage



Questions

- How is benthos distributed in the Weddell Sea?
- Are there any differences along the shelf?
- How important is the role of sea ice?



A man with dark, curly hair, wearing a grey suit jacket, a light-colored shirt, and a patterned tie, is smiling and gesturing with both hands. The background is a wood-paneled room with a framed document on the wall. The word "STATISTICS" is overlaid in white, bold, sans-serif font across the center of the image.

STATISTICS

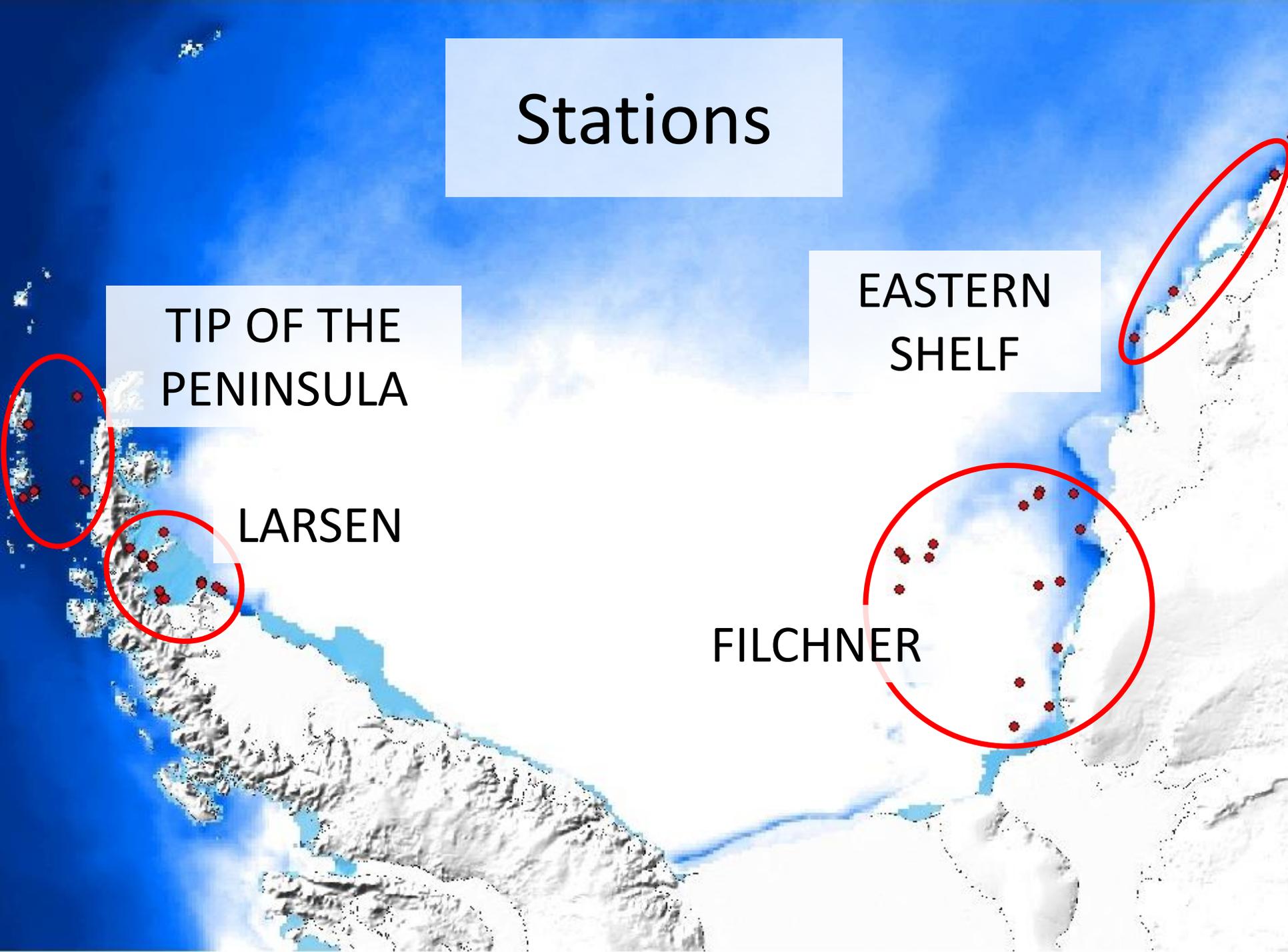
Stations

TIP OF THE
PENINSULA

LARSEN

EASTERN
SHELF

FILCHNER



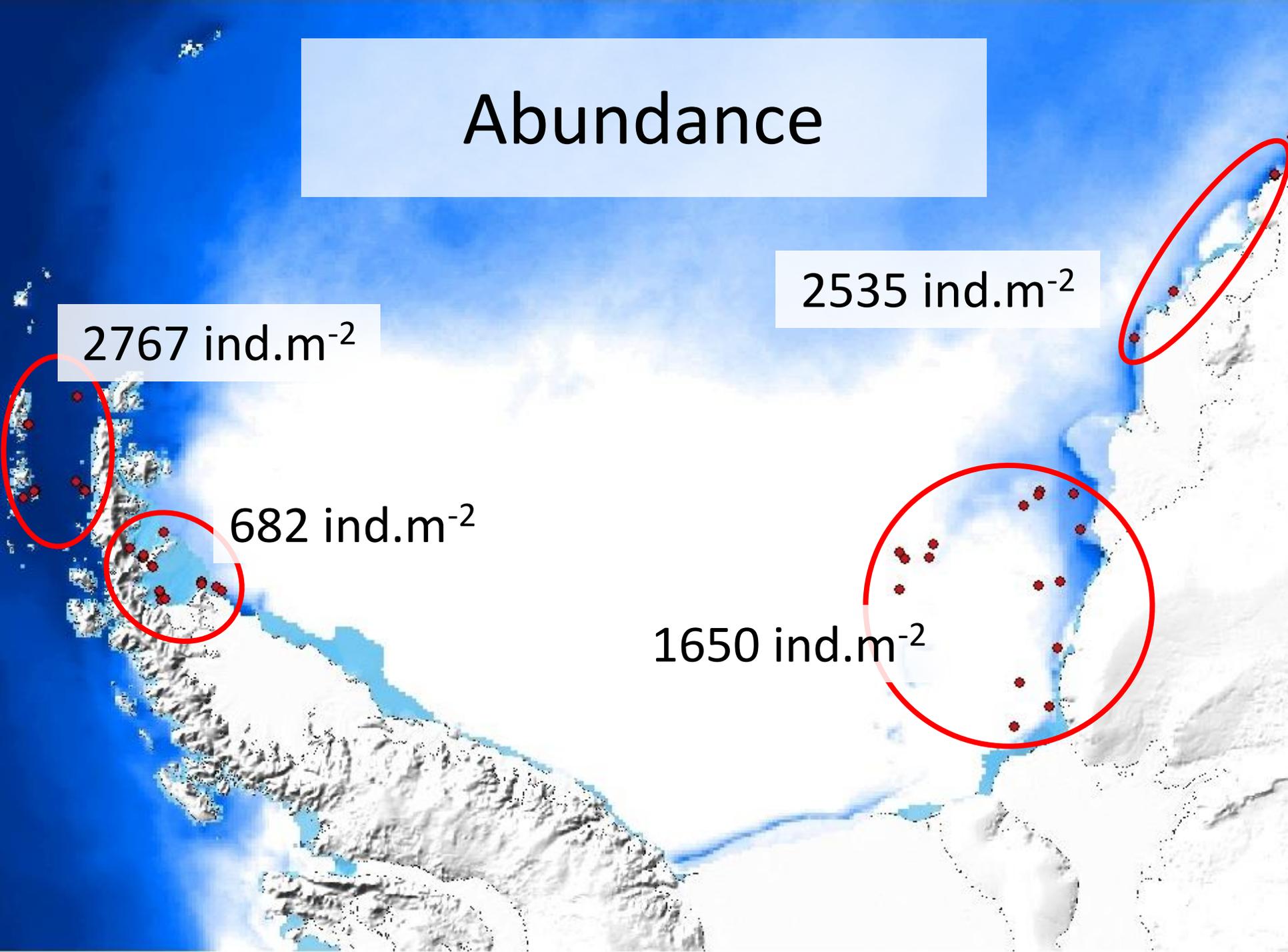
Abundance

2767 ind.m⁻²

2535 ind.m⁻²

682 ind.m⁻²

1650 ind.m⁻²



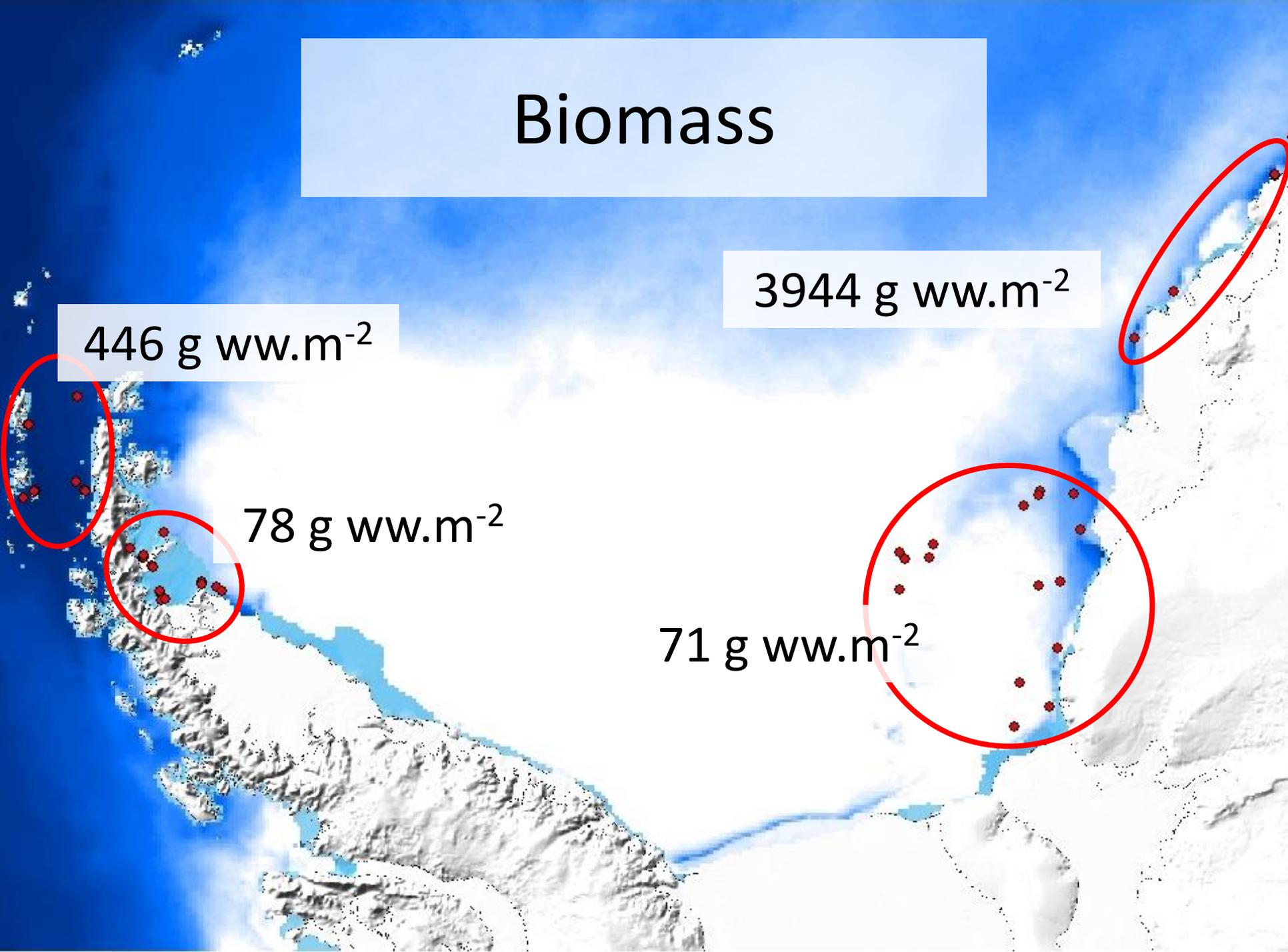
Biomass

3944 g ww.m⁻²

446 g ww.m⁻²

78 g ww.m⁻²

71 g ww.m⁻²

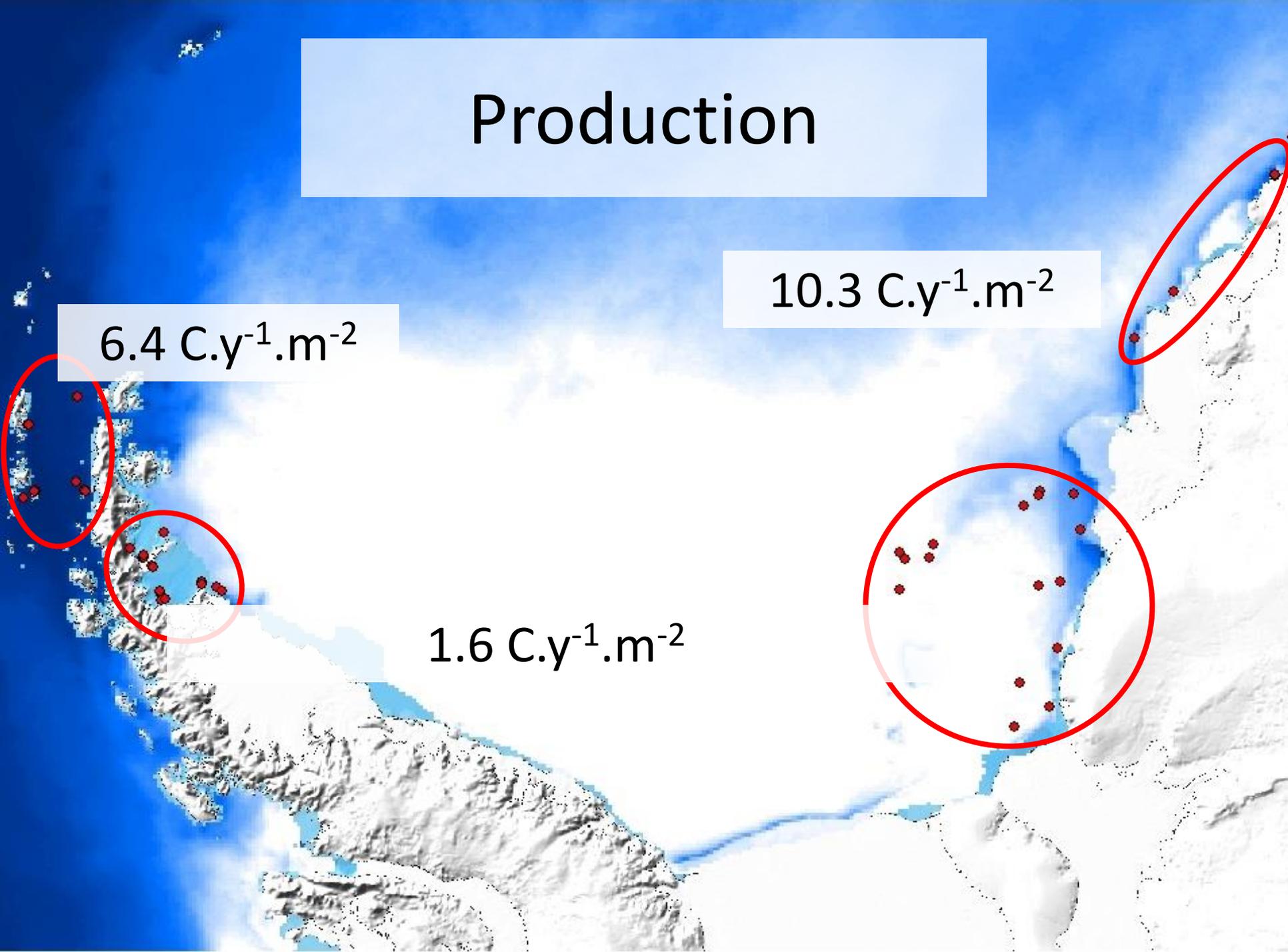


Production

6.4 C.y⁻¹.m⁻²

10.3 C.y⁻¹.m⁻²

1.6 C.y⁻¹.m⁻²

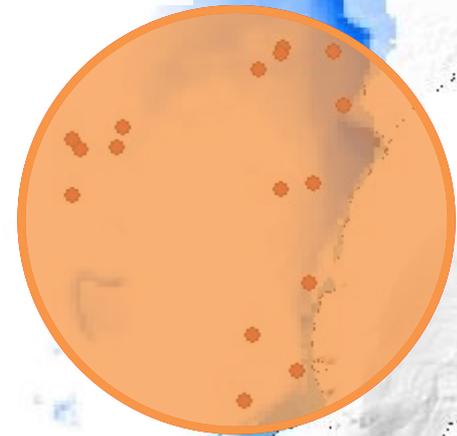
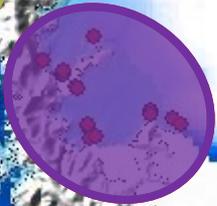


Abundance

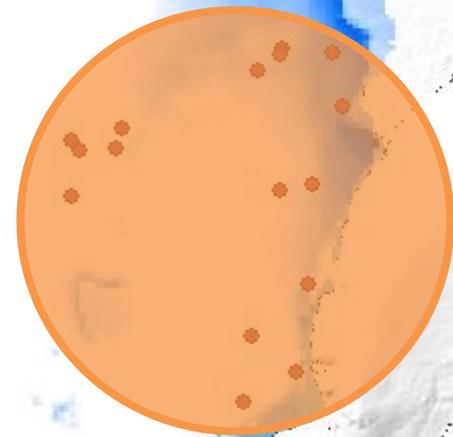
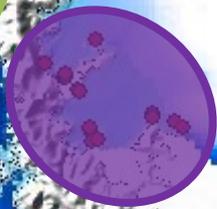
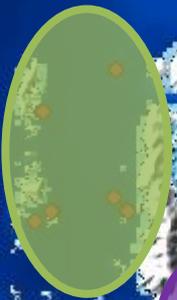
**CLITELLATES
AMPHIPODS**

**Biomass &
production**

**SPONGES
OPHIUROIDS
POLYCHAETES**



Summer average sea ice
coverage
Rho: 0.28 – 0.38



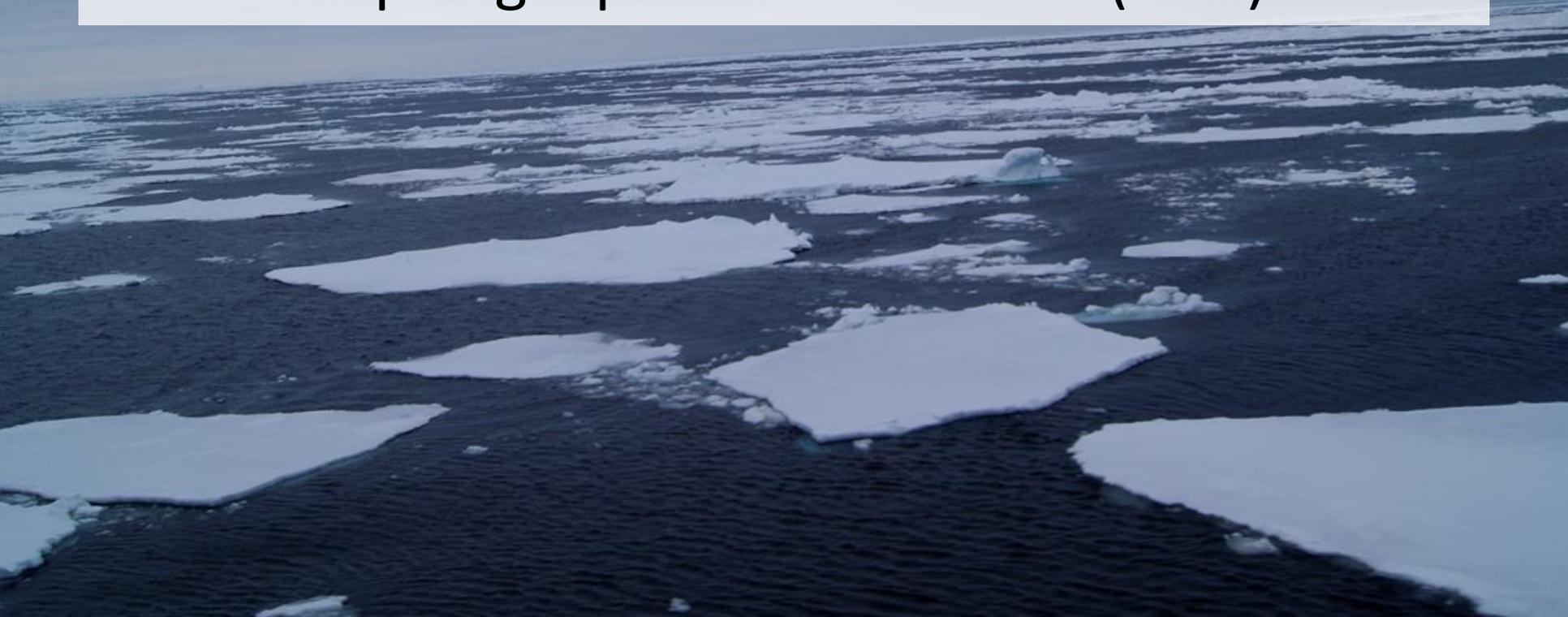
Conclusions

- Heterogeneous distribution pattern...
 - Higher values at the “extremes”
 - All areas differ
- Sea ice coverage plays a role, but not key



Acknowledgements

- Crew of R/V Polarstern
- POLMAR & LMH
- Benthic pelagic-processes section (AWI)



Thank you

