

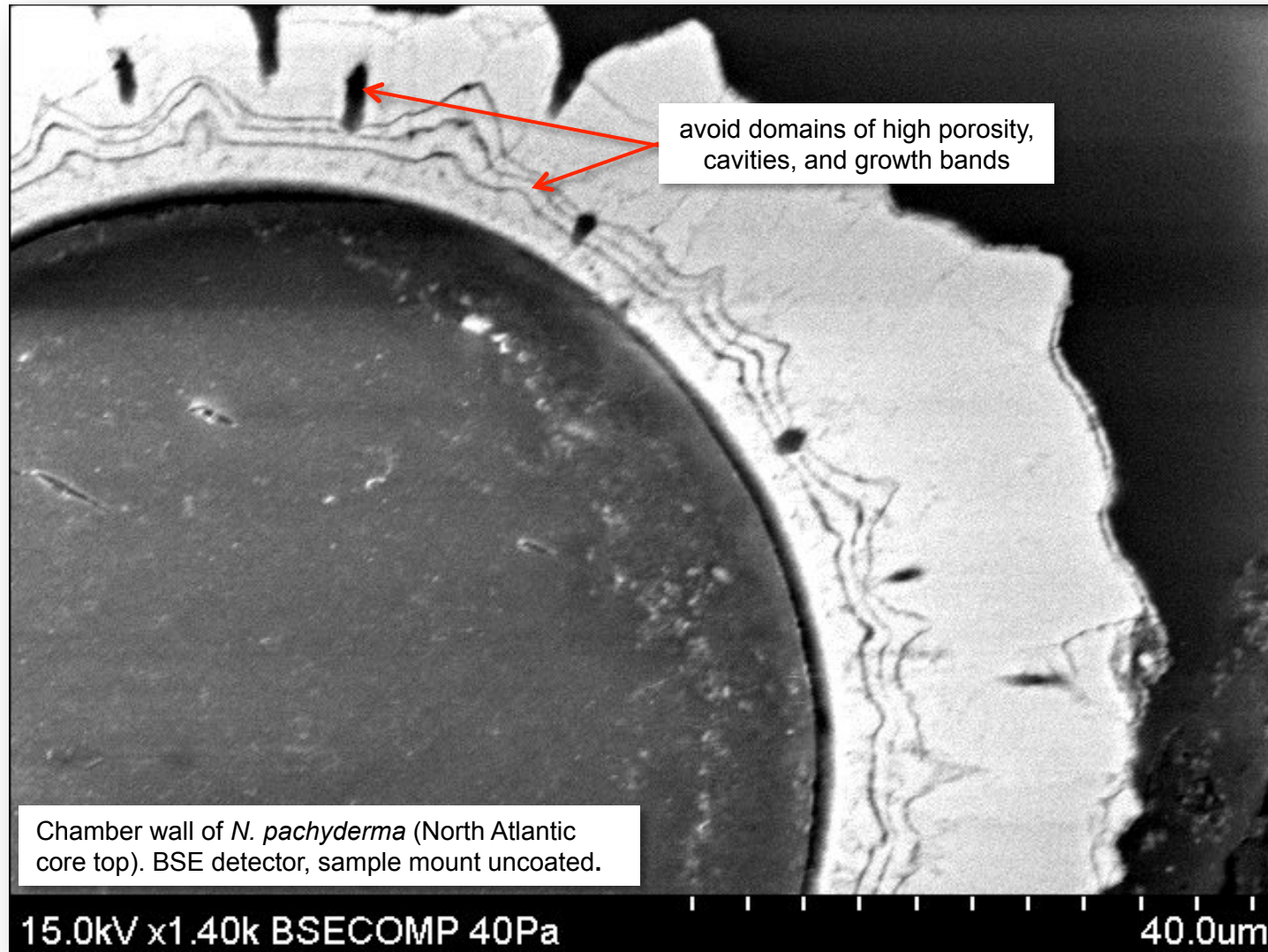
CAMECA

IMS 1280

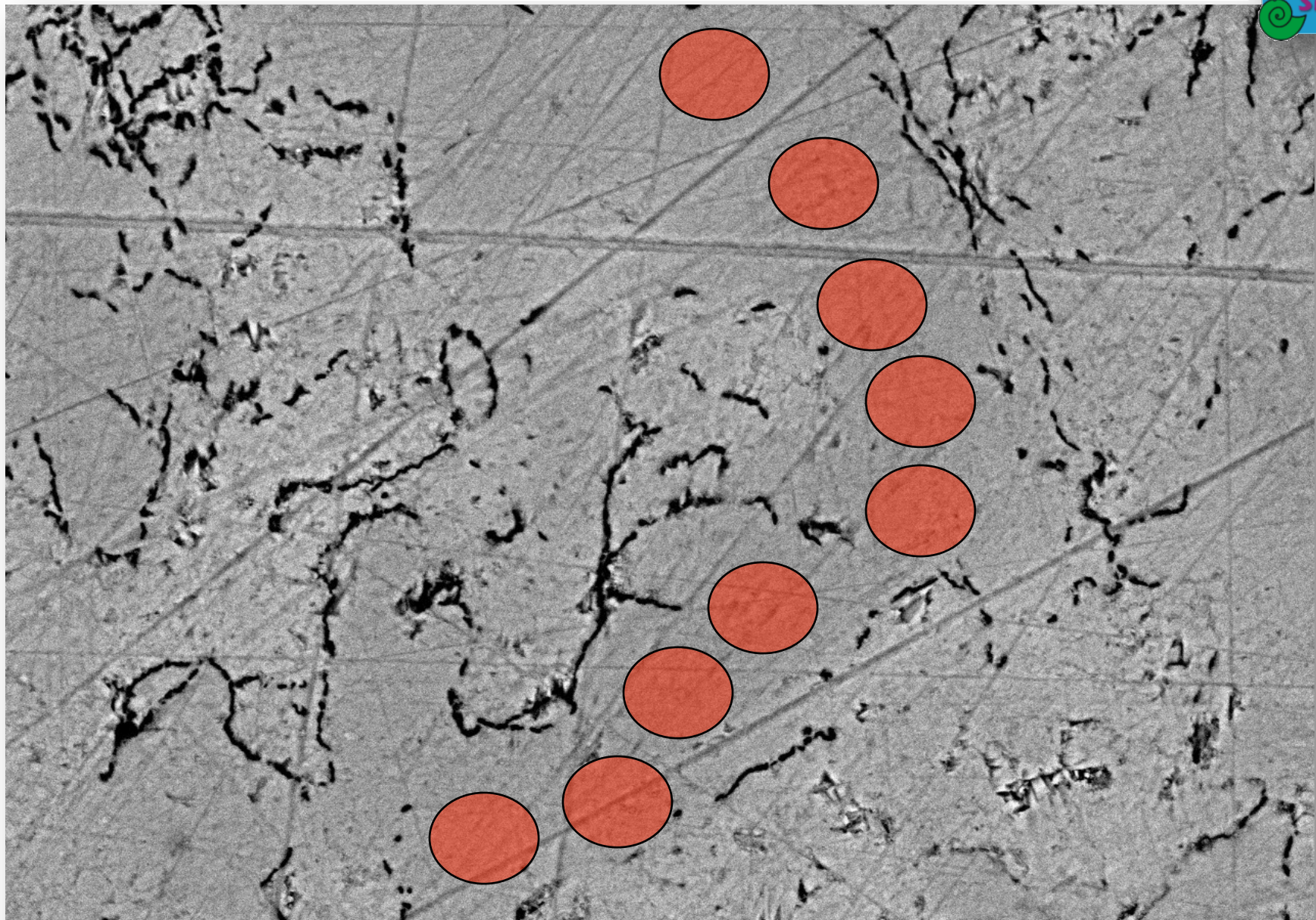
Example: Foraminiferal shells



- imaging of **uncoated** samples by SEM in environmental mode using the backscattered electron detector (BSE) has shown to be a useful approach to locate growth bands and cavities that are filled by epoxy and/or organic material.
- some of these features may not be clearly visible after coating. **Only non-porous areas can be safely analyzed with high precision and accuracy.**
- the Au-coat can be applied at the WiscSIMS laboratory.



Example: Preselection of suitable pit locations for SIMS analysis of a coral

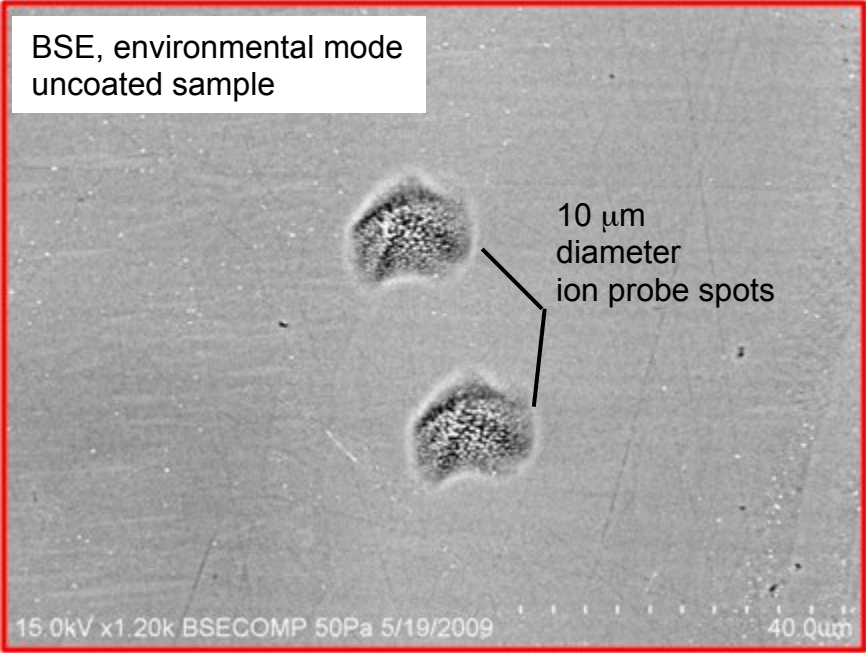
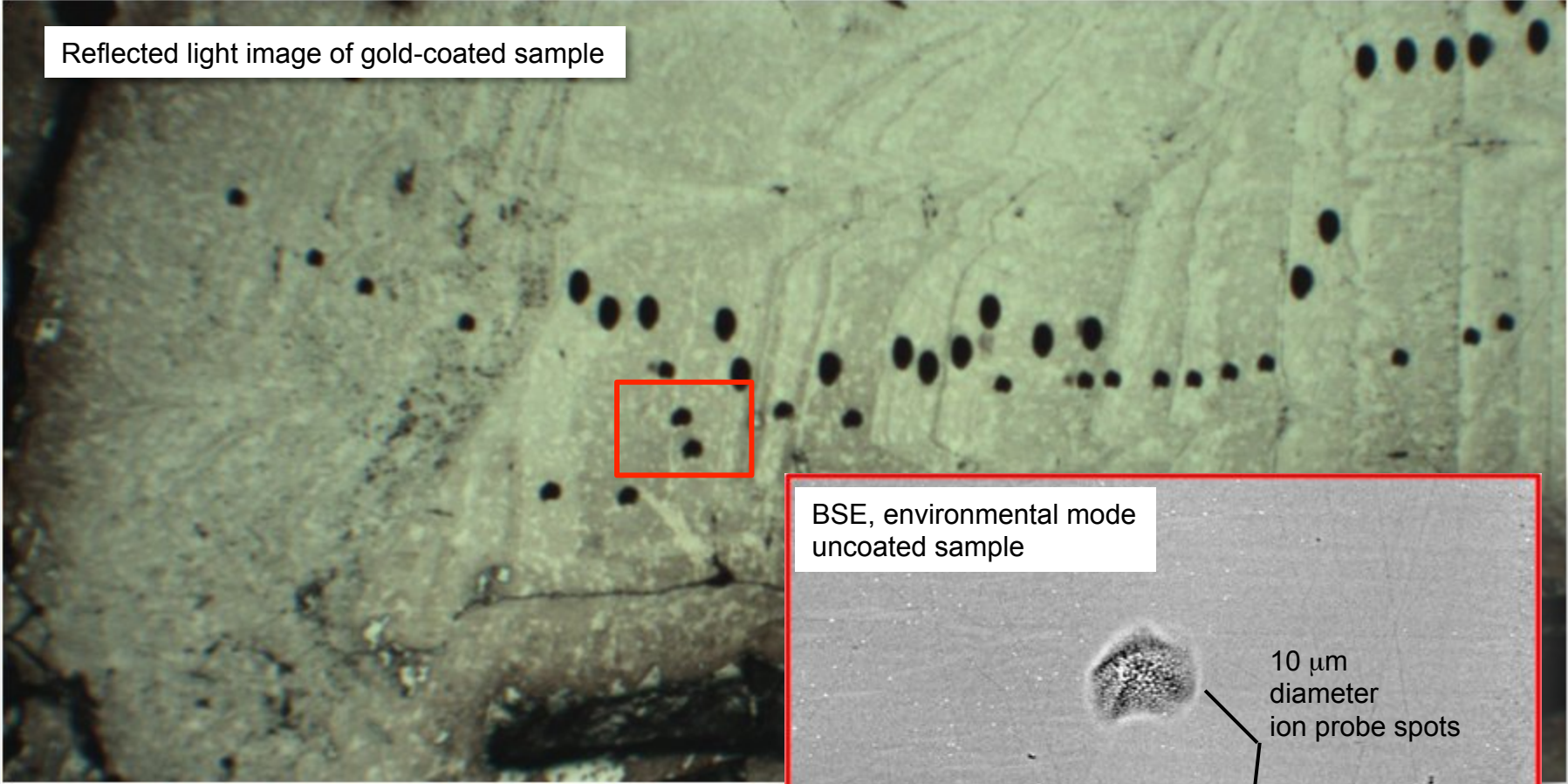


15.0kV x750 BSECOMP

50.0um

Sample provided by Fred Andrus, University of Alabama

Example: Sample surface conditions for **speleothem calcite**



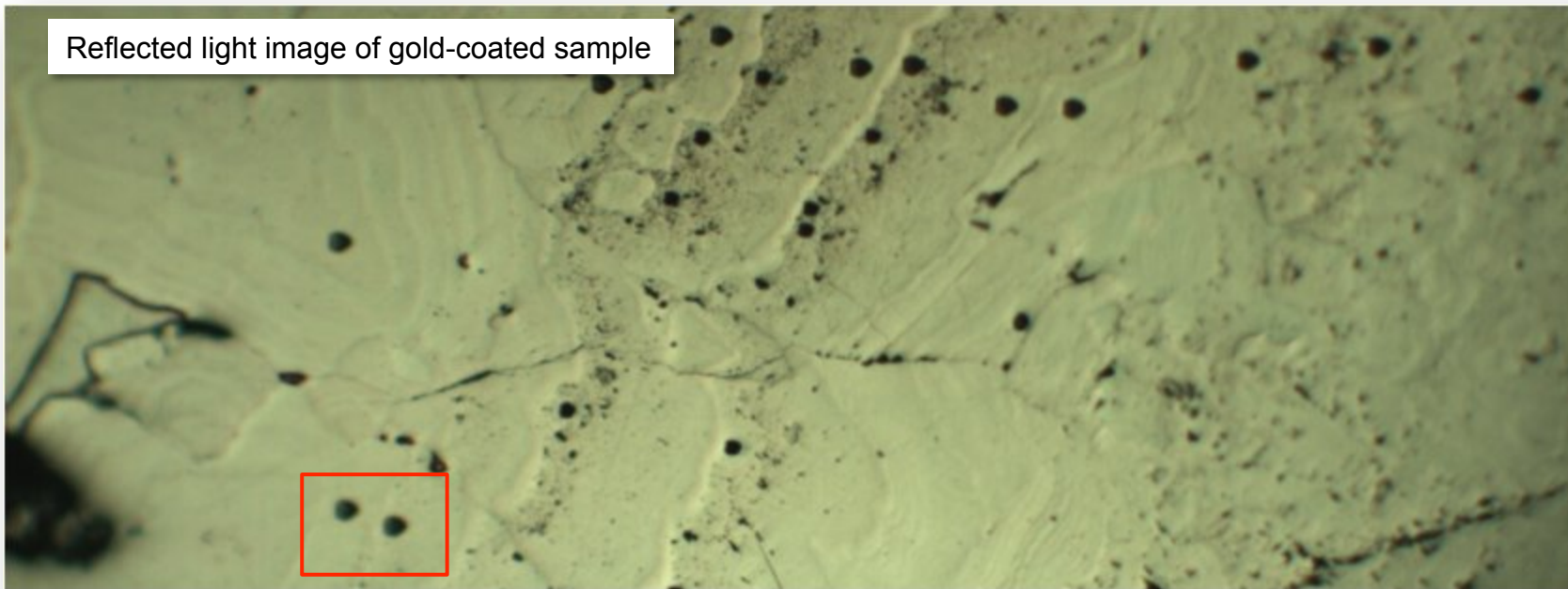
Ideal conditions:
Smooth surface condition

Good yield

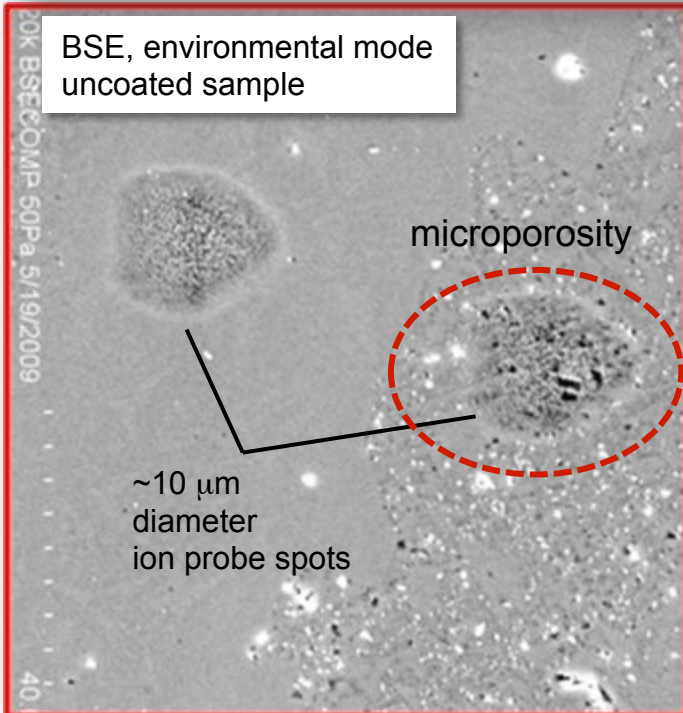
Example: Sample surface conditions for **speleothem calcite**



Reflected light image of gold-coated sample



BSE, environmental mode
uncoated sample



Questionable conditions:

Mediocre surface smoothness, due to microporosity or cracks in sample.

Check ion yield of these ion microprobe spots relative to non-porous standard grain analyses to confirm viability.