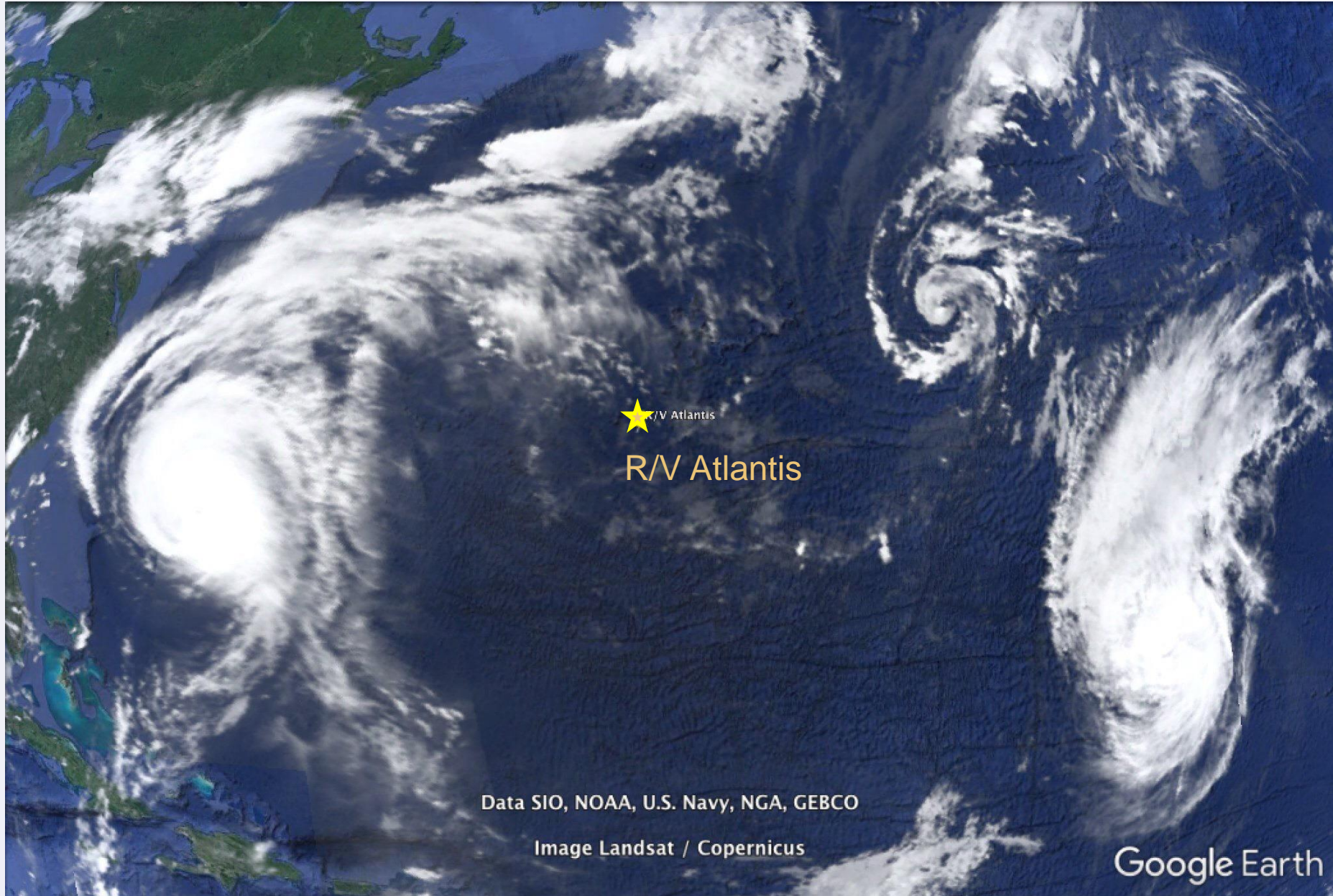




# Lost City Return 2018 (Sept 8 – Oct 1)





# NSF Bio-Oce: What limits life in the serpentinite subsurface?

Co-Chiefs:

S. Lang, B. Brazelton

Vehicles:

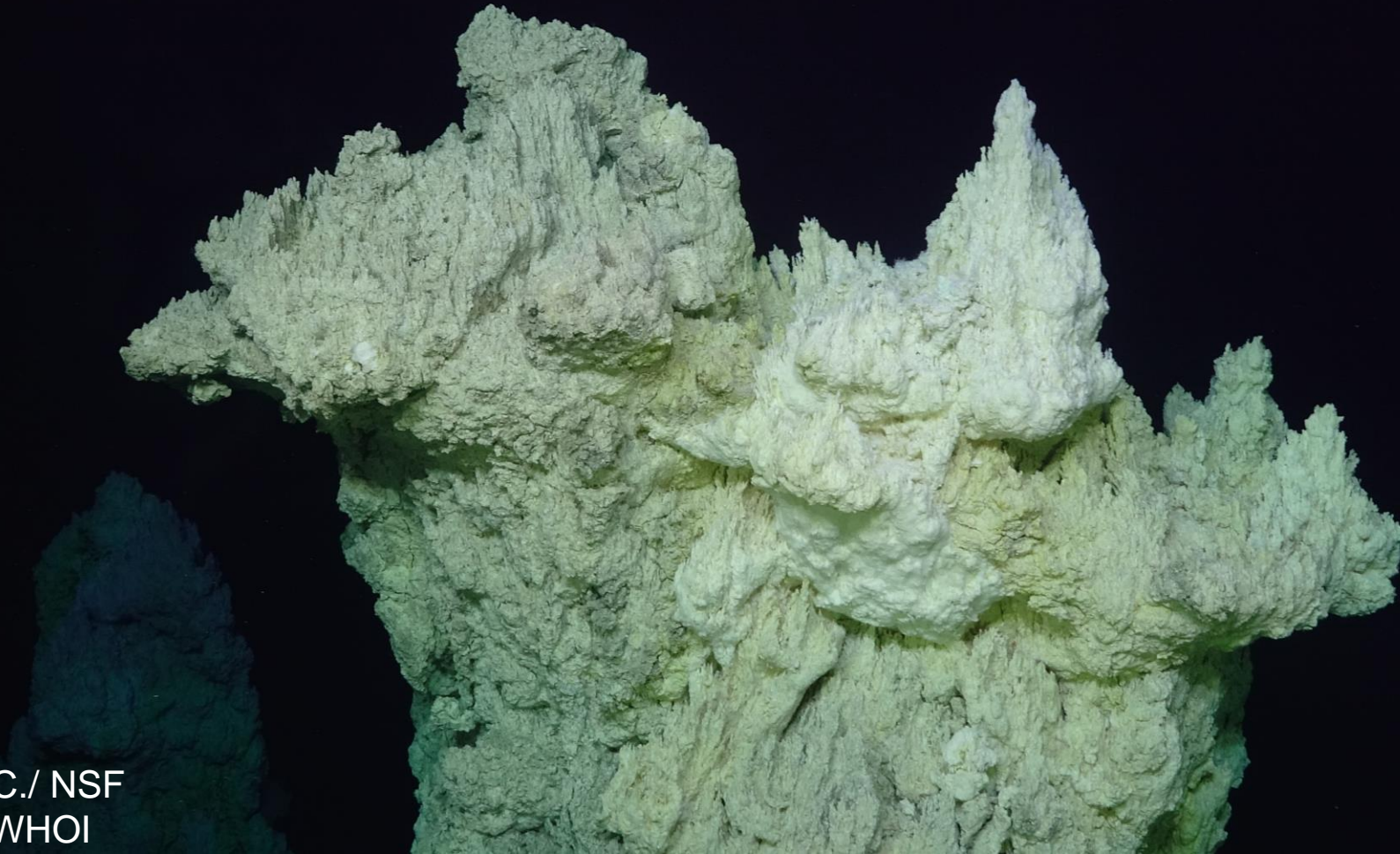
ROV Jason, R/V Atlantis (y'all rock)

Science Days Funded:

12

Science Days Realized:

5.5

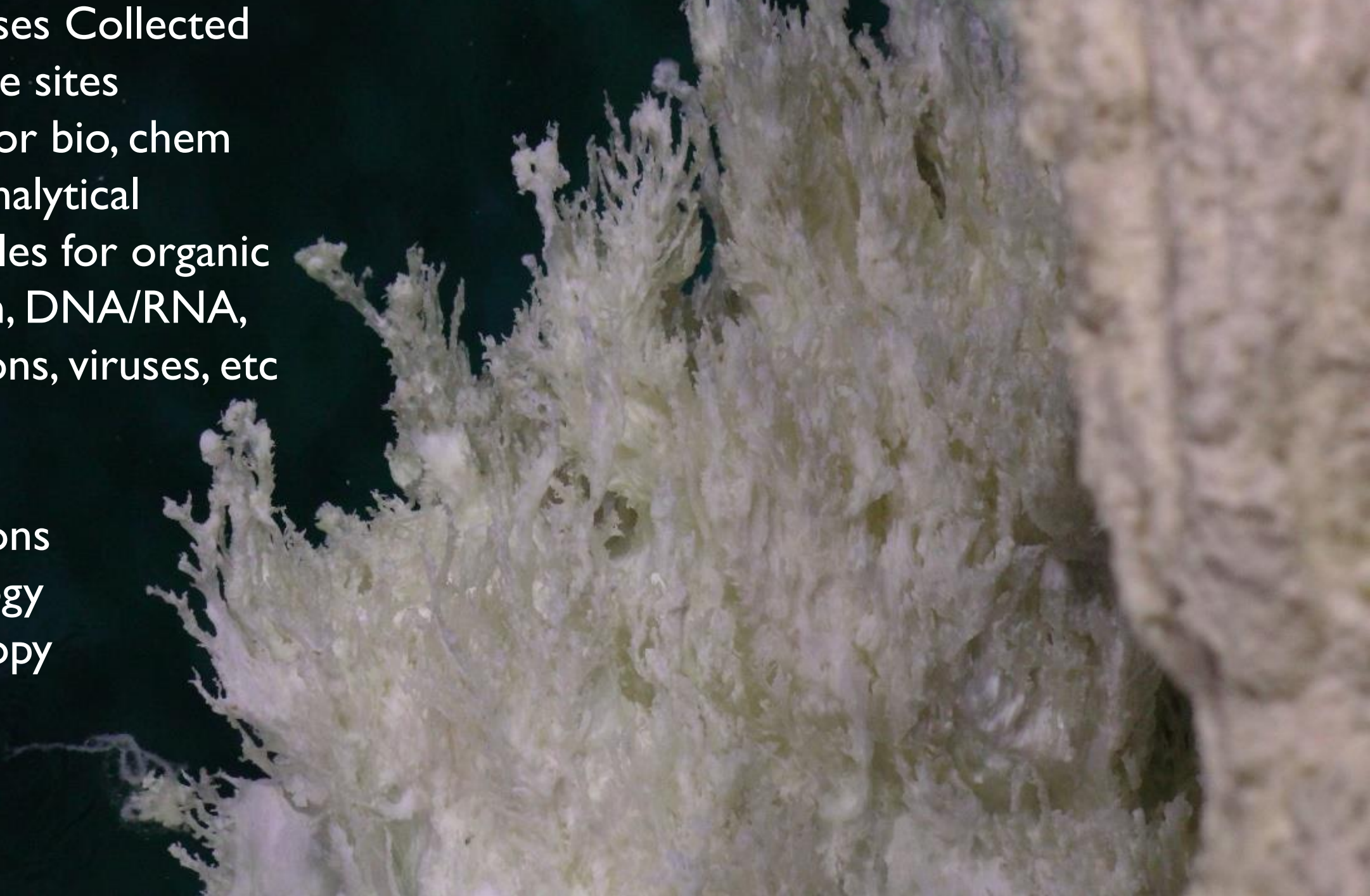


## Fluids & Gases Collected

- 12 unique sites
- >130 L for bio, chem
- >2000 analytical subsamples for organic geochem, DNA/RNA, incubations, viruses, etc

## Chimneys

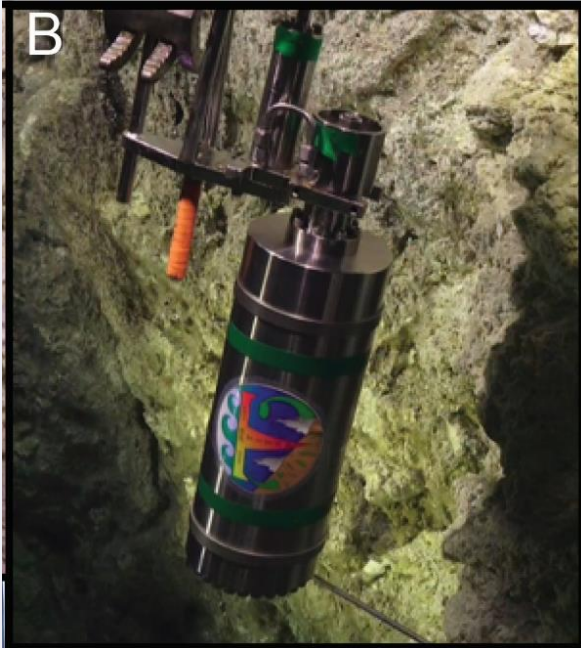
- Incubations
- Mineralogy
- Microscopy





# Some of the unique sampling devices

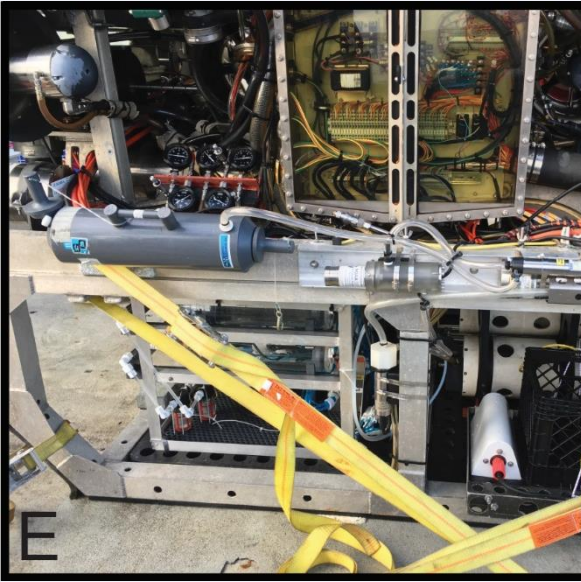
.....



'Titan' Gas Tight  
Sampler  
(Früh-Green, Lilley)

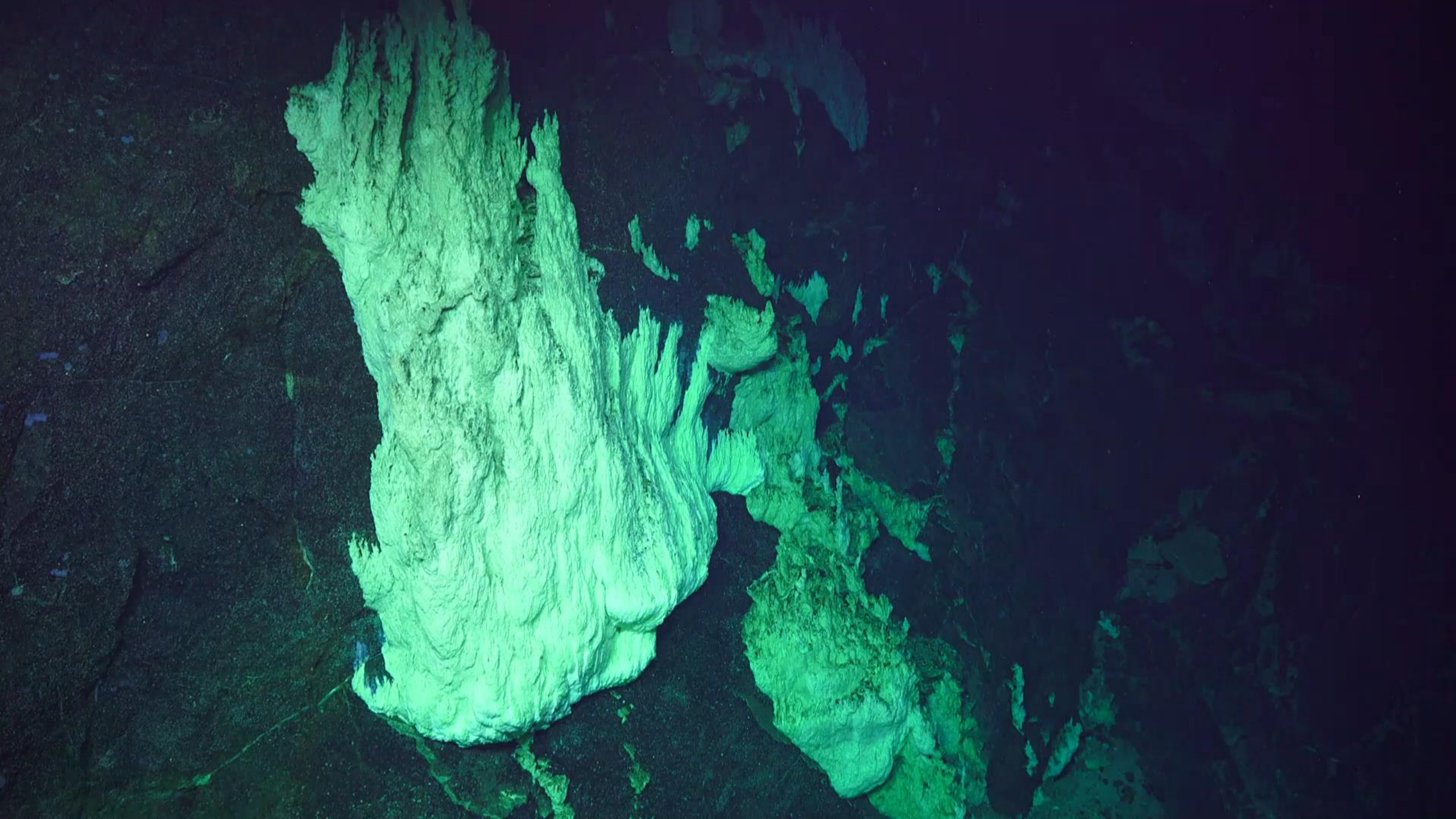


**H**ydrothermal  
**O**rganic  
**G**eochemistry  
(Lang)  
-7 2-L 'natural'  
-7 2-L 'incubation'  
-5 in-situ filters  
-2 1-L 'natural'



Flow through  $\text{CH}_4$ ,  
eH sensors  
(Lilley, Walker)







# Sampling from boreholes of IODP 357

