

Discrete DMS/P measurements, Production rates and the Influence of light/UV

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Aims:

Compare DMS (dimethyl sulphide) and its precursor DMSP (dimethylsulfoniopropionate) production inside and outside of POCs and filaments of upwelled water

Measurements we're making on the Ron Brown:

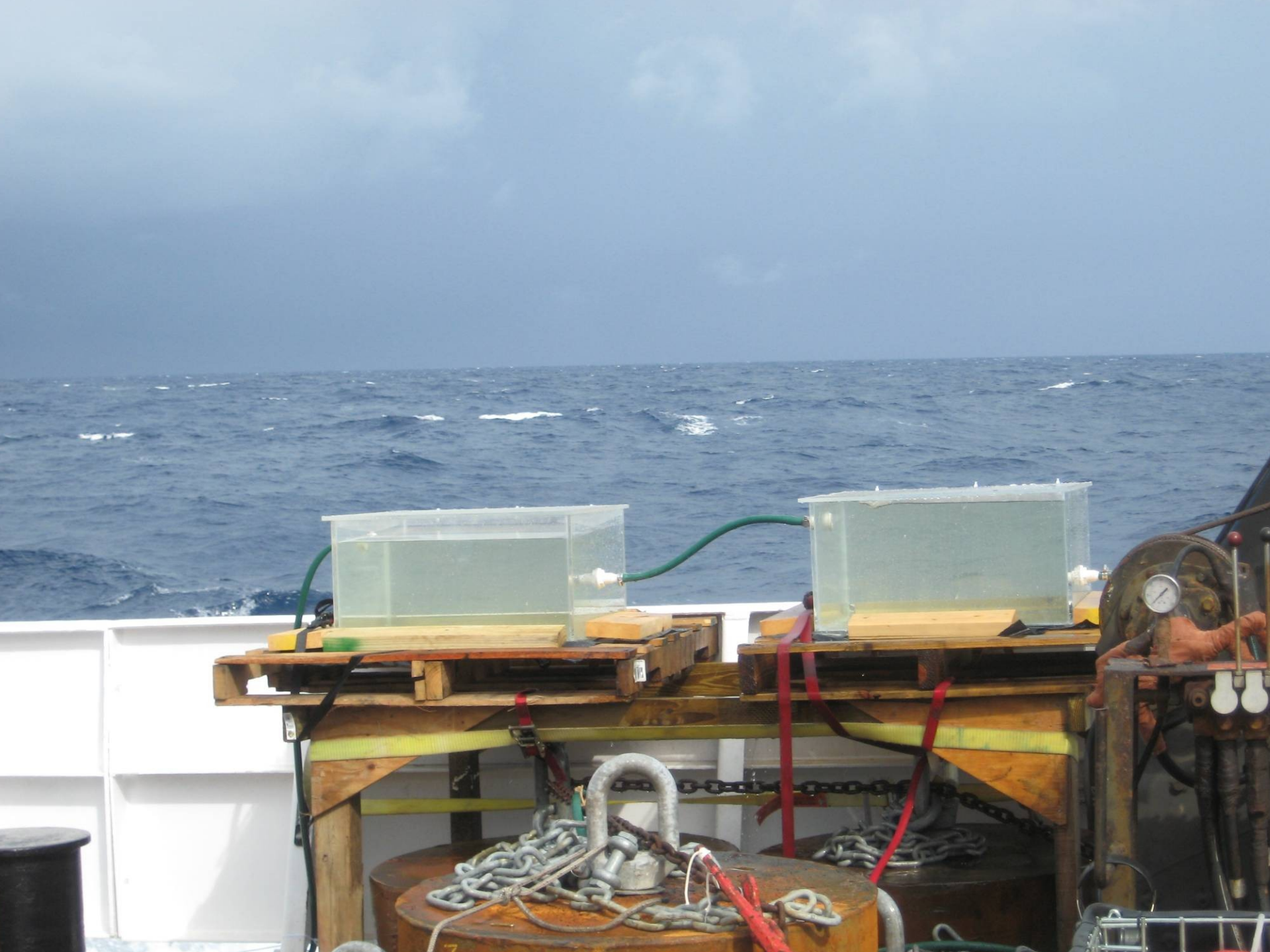
Discrete DMS (dimethyl sulphide), **DMSP**
(dimethylsulfoniopropionate)

Chlorophyll fluorescence

DMS/DMSP production rates

Light, 300-800 nm

Nutrient measurements at Bigelow



- DMS thought to be an important source of CCN, at least in remote ocean regions

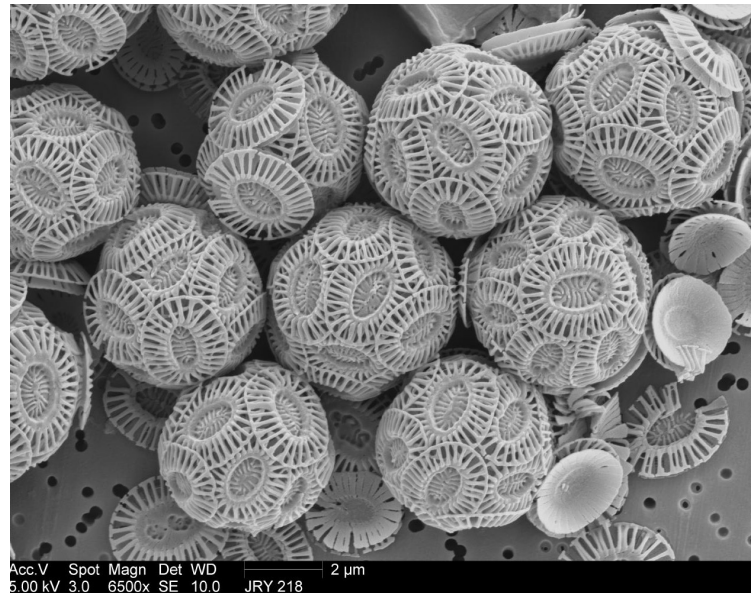


- Major source of acidity in the atmosphere
- Large flux of S
- May drive ocean => atmosphere NH_x flux => influence on marine and terrestrial productivity

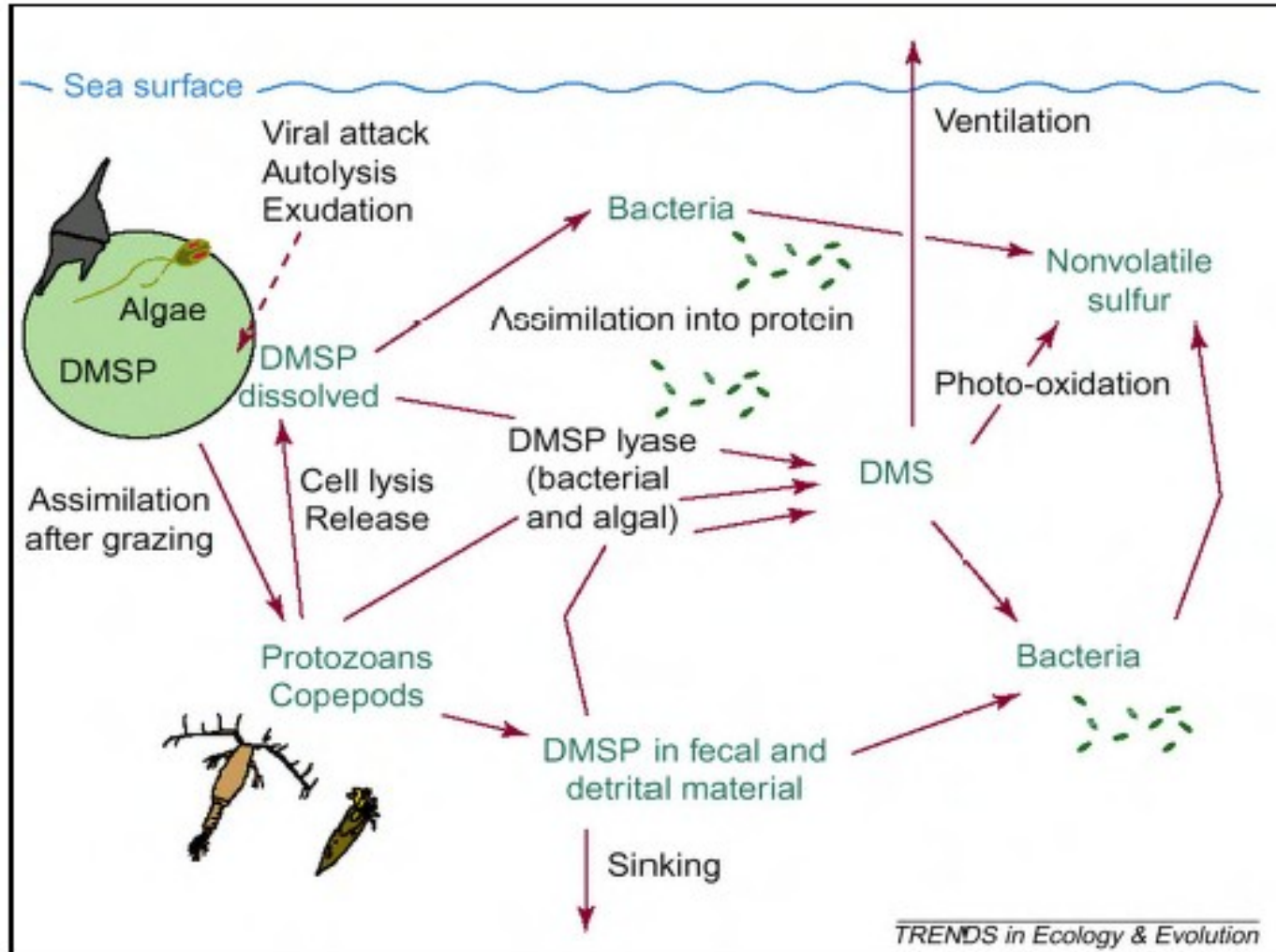
- DMS is a breakdown product of DMSP which is made by phytoplankton...

Uses?

- Osmolyte
- Anti-oxidant?
- Grazing defence?
- Viral defence?



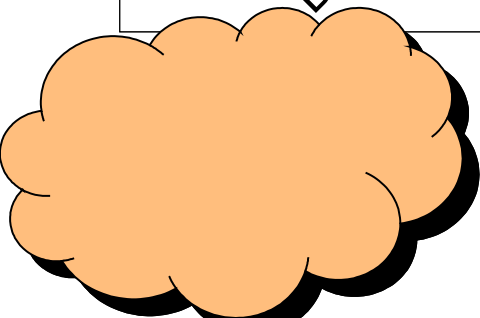
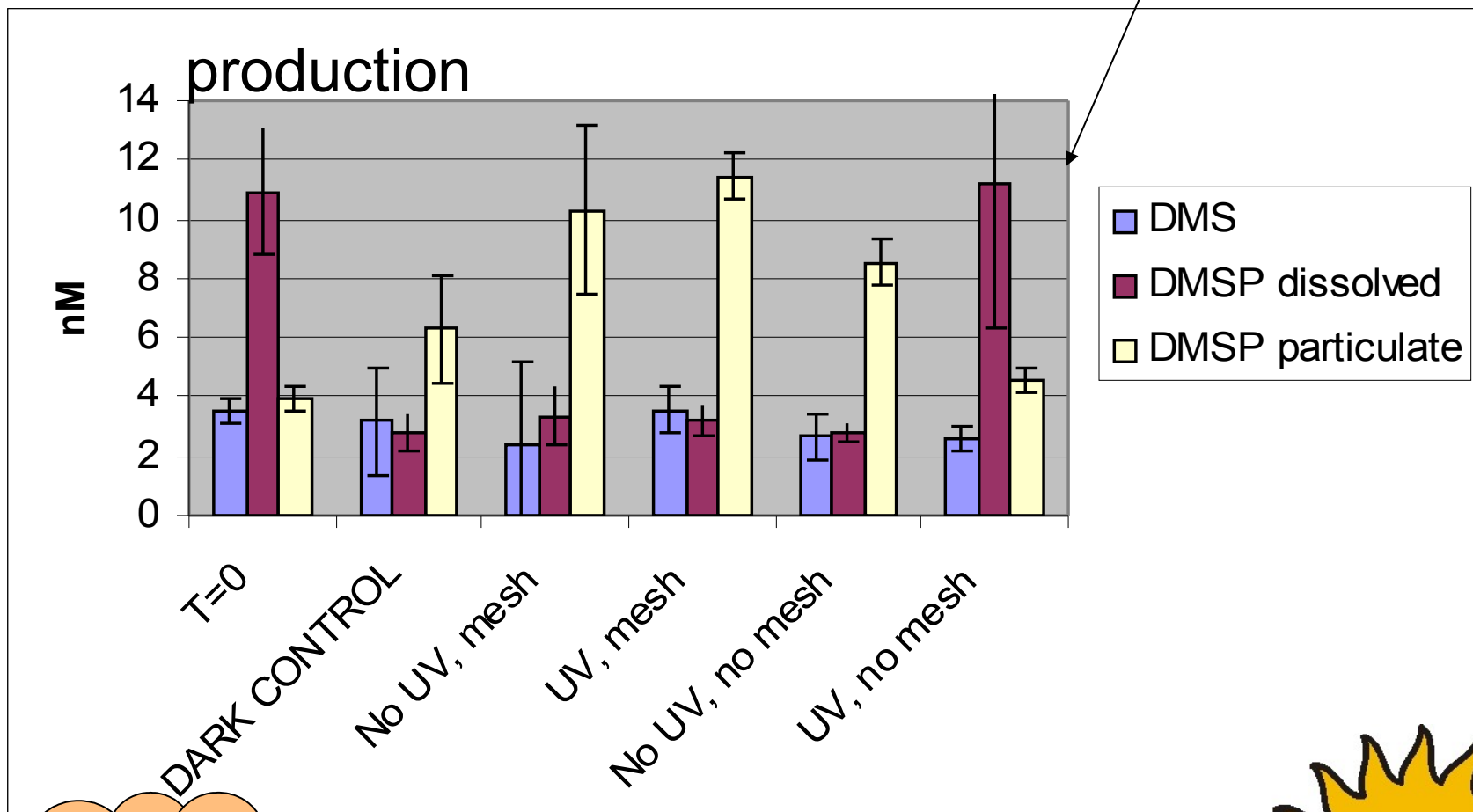
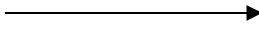
DMS production is complex and not terribly well understood...



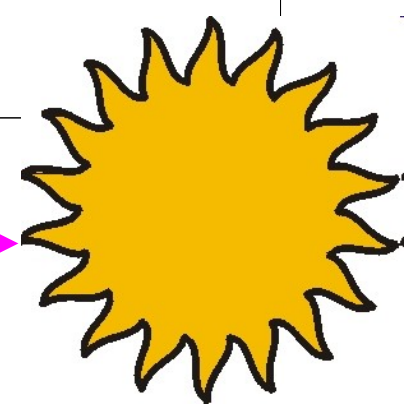
From Simo, 2001

Increasing DMSP

Cells fried



Increasing radiation



Thanks...

- Bob Weller, PS'ing under adverse conditions
- Also Carlos (WHOI) Ming (Hawaii) as well as the rest of the science party and the ships' crew
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