SAS Honors Seminar 256: Extraterrestrial Life

9/13/2011

Reading for Thursday (9/15)

Bennett & Shostak 4.2, 6.1, 6.3

– history of terran life

Sagan (1967)

– revolutionized biology

– read abstract and sections

1, 2.1-2.3, 2.6, 3.1-3.3, 3.6,

3.8, and 4 (see cheat sheet)

Lynn Margulis

University of Massachusetts

Response paper for Tuesday (9/20)

Write a statement justifying what you believe to be the appropriate level of involvement of Rutgers in the field of astrobiology. Do you favor a new department? an interdisciplinary degree program? an undergraduate major? no commitment at this time to such a speculative enterprise? Your statement should be specific but written at a level that is accessible to a nonspecialist (e.g., a university administrator).

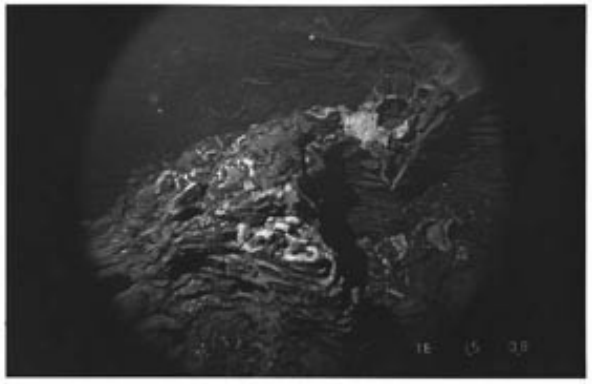
Upcoming field trip (9/22)

Deep Sea Microbiology Lab – Prof. Costa Vetriani

Institute of Marine & Coastal Sciences

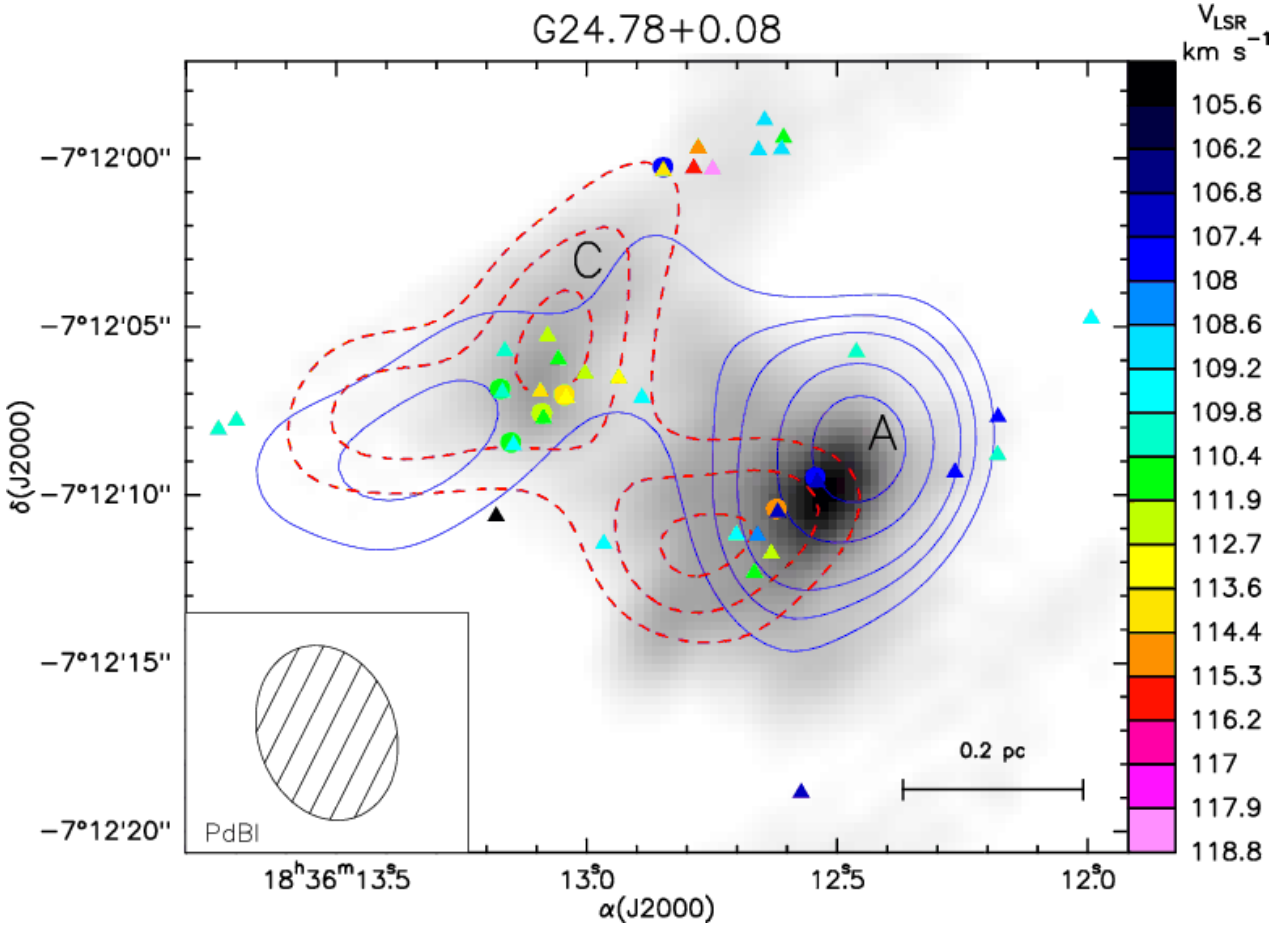
Department of Biochemistry and Microbiology

http://marine.rutgers.edu/deep-seamicrobiology/



lava flows and tube worms 2500m below the surface of the Pacific

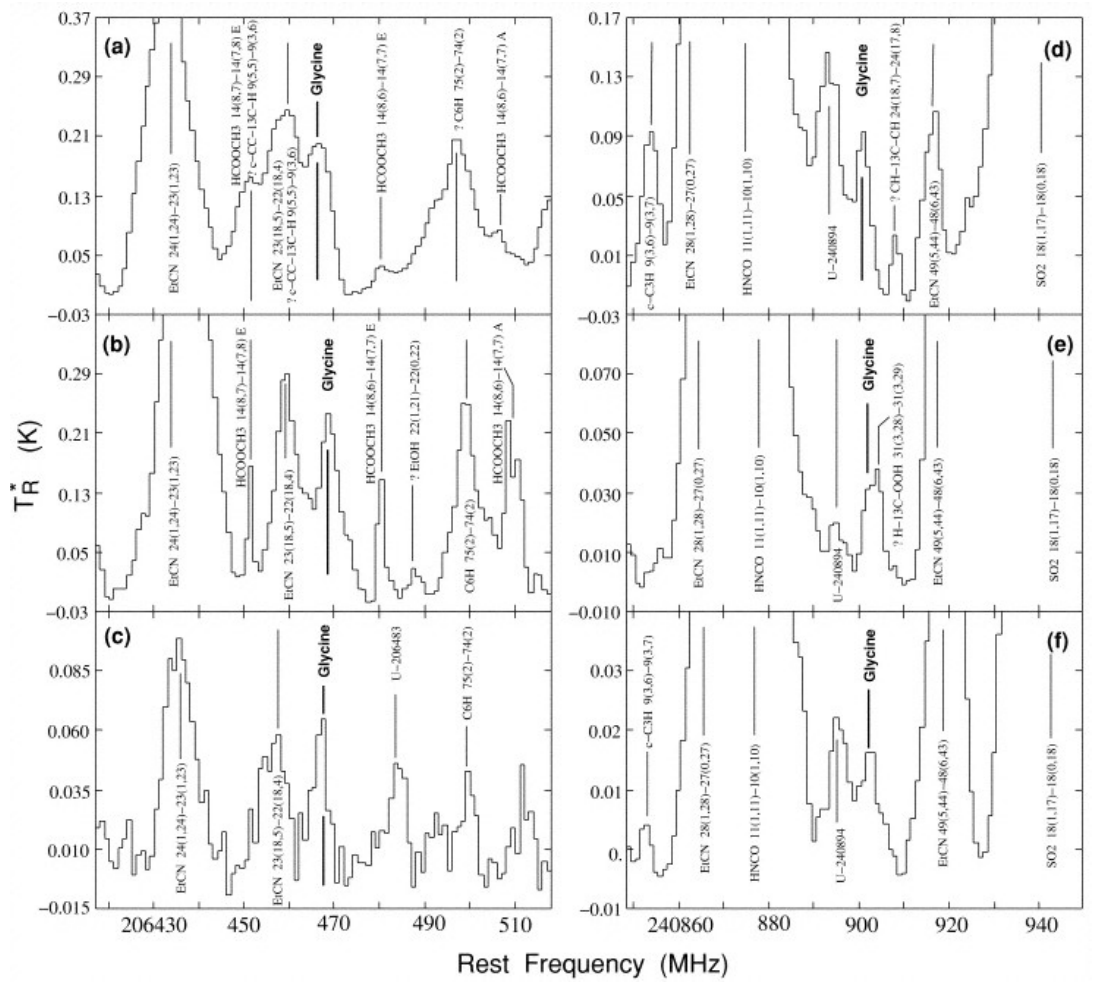
Alcohol in space



Moscadelli et al. (2007, A&A, 472, 867): colored symbols are methanol masers in the dense gas surrounding two protostars

Glycine in interstellar gas

Kuan et al. (2003, ApJ, 593, 848): multiple glycine lines possibly detected in three regions of dense interstellar gas



Glycine in a comet

Elsila et al. (2009, M&PS, 44:9, 1323):

glycine definitely detected in Comet Wild 2 by NASA's *Stardust* sample return mission; high ^{13}C enrichment (vs. ^{12}C) implies extraterrestrial origin