

Research jupiter's moon europa

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Jupiter's Moon Europa. There are a number of characteristics of Jupiter's moon Europa which appear to be very similar to those of Earth. The Galileo mission of 1995 produced valuable data which confirmed, for example, that Europa has a saltwater ocean which is covered by a crust of ice and that the water is in contact with the mineral-rich sea floor (Clark et al., 2008). Research on earth into rich hydrothermal fields on the sea floor, shows that this environment is a very productive habitat in which living organisms can survive using geothermal energy and the nutrients from the rocks below. Scientists believe, therefore, that Europa may possibly have the necessary qualities to support life, although so far there has been no way of investigating this in order to obtain any certainty one way or the other. If life were to be present on Europa, it would most likely be a fairly basic form, similar to the organisms found near volcanic vents in the seas of earth. Proof of this would, nevertheless, be a big shock to most inhabitants on earth. It would prove that the Earth is not unique, nor the center of the universe, and that life is likely to be abundant, and this might shake some firmly held religious beliefs about the role of mankind. Ideally we should protect any non-terrestrial life from contamination, because living cells could conceivably survive a journey in space (Greenberg, 2010, p. 334), but in practice this may be difficult if invasive methods are used to study any new life form. We certainly should not treat it as a threat to human life, since it would be one of the greatest discoveries ever made. Some precautions regarding introducing any new life form to the earth's environment would, however, be sensible, just in case of any unforeseen effects on earth's living creatures.

Reference

Clark, K., Boldt, J, Greeley, R., Hand, K., Jun, I., Lock, R., Pappalardo, R., Van Houten, T. and Yan, T. “ Return to Europa: Overview of the Jupiter Europa orbiter mission.” *Journal of Advances in Space Research* 48 (4), (2008), pp. 629-650.

Greenberg, R. *Europa - The Ocean Moon: Search for an Alien Biosphere*. Chichester: Springer, 2010.