Biological constraints for life on planetary surfaces

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Life on a planetary basis is substantiated as organics and organisms, and defined as the intermediate forms (briefly expressed as CH_2O) hovering between the reduced (CH_4, methane) and (CO_2, carbon dioxide) ends, different from the classical definition of life as complex organization maintaining ordered structure and information. Both definitions consider sustenance of life meant to be protection of life against chaos by input of external energy. The CH_2O-life is maintained as long as the supply of H and O lasts, which is in turn provided by the spilt of the water molecule H_2O. Water is split by electricity as well-known in school experiments and by solar radiation and geothermal heat on a global scale. In other words, solar radiation and planetary heat split water to supply H and O for continued existence of life on a planetary body. These photochemical and geothermal processes should influence origin and evolution of a planetary atmosphere and biosphere. This view of life may be applicable to search for life in space, or astrobiological explorations.