

# COULD COMETS BE CARRIERS OF INTACT HOMOCHIRAL BIOMOLECULES FROM INTERSTELLAR SPACE?

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It has been suggested that the synchrotron circularly polarized ultraviolet light produced off-angle to the orbit of neutron star remnants of supernova explosions interacted with interstellar grains from the presolar nebula producing chiral molecules. Furthermore, it has also been suggested that comets were the carriers of such extraterrestrial sources of homochirality from interstellar space to the primitive Earth. We present here a computer model calculation of the effect of ionizing radiation on cometary material. The external (cosmic rays) and internal (embedded radionuclides) contributions were considered to determine the degree of destruction of possible homochiral biomolecules present such as amino acids and carboxylic acids. Our results suggest that an insignificant degree of destruction (2-12%) of the homochiral biomolecules could be expected. Therefore, comets could be carriers of intact homochiral biomolecules.