URANIUM AND ZIRCONIUM ENRICHMENTS IN LIBYAN DESERT GLASS:
ZIRCON, BADDELEYITE, AND HIGH TEMPERATURE HISTORY OF THE GLASS.
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INTRODUCTION. Libyan Desert Glass (LDG) is an enigmatic natural glass found in an area of at
least 3500 km² between sand dunes of the southwestern corner of the Great Sand Sea in western Egypt,
near the border to Libya. The glass shows irregular shapes with signs of sand abrasion and other erosion
features. The age of the glass, as determined by the fission track method, is around 29 Ma [1]. Chemically,
LDG is remarkably homogeneous with about 96.5-99 wt.% SiO₂. Major and trace element abundances fall
into a narrow range (see, e.g., Fudali [2], Barnes and Underwood [3], Weeks et al. [4], and Koeberl [5],
although some trace elements, such as the rare earth elements, occur at levels typical for upper crustal
rocks [4-6]. The origin of LDG is the subject of a controversy which is still not settled. The
samples that have
