DRAFT

XXVIII. "YA1075" (ver. 2005)

peridotite

55 grams

Introduction

Yanai (abs. 2002) reported an apparent Martian meteorite found among a collection of diogenites. The sample has a dark green color and is partly covered by a shiny-black fusion crust.

The unofficial name given by Yanai for this important piece of Mars has not been approved by the NIPR nor Meteoritical Society Nomenclature Committee.

Petrography

According to Yanai (2002) the texture and mineralogy of "YA1075" appears to be similar to ALH77005. Large pyroxene grains poikilitically enclose small rounded olivine phenocrysts. The mesostasis contains maskelynite and opaques.

Mineral Chemistry

Olivine: The composition of olivine ranges from Fo_{67-74}.

Pyroxenes: The composition of the host pyroxene ranges from $En_{73-77}Wo_{2.5-5}$. Small grains of augite $En_{47-52}Wo_{32-38}$ appear as small grains in the host pyroxene.

Maskelynite: The plagioclase (An_{50}) is shocked. *Note that the plagioclase composition is unlike that of diogenites.*

Whole-rock Composition

None reported.

Other Isotopes

Oxygen isotopes as determined by Clayton (as reported by Yanai 2002) are $\delta^{18}O$ = +3.95 ‰ and $\delta^{17}O$ = + 2.23 ‰ (with $\Delta^{17}O$ = +0.18 ‰).