ties and planar weaknesses of the crystals (cleavage, twinning, inclusions, etc);
- the surface of the crystals in contact with the basic magma
  equilibrates with the latter, resulting in variably resorbed crystals
  with an almandine-relic skeleton and a reaction rim, through
  dissolution, of labradorite composition;
- cooling of the basic magma leads to interstitial and peripheral
  crystallization of a more sodic plagioclase with a strong normal
  zoning.

This evolution is compatible with a context of magma mixing. It
does not exclude dendritic growth, which may have occurred
simultaneously in some of the studied samples.

Hibbard, M.J. (1981): The magma mixing origin of mantled

OS01-48
GEOCHEMISTRY, EVOLUTION AND ORIGIN OF
THE FANOS GRANITE (NORTHERN GREECE)
G. CHRISTOFIDES, T. SOLDATOS*, and A. KORONEOS.
(Department of Mineralogy, Petrology and Economic Geology,
Aristotle University, Thessaloniki, Greece).

The Fanos granite (Northern Greece) is a
pluton composed of high silica, fine- to
coarse-grained leucogranites with small
amounts (<3%) of biotite, which intrudes the
Mesozoic Guevgueli ophiolitic complex.

The mineralogy and chemistry of the rocks
studied suggest on the whole, that they are
peraluminous with calc-alkaline affinity, I-
type characters and 80-85% to 80.03 per mil.
They belong to the same differentiation
series, from a single parent magma, with frac
tional crystallization as the main differen
tiation process. Mass-balance calculations
based on major elements suggest 32% crystal
accumulation mainly of K-feldspars and
plagioclases. Compatible - incompatible trace
element diagrams have substantiated that frac
tional crystallization and not partial melting
is the evolution process.

The REE patterns are concave and display
LREE enrichment, while HREE decreases and
Eu/Eu* progressively increases with differen
tiation. REE behaviour is controlled mainly by
plagioclase and accessory phases (allanite,
sphene, apatite and zircon).

The origin of the Fanos granite has been
tested by partial melting modeling of
graywacke and quartz diorite as possible
source material. The Rb, Ba, Sr and REE pat
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evolved type of the Fanos granite.

Discriminant diagrams indicate either a
décollement arc or a collision related tectonic
environment for the Fanos granite.

Textural relation indicate the
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OS01-50
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CRUSTAL AND MANTLE
MAGMATISM
L. HECHT, P. HENNEY, G. MORTE
(Department of Applied Mineralog
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British Geological Survey, London,

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OS01-49
NATURE AND COMPOSITION OF RESTITES
IN THE VELAY GRANITE (FRANCE)
J.M. MONTEL*, and A. CHEILLETZ.
(CNRS UA 10, Clermont-Ferrand, France).

The Velay granite (biotite granite or more
-cordierite-biotite granite) is known for its abundant
enclaves of varied types. Numerous studies have shown
that it results from the melting of the surrounding
metapeliteic and orthogneissic series. Some of these
enclaves, made of Al-rich biotite (30%), cordierite
(40%), plagioclase (10%), sillimanite (10%) and 10% of
quartz, garnet, hornblende, and accessories are
definitely restites formed by melting of metapelites.
Arguments for that are (1) they show a metamorphic

OS01-51
TOURMALINE APOLITE FROM
THREE POSSIBLE GENETIC
A. KOZLOWSKI*, and P. METZ2.
(Warsaw University, Warsaw, Pola.
2Tbingen University, Tbingen, FRG

The tourmaline aplite b
range up to 2 m in thickn
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