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Receipt of this notice does not guarantee that your submission was accepted as a session at the 2015 AGU Fall Meeting. All proposals are subject to review and acceptance by the Program Committee. You may review or edit your submission until the deadline of **22 April 2015 23:59 EDT/03:59 +1 GMT**. After this date, no further edits will be made to the proposal.

### Volatile cycle at subduction zones: from the mantle to the surface

**Session ID#:** 7434

**Session Title:** Volatile cycle at subduction zones: from the mantle to the surface

**Session Description:** The goal of this session is to integrate multidisciplinary efforts to further comprehend the deep volatile cycle, the global volatile budget, the long-term role of volatiles at subduction zones and their host reservoirs. Subduction zones efficiently cycle volatiles from the atmosphere - hydrosphere to the mantle and back to the surface through volcanism and degassing. In several parts of the system, C-S-O-H-bearing fluids are the transfer agents of volatiles. They promote serpentinization of the forearc wedge and flux mantle melting beneath the arc front. We seek contributions from geochemistry, petrology, geophysics, experiments and field geology that address the temporal and spatial evolution of the subduction outfluxes, the role of the forearc wedge into the volatile cycle, and the chemical exchange between the Earth's reservoirs. We also welcome studies that explore the role of the volatiles/fluids on the physico-chemical state of subduction zones and on the formation of the continental crust.

**Primary Section/Focus Group:** Volcanology, Geochemistry and Petrology

**Cross-Listings:**

- DI - Study of the Earth's Deep Interior
- NH - Natural Hazards
- P - Planetary Sciences
- T - Tectonophysics

**Co-Sponsored Sessions:**

- EGU-GMPV - European Geosciences Union – Geochemistry, Mineralogy, Petrology, and Volcanology
- GS - Geochemical Society

**Co-Organized Sessions:** No

**SWIRL Theme:** Deep volatile cycle

**Virtual Session:** No

**Index Terms:**

1030 Geochemical cycles [GEOCHEMISTRY]

1031 Subduction zone processes [GEOCHEMISTRY]

3630 Experimental mineralogy and petrology [MINERALOGY AND PETROLOGY]

3640 Igneous petrology [MINERALOGY AND PETROLOGY]

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- To access your submission in the future, point your browser to the [User Portal](#).
  - Your Session ID# is: 7434.
  - Any changes that you make will be reflected instantly in what is seen by the reviewers.
  - After the session proposal is submitted, you are not required to go through all submission steps to make edits. For example, click the "Conveners" step in the Session Proposal Control Panel to edit the Conveners and then click save or submit.
  - When you have completed your submission, you may close this browser window or submit another session <http://fallmeeting.agu.org/2015/submissionsite>.

[Tell us what you think of the session submittal process.](#)