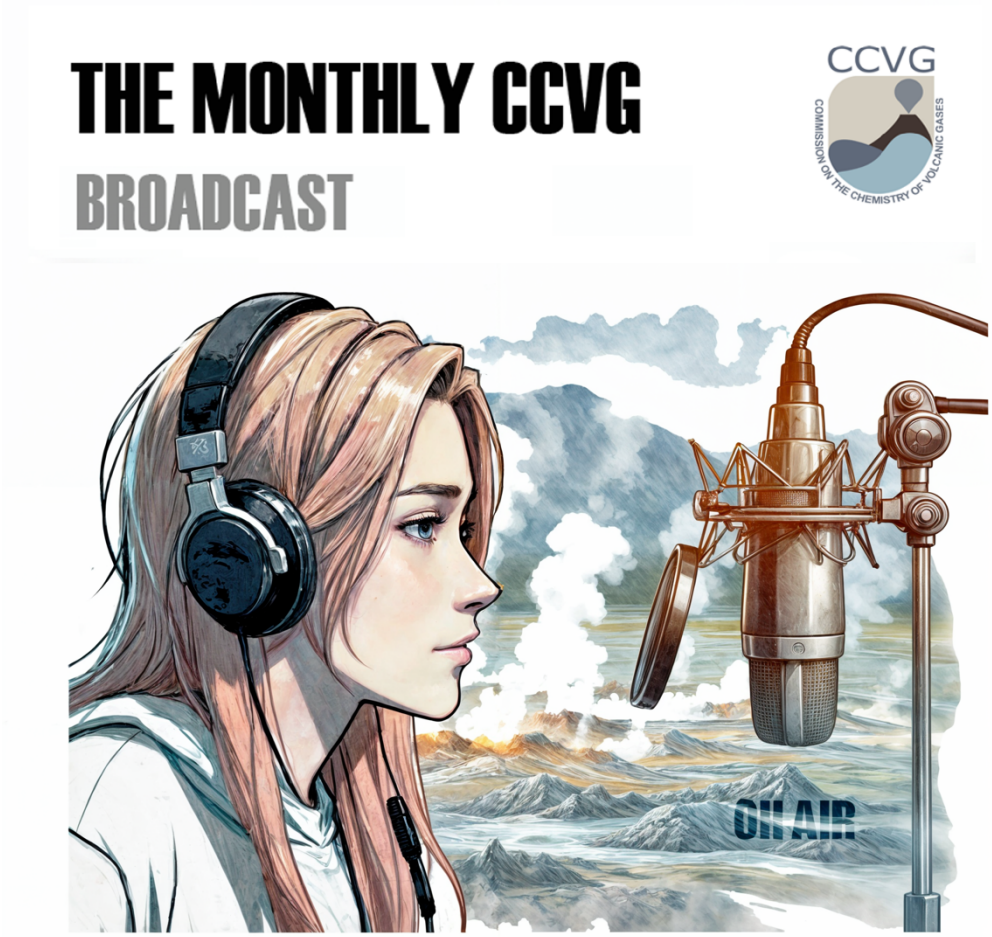
**CCVG Broadcast - Third episode: Friday 29, 14h00 UTC**




The IAVCEI Commission on the Chemistry of Volcanic Gases (CCVG) is continuing his monthly virtual seminar series. The topics are wide ranging around the theme of volcanoes and volatiles but not only.

Our third talk is on **Friday November 29 at 2 PM UTC** and will be given by **Dr. Marie Boichu** from CNRS/Université de Lille, Laboratoire d'Optique Atmosphérique, France.

Title: **VolcPlume : an open access web platform for the near-real time monitoring of volcanic degassing activity and atmospheric hazards**

Abstract: The VOLCPLUME web portal (https://volcplume.aeris-data.fr) aims at supporting the near-real time monitoring of volcanic emissions and the multi-scale analysis of volcanic plumes in the atmosphere from local to global scales. The portal allows for jointly analyzing a broad panel of satellite and ground-based active/passive remote sensing observations of both volcanic gas and particles, including Low Earth and Geostationary Orbit imagery, spaceborne or ground-based lidar, and photometric measurements. The portal also gives access to in-situ ground-level air quality monitoring networks. This synergy aims at facilitating the

assessment of the multiscale atmospheric impacts of volcanic plumes that include modifications of the atmospheric chemistry, degradation of air quality, aviation hazards, and climate impacts.
A companion interactive web application, named « SO2 Flux Calculator », has also been developed to automate the estimation of daily SO2 gas flux emissions from S5P/TROPOMI observations with a robust noise estimation. Such tools allow to remotely track changes in the degassing or eruptive activities of any isolated or non-instrumented volcano. For illustration, I will present in this seminar different case-studies including the eruptions of Cumbre Vieja (La Palma, Canary Islands), Piton de La Fournaise (La Réunion), Soufrière Saint-Vincent (Lesser Antilles) and Hunga Tonga.

Bio: Marie Boichu is CNRS researcher, affiliated to the Laboratoire d'Optique Atmosphérique at the University of Lille. She conducts interdisciplinary researches on volcanic gases and particles, at the interface between Volcanology/Earth Sciences and Atmospheric Sciences. She is expert in remote sensing (satellite- and ground-based) and atmospheric chemistry-transport modeling. She studies the multi-scale atmospheric impacts of volcanism on air quality, aviation safety and climate. Her research also aims at monitoring from space the evolution of volcanic activity during crisis time, for better understanding local hazards.