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# Creating global comparative analyses of tectonic rifts, monogenetic volcanism and inverted relief

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I have been all around the world, and to other planets and have travelled from the present to the Archaean and back to seek out the most significant tectonic rifts, monogenetic volcanoes and examples of inverted relief. I have done this to provide a broad foundation of the comparative analysis for the Chaîne des Puys – Limagne fault nomination to UNESCO world Heritage. This would have been an impossible task, if not for the cooperation of the scientific community and for Google Earth, Google Maps and academic search engines. In preparing global comparisons of geological features, these quite recently developed tools provide a powerful way to find and describe geological features. The ability to do scientific crowd sourcing, rapidly discussing with colleagues about features, allows large numbers of areas to be checked and the open GIS tools (such as Google Earth) allow a standardised description. Search engines also allow the literature on areas to be checked and compared. I will present a comparative study of rifts of the world, monogenetic volcanic field and inverted relief, integrated to analyse the full geological system represented by the Chaîne des Puys – Limagne fault. The analysis confirms that the site is an exceptional example of the first steps of continental drift in a mountain rift setting, and that this is necessarily seen through the combined landscape of tectonic, volcanic and geomorphic features. The analysis goes further to deepen the understanding of geological systems and stresses the need for more study on geological heritage using such a global and broad systems approach.