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## Counter-Earths – Planetary models beyond operational images

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This contribution deals with an extensive apparatus of sensing and modelling the Earth, producing numerous fragmented Counter-Earths - the digital models and data visualizations of the planetary ecosystem. We center our analysis around this increasingly non-human visual culture, in order to seek possible theoretical framings of global climate sensing and modelling. After a historical and theoretical introduction to emergence and composition of this infrastructure - drawing from the works of Jennifer Gabrys and Paul N. Edwards -, we elaborate a framework in which we can see machine production of images of the planet as continuous algorithmic process of transformation of planetary circumstances. Contesting interpretation of the imagery that facilitates this process as *representations* of the planet, we categorize climate models and satellite visual outputs as *operational images*, following insights by Vilem Flusser and Harun Farocki. While fully acknowledging its historical and theoretical importance, this terminology is in this contribution further assessed as still too human-centric, and for this reason, we proceed with Dietmar Offenhuber's concept of *autographic visualization* that endows non-human assemblages with capacity of self-presentation and self-diagrammatization. Consequently, we conclude with several examples of autographic visualization of climate change on a planetary scale, discovering Earth's tendency to be externalized, geological memory of modernity, that can be read through machine sensing systems uncovering these hidden traces of the past.