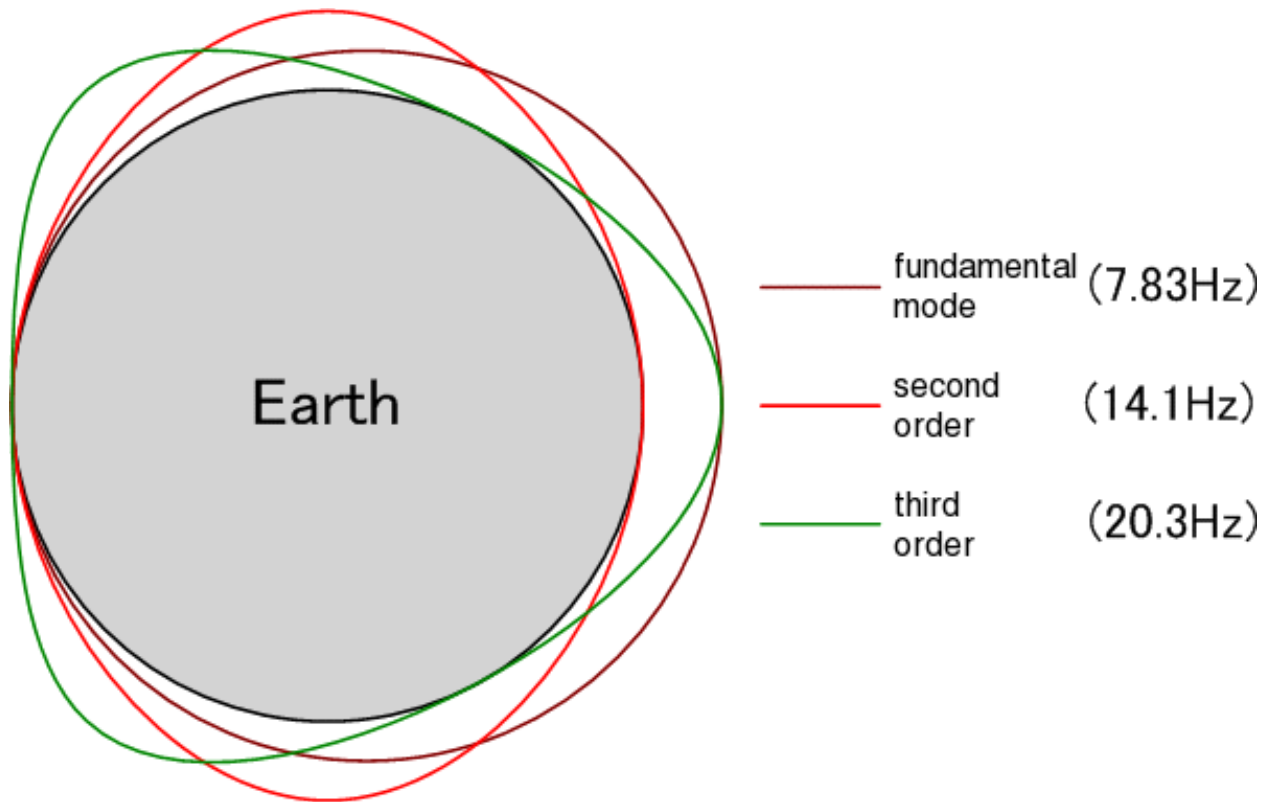


## *Unveiling*

### Technical and Aesthetic Remarks

From a technical standpoint, the pitch material in *Unveiling* is based on the Schumann resonances (SR), a phenomenon first predicted by physicist Winfried Otto Schumann. In a series of papers published between 1952 and 1957, Schumann postulated that the space between the earth's surface and the bottom of the ionosphere would provide a resonant cavity for electromagnetic radiation, the main source of which is lightning activity around the planet.

When the phenomenon was experimentally confirmed in the 1960s, it was found that, although the Schumann resonance fundamental frequency changes continuously throughout the day, it peaks on average at approximately 7.83 Hertz. The first harmonic of the SR appears at approximately 14.1 Hz, with higher harmonics appearing at intervals of approximately 6.1 Hz, and peaking at around 20.3 Hz, 26.4 Hz, and 32.5 Hz.



In the ensuing decades, research has found that there may be a linkage between the Schumann resonances and consciousness. For example, in a 2014 paper, Dr. Michael A. Persinger claims that:

Recent measurements of cerebral quantitative electroencephalographic power densities within the first three harmonics of the earth-ionosphere Schumann resonances and the

same order of magnitude for both systems electric and magnetic (pT) fields suggest the possibility of direct intercalation or interaction. The phase modulations of the Schumann propagations and those associated with consciousness are very similar.

[“Schumann Resonance Frequencies Found Within Quantitative Electroencephalographic Activity: Implications for Earth-Brain Interactions,” *International Letters of Chemistry, Physics and Astronomy Online*: 2014-03-12 ISSN: 2299-3843, Vol. 30, pp. 24-32.]

The pitch materials of *Unveiling* were developed by writing a Max/MSP patch that extrapolates higher harmonics by a 6.1 Hz interval. This produced a set of frequencies, which were found to most closely map to an A = 432 Hz tuning, and from which pitches were selected as the basis of the piece. One frequency specifically, 136.1 Hz was selected as the fulcrum of the composition, but apart from that choice the process of selection was completely intuitive. No attempt was made to collate the available frequencies into any kind of system. Rather, the compositional process was allowed to unfold organically, guided by a single intention.

That intention was in the form of a question: how do we understand the times we live in?

The result is *Unveiling*, which took shape as an answer-in-sound to that question. The lifting of veils as a metaphor for a process of transformative evolution in which the heretofore overlooked becomes the newly acknowledged. As each veil falls, what is disclosed is simultaneously unprecedented and timeworn, new and old, unknown and familiar. This paradox presents us with an opportunity to allow boundaries to dissipate and to recognize previously spurned possibilities. *Unveiling* offers a place of stillness from which to witness this unfolding process with equanimity.

Carlos Delgado, Ph.D.

March 2023