ZERO-GRAVITY: THE FIRST WATCHMAKING COMPLICATION OF THE SPACE AGE

(http://www.0g-complication.ch)

Alain Sandoz¹

As a tribute to the beauty of fine mechanics exposed at the International Watchmaking Museum of la Chauxde-Fonds and to the pursuit of space exploration, we present a mechanical device that measures the time spent in weightlessness: Zero-Gravity, a watchmaking complication of the space age.

Key words: watchmaking complications, measuring time, weightlessness, mechanical devices

According to the Foundation of High Horology a watchmaking complication is "... *any function* [of a watch] other than the indication of hours, minutes and seconds, regardless of whether the mechanism is hand-wound or self-winding, mechanical or electronic, ...". The number of existing complications does not exceed a few dozens, among which astronomical indications (moon phases, equation of time, movement of planets, for example) are related to celestial mechanics.

Amateurs of watchmaking complications have devoted their fortune to collecting such beautiful mechanical devices, but watchmakers and collectors alike have seldom been found to be travelling in space. Weightlessness would have prevailed in their journey and inventing a mechanism for their watches to measure the time spent in that state would no doubt have challenged their minds.

Measuring the time spent in the state of weightlessness defines a new type of complication: de facto the first watchmaking complication of the space age. The short ludic presentation of the Zero-Gravity complication at EMC-18 sketches this invention and intends to bring together the old world of the mechanical devices exposed in the Museum and the new world that humans are dreaming of in order to make travel to the planet Mars possible.

References

« Clock device for measuring the time spent in weightlessness », Alain Sandoz, Tom Josset, WO 2017/137926 Al, DEMANDE INTERNATIONALE PUBLIEE EN VERTU DU TRAITE DE COOPERATION EN MATIERE DE BREVETS (PCT), Feb. 2017

¹ Information systems engineer, Associate prof., Informatics Institute of the University of Neuchâtel, co-inventor of the Zero-Gravity watch-making complication.