The Effect of the Electromagnetic (EM) Environment onto the Movement and Retention of Moisture in Old Buildings

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Moisture is one of the main decay factors of old buildings. Most common factors affecting the movement of moisture are humidity and temperature changes, known as the hygro-thermal environment. There is a 3rd factor that also affects every building: the surrounding electro-magnetic (EM) environment, which includes both man-made electromagnetic fields and Earth's natural geomagnetic field. The effect of the EM environment onto historic buildings has been scarcely studied.
Present research proposes a unified electro-hygro-thermal framework to better describe the main factors that drive and influence the movement of moisture in porous masonry and to understand how various moisture drivers interact.

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