

Pattern Completion

Michaela Nettell, Hugo Spiers & Tom Simmons



Pattern Completion

Installation, Michaela Nettell, Tom Simmons & Hugo Spiers

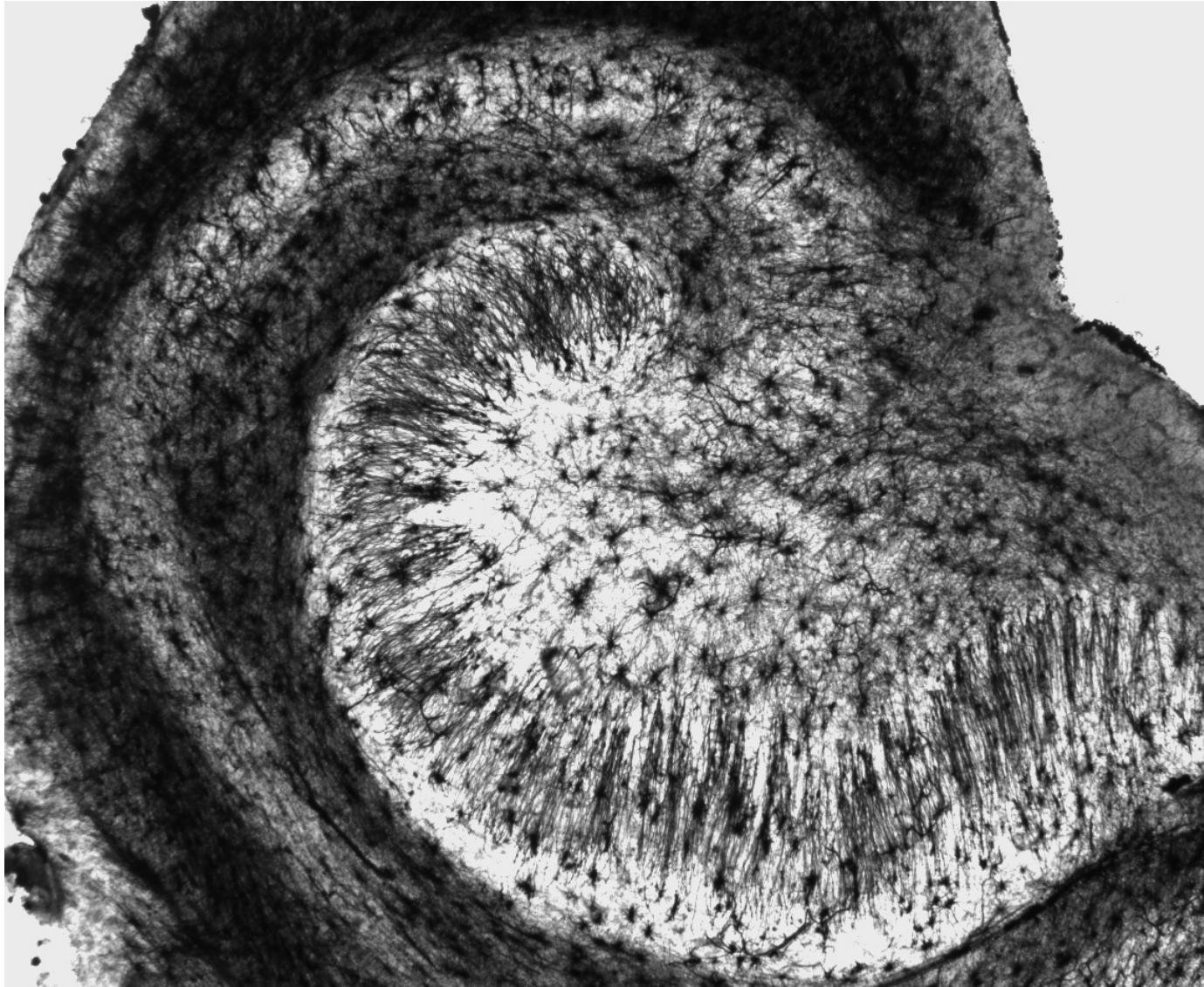
Work in progress (2008/ 2009)

When a memory is created activity patterns in the neurons become inscribed in their connections, leaving a trace known as an engram. It is thought that during recall this trace is re-activated and the original activity pattern re-established. This process is known as 'pattern completion' and is believed to occur in a part of the brain called the hippocampus.

During pattern completion, the initial activity of the cells is incoherent, but via a repeated re-activation process the activity pattern is pieced together until the original pattern is complete. Sometimes it fails, leaving us unable to bring elements of the past to mind.

Pattern Completion

Image of a Human Hippocampus



Pattern Completion

Background Information

To research and develop ideas surrounding pattern completion and memory fragmentation, using disciplinary and interdisciplinary approaches and methods.

To research people's experience of remembering events, identifying the types of fragments that people tend to struggle with.

To use this research to create an installation linking subjective experiences of memory to the physicality of tiny cells in the brain. The installation will present an allegory, a symbolic stage for the acts, processes and metaphors of memory.

To develop a program that interprets models of hetero- and auto- associative processes linked with pattern completion, to inform the sequential and spatial reproduction of audio-visual materials in the installation.

The development of this algorithm will form a key aspect of our research, investigating neurological and phenomenological interpretations of processes of memory recall.

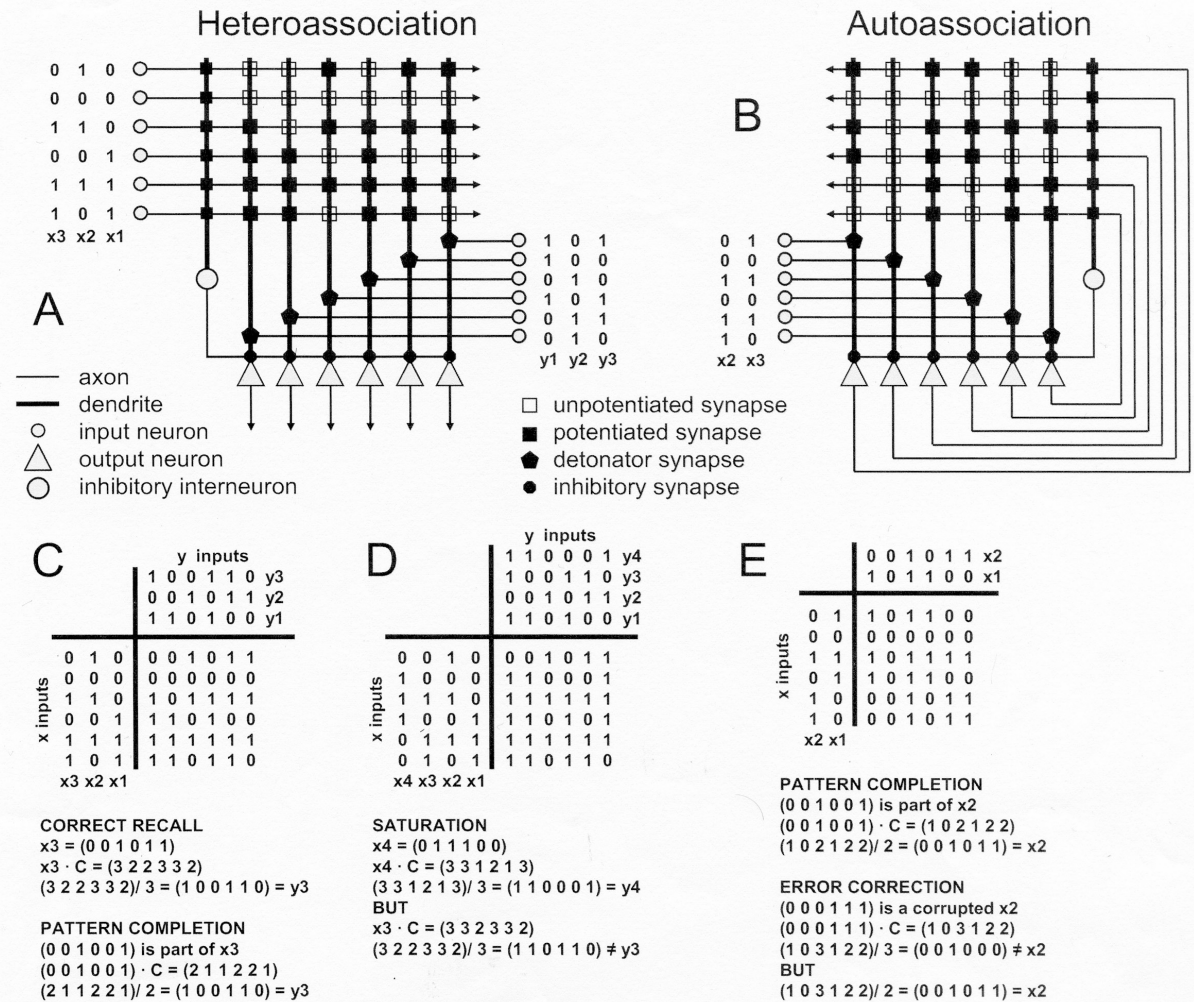
Pattern Completion

Preliminary Photographs



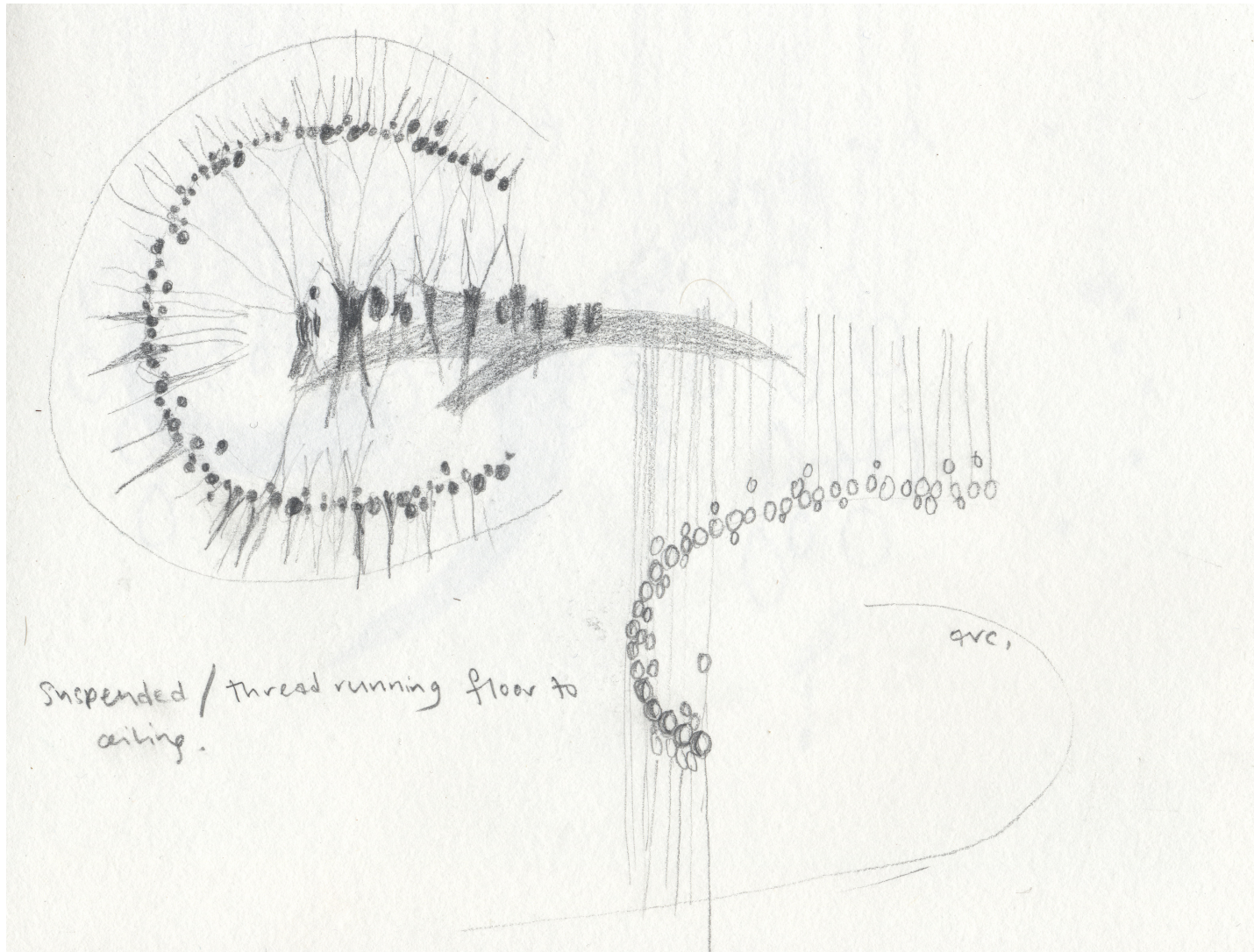
Pattern Completion

Representation of hetero- and auto-associative processes of pattern completion



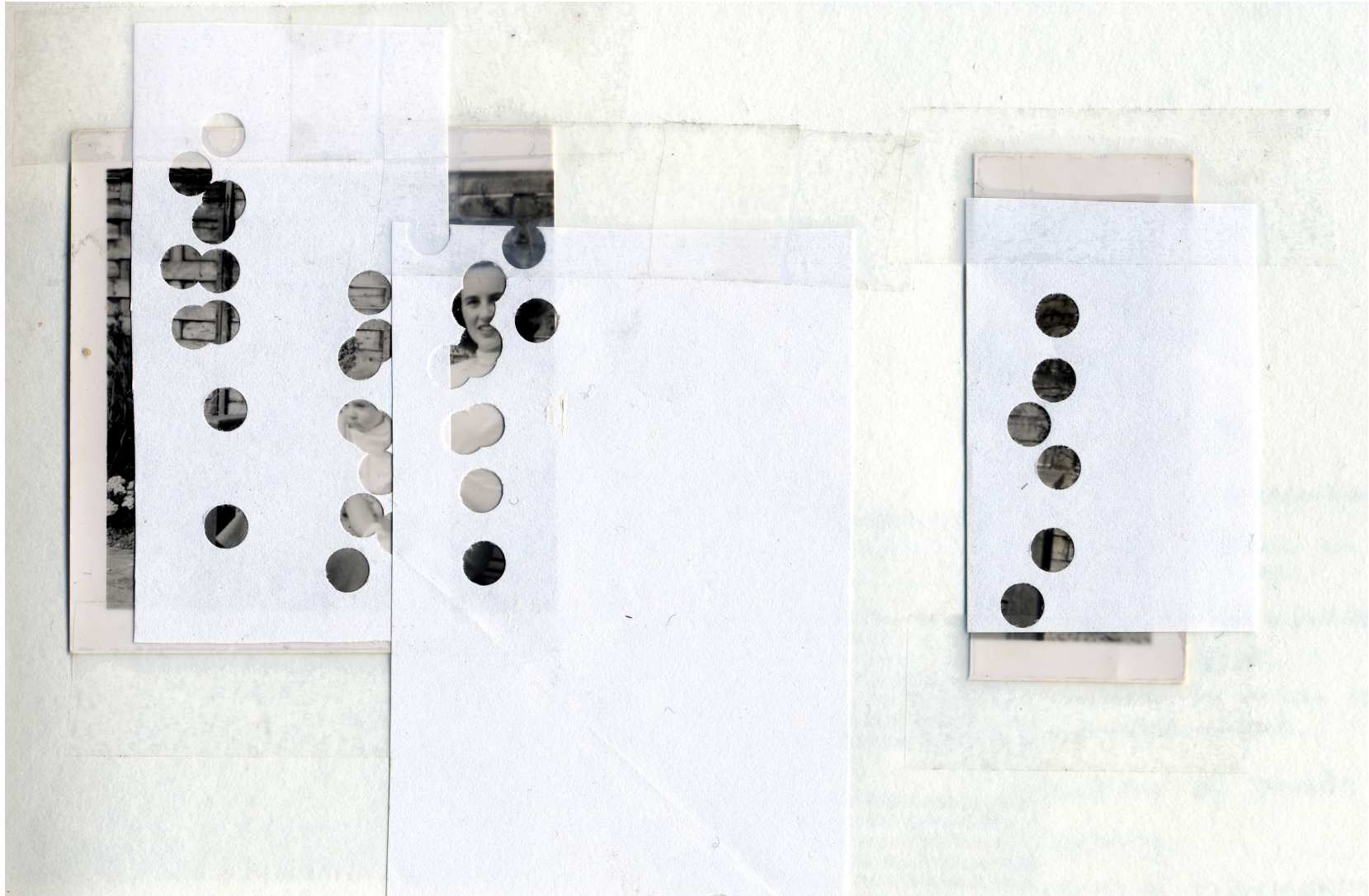
Pattern Completion

Preparatory Drawing



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Preparatory Drawing



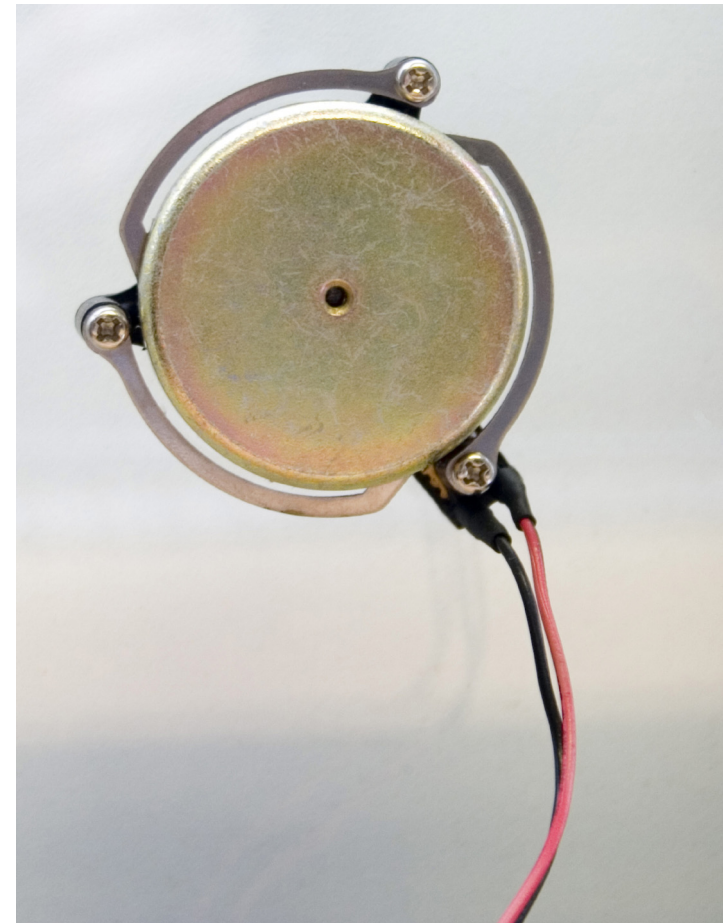
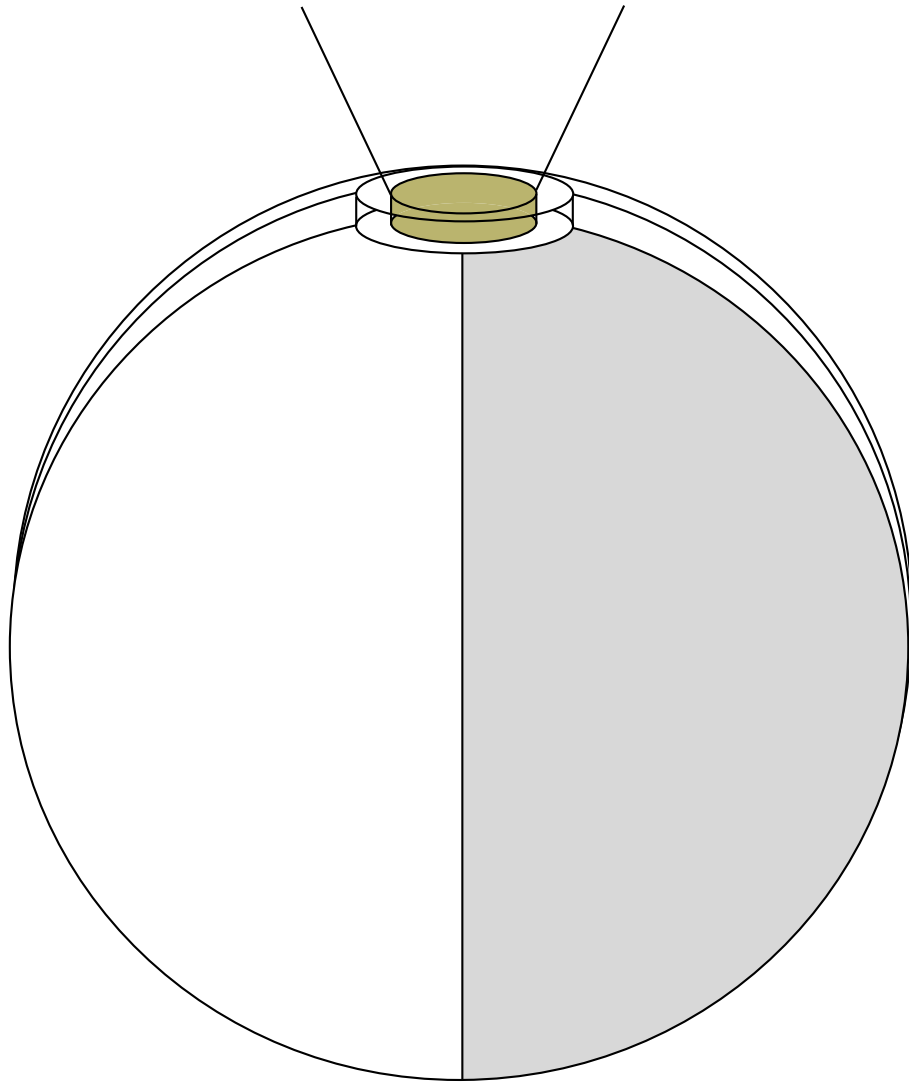
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Preparatory Drawing



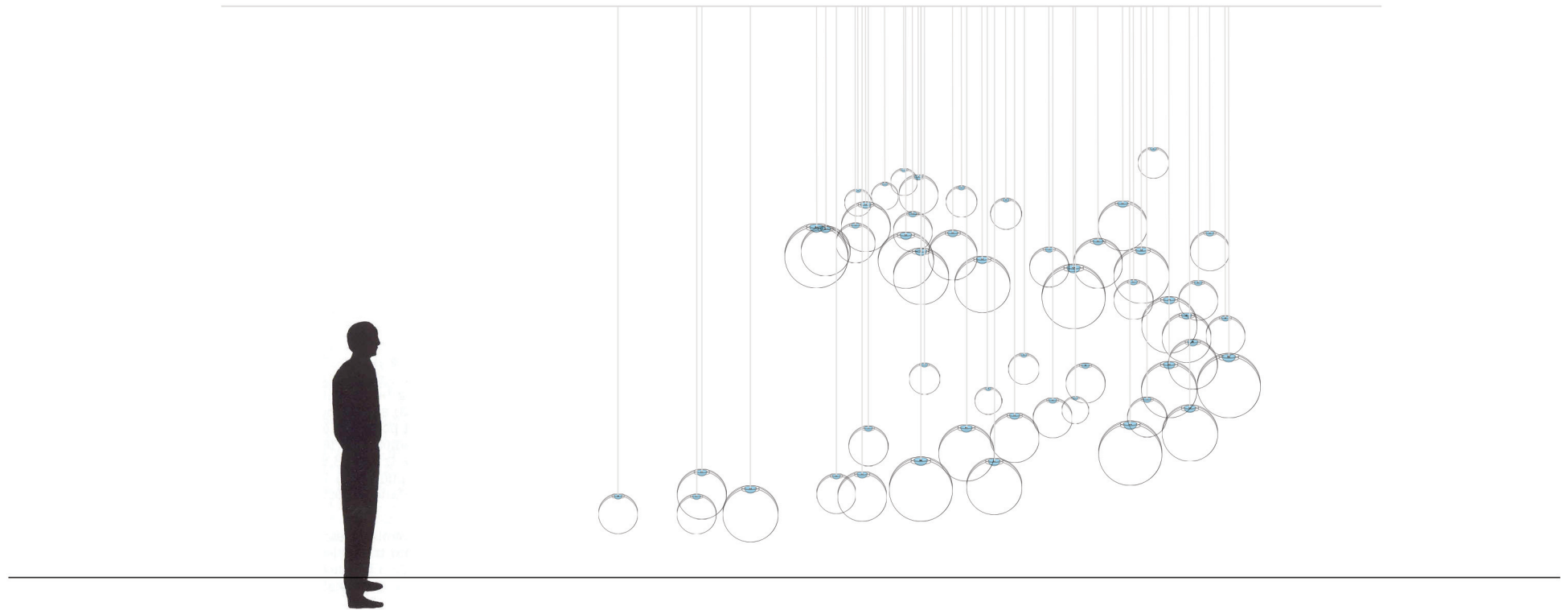
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Diagram of a glass sphere with a glass exciter (audio)



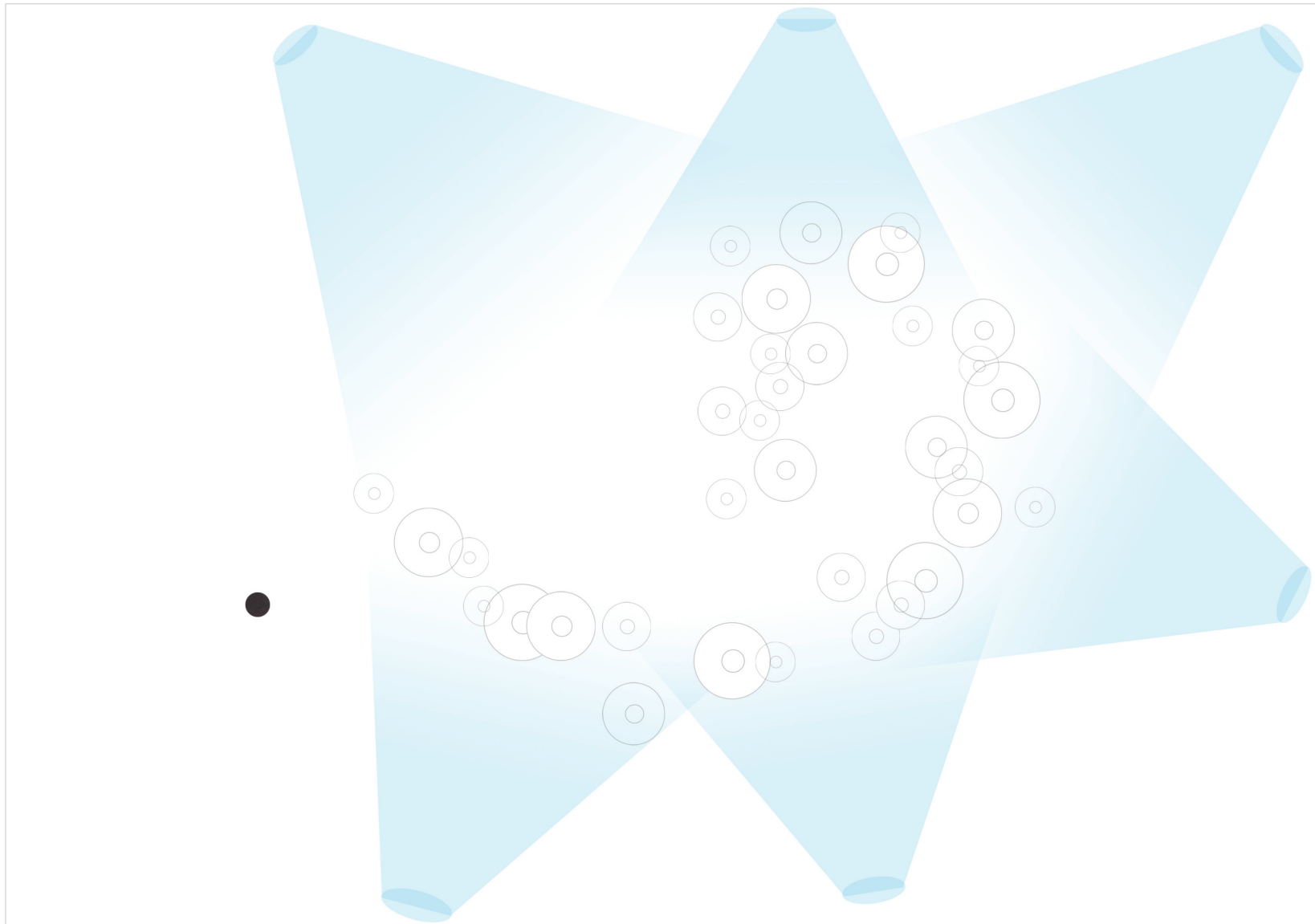
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Representation of the installation



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Ariel representation of the installation with 6 data projectors



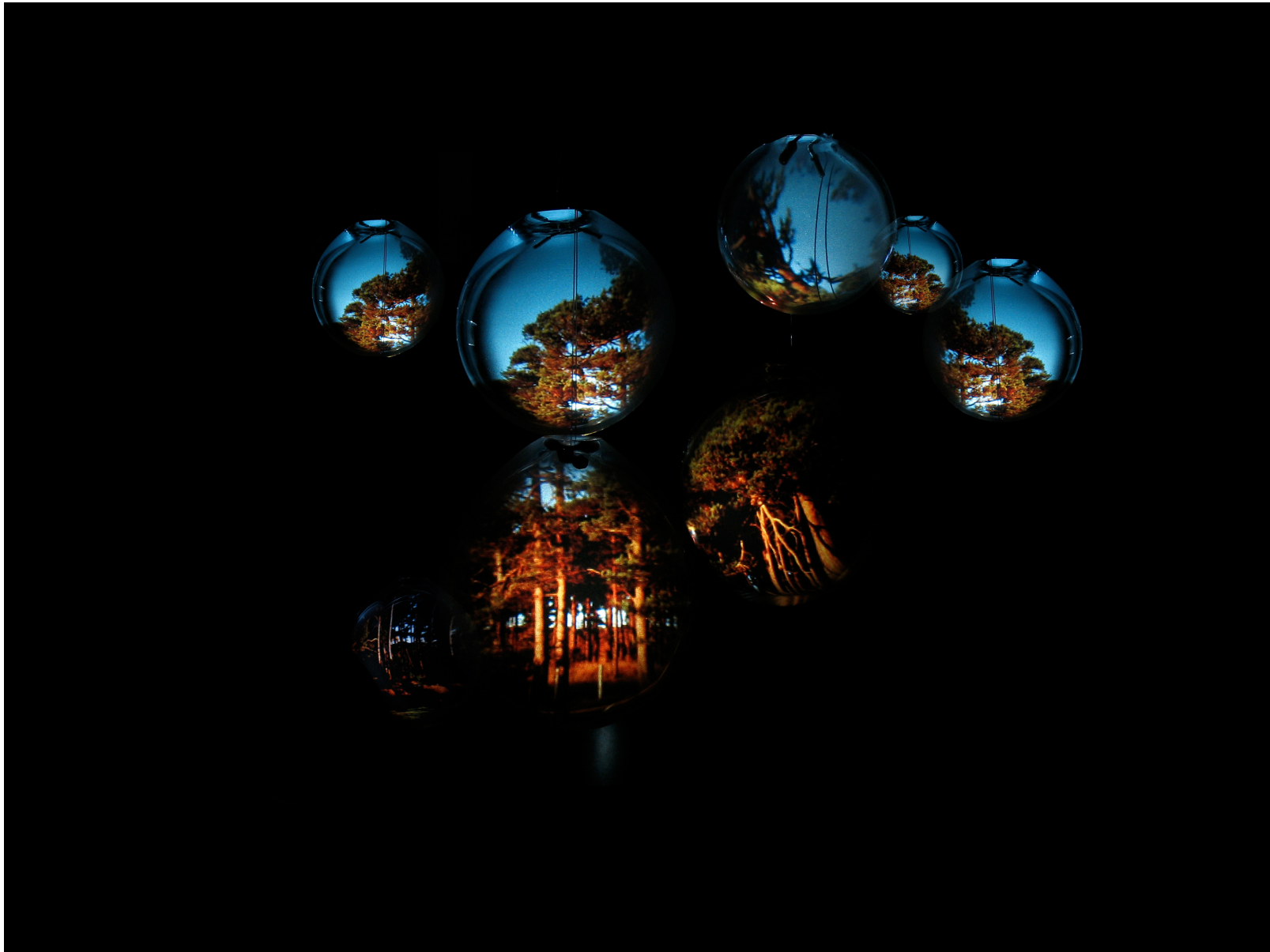
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Photographs of images of a forest projected onto glass spheres



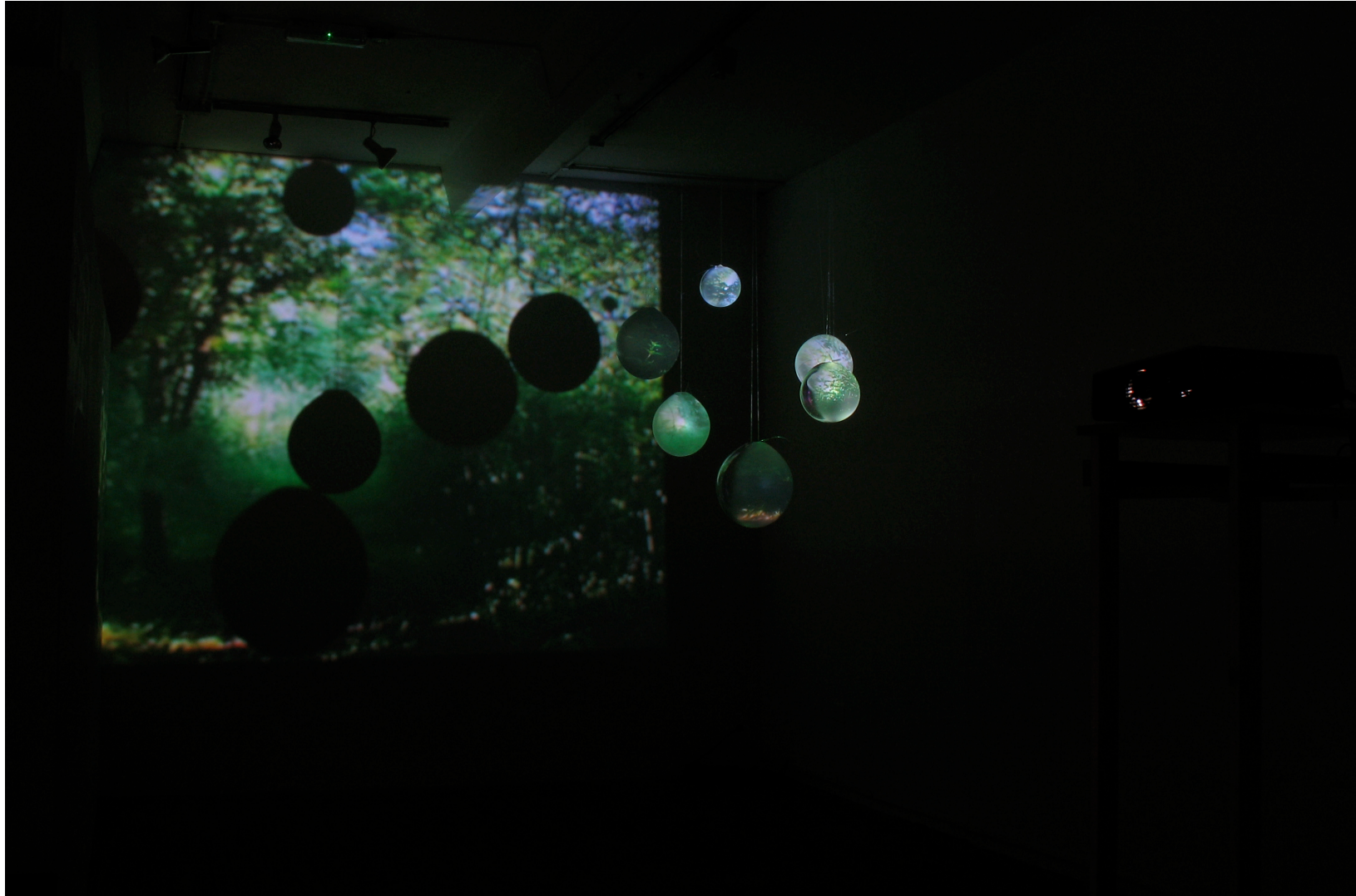
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Testing our ideas for the installation



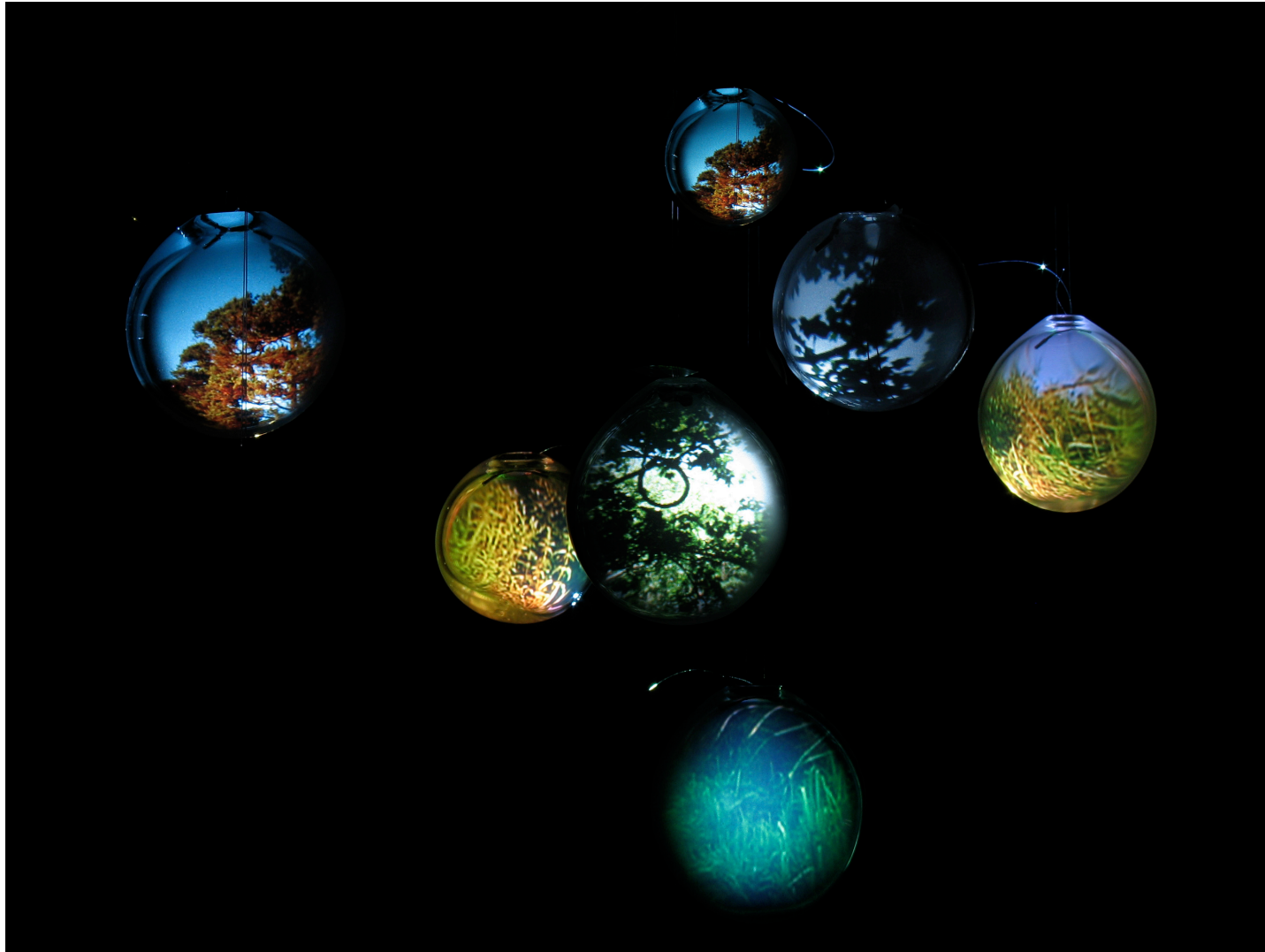
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