2.2: THE COTTON CAVES

Armed now with the confidence and understanding necessary to work with AIR Grid it was time to start using it. Of the two protagonists who had fuelled the thesis argument, Mies and Lefebvre, the former had so far played a more significant role in the invention of AIR Grid than the latter. However, with the question of how to use it, the thinking of the latter now came into play. Recollect Lefebvre's dismay as he looked down on the new town. He saw it as pure system, a place with no meaningful space of representation. Recollect his profound experience of the Sagrada Familia. In what follows Lefebvrian dismay is appropriated in an attempt to convey what was missing from the new town.

The sequence of research, intuition and experiment that led to the creation of AIR Grid was not the justification of AIR Grid. Although AIR Grid is inextricable from the circumstances of its discovery, it is not reducible to them. Irrespective of its Miesian origin, AIR Grid can be deployed independently as a means of activating space. AIR Grid has the potential to activate space thanks to its tendency to bifurcate between: 1. an array of parallel planes, 2. a volume of mist. There are moments when AIR Grid appears to be all planes and no mist and there are moments when it appears to be all mist. There are also moments where it appears to be both, at one and the same time.

The bifurcating of AIR Grid depends on the presence of living being. It is living being who switches AIR Grid back and forth between the two moments. This effect is due to living being's innate sense of the laws of space, which are not laws that have been learnt but immanent to all living bodies. In the switching of AIR Grid, living being senses something of itself, something that seems primal, fundamental and locked up inside.

To conclude this research it is proposed to deploy AIR Grid in the creation of a series of caves, which will be called Cotton Caves. The caves are to be located in the dells that circumscribe the new town of Stevenage. Stevenage was one of the eight new towns proposed by the Greater London Plan of 1944. The ambition for each new town was that it would each provide a community in which 60,000 people could live and work. The village of Stevenage became the first designated new town in 1946. Recollect Lefebvre's question as he looked down on the new town of Mourenx:

Will people be compliant and do what the plan expects them to do, shopping in the shopping centre, asking for advice in the advice bureau, doing everything the civic centre offices demand of them like good, reliable citizens?.....Can spontaneity be revitalized here, can a community be created?[1]

Some sixty years into the future, in the now not so new

town of Stevenage, the answer to Lefebvre's question is yes; people do shop in the shopping centre, they do tend to seek advice in the advice bureau and they do tend to comply to the demands of the civic centre offices, like good, reliable citizens. All of which, in itself, Lefebvre would have regarded in a positive light, functionalism does have its benefits. But, Lefebvre would want to know: does anything else ever happen?

The purpose of the Cotton Caves is to provide a place where the people of Stevenage and visitors to the town, can come to search for AIR Grid and enjoy the experience of AIR Grid when it is found. The search and experience will involve anticipation and delight, rather like searching for crystals, precious stones, gorgeously coloured species of birds and insects. It is envisioned that the Cotton Caves will have a fairy-tale effect on the minds and the imaginations of the people who visit them, in some cases prompting exhilaration and mild feelings of giddiness.

The extent of the caves is potentially endless since new chambers can be added at any time. However, it is necessary to start digging somewhere. It is proposed the first entry point and chamber will be built to the north of the new town, located under the chalk berm that cuts from east to west across a gently sloping field near Crow End, this will be called Cotton Cave 01.

Cotton Cave 01 will serve as the operational headquarters for the construction, maintenance and management of the Cotton Caves. For this reason, in addition to the grid chambers that will be common to all Cotton Caves (see below), Cotton Cave 01 will be equipped with all the facilities necessary to support the headquarter function. These will include: cooking and eating facilities, sleeping facilities, cleansing facilities, a drawing office, studio space, materials store, temporary storage for grid support units, lighting store.

A grid chamber is an ovoidal space into which an assembly of AIR Grid structures can be sewn, the inner surface is painted matt black. Grid support is facilitated by preformed, standard units of black polyurethane which come in a range of sizes designed to suit specific AIR Grid configurations, corresponding to the range of sizes distilled out of the ambience of the NNG (see above). The polyurethane unit is a single, seamless, entity presenting four identical surfaces, in parallel facing pairs, between which AIR Grid can be sewn. Each surface is marked by a raised panel (approximately five millimetres). The raised panel marks out and identifies the sewing field of a particular surface. The sewing field is coated in a fine layer of Cotton Cave Chalk Polymer (CCCP).

CCCP is an emulsion based artificial resin consisting of a fifty-to-fifty mixture of calcium carbonate and titanium

oxide, which are cold mixed in a dilute solution of polyvinyl acetate fixative. The coating of CCCP is intended to give to the sewing field a matt white finish, making it appear as a floating white plain.

Located on the sewing field is the grid of holes, at one centimetre centres, through which AIR Grid will be sewn. The back of the grid support is profiled to provide vertical ribs. These are slit with fine incisions, at one centimetre centres, corresponding to the cadence of the grid of holes. The purpose of the slits is to grasp the ends of the threads and hold the lattice taut. The vertical ribs are spaced so as to deliver grids whose sizes correspond to the range distilled out of the ambience of the NNG. The support structure of the smallest grid (6, 6, 15) consists of one bay, it is determined by two ribs at seven centimetre centres, the next size up (12, 12, 30) has three ribs, two of the ribs comprise a seven centimetre bay, two of them comprise a bay of six centimetres. Further increments of six centimetre bays delivers all the required support sizes. Once the grid has been sewn into the support structure the total assembly can be fixed to the upper surface of the level portion of the ovoidal grid chamber.

It is intended that lighting will be directed from the outer layer of the grid chamber, onto the surface of the sewing field, however since it is likely that living being will want to experiment with the lighting arrangements the installed fittings will be easy to move and adjust, consisting of free-standing spot lamps and projectors on adjustable trolleys.

The schema for sewing AIR Grid structures into any particular grid chamber will be determined by living being. Four factors influence the range of possible sewing configurations. First, the grid sizes. Because the range of possible sizes corresponds to the range of sizes distilled out of the ambience of the NNG, so there are eight possible sizes of AIR Grid (6,6,15); (12,12,30); (18,18,45); (24,24,60); (30,30,75); (36,36,90); (42,42,105); (48,48,120).

Second, the grid colours. In the experimental AIR Grid work conducted by the researcher it has been shown that the greatest mist effect is achieved by sewing to a colour base. Sewing to a colour base does not mean that the entirety of the AIR Grid is sewn out of thread of a single colour. Sewing to a colour base involves the selection of a range of threads whose colour is closely related on the colour spectrum, for example a blue base might involve the selection of a range of threads from cyan to ultraviolet. Subsequent prioritization of the amount of cyan would give to this AIR Grid a distinct blueness which, had violet been prioritised, would be blueness of a very different kind.

Bold colour contrast is not recommended as a strategy

for determining AIR Grid colour, it tends to fragment the lattice; however; the introduction of small, barely perceptible areas of colour contrast can have a wonderful effect. Just as living being enjoys the feeling that it is they who are switching the AIR Grid back and forth so, when the subtle contrast of colour appears, they cannot be certain if it is a property of AIR Grid or if it is they who have made it appear (this is because colour is a relational property, the explanation of which is beyond the scope of this thesis).

Third, the angular and dimensional relationships between the different AIR Grid structures in a particular grid chamber. Clearly, the gathering of a variety of differently sized and differently coloured grids into a single chamber will produce extraordinary effects. Strategies for predicting particular effects due to angular and dimensional relationships can only be arrived at through empirical experimentation and observation, here there is scope for further research.

Fourth, the precise shape of any particular grid chamber. Although the generic module of the grid chamber is two-point-four metres and the radius of curvature is one-point-two metres, the precise number and configuration of modules will vary from one chamber to another. The extent and arrangement of modules of any particular chamber will influence the sewing strategy adopted for that chamber. What is more, differences between the extent and arrangement of modules of particular chambers will influence the sewing strategy adopted between chambers. The spatial logic of Cotton Caves is such that the grid chamber is best understood as a space, or a sequence of spaces, set inside the excavated space of the cave. This offers the potential for a wide range of different journeys and modes of occupancy of the Cotton Caves. In fact there is such a variety of possibilities built into the project of the Cotton Caves that it is hard to imagine ever exhausting the entire range.

SIGNAGE INDICATES THE WAY TO THE COTTON CAVES, electronicmontage, 15 x 15 x 80 dpi


Public Bridl
Cotton Caves
Cotton Caves
Hertfordshire Way

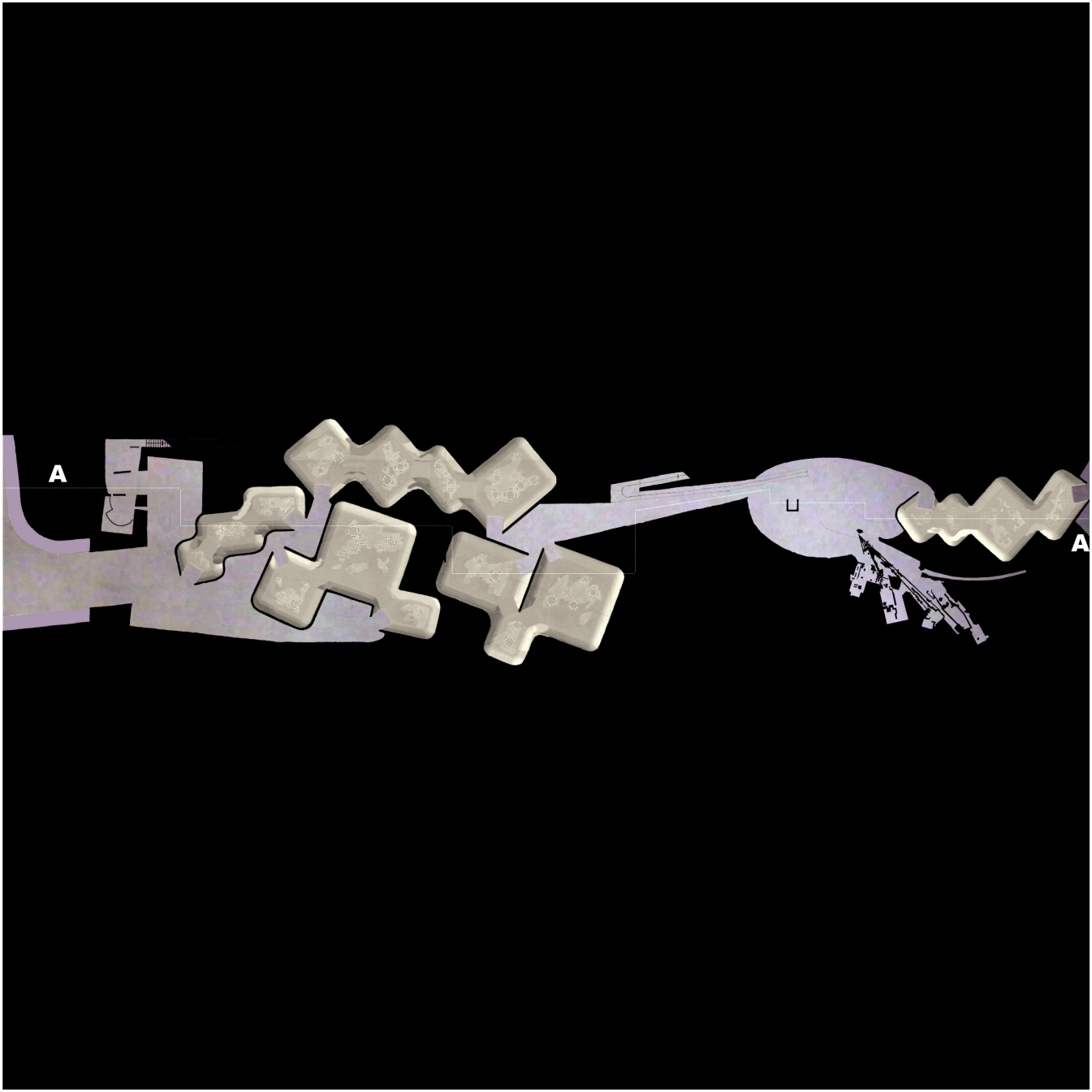
ENVELOPED IN THE GREY MISTS OF A GREY DAY, view of Stevenage new town with hospital and pylons, digital photograph, 15 x 7.5 x 110 dpi

LOCATION OF COTTON CAVE 01, gently slopping field with chalk berm, Crow End, Stevenage, digital photograph, 15 x 7.5 x 110 dpi

COTTON CAVE 01, site plan, electronic drawing, 50 dpi @ scale 1:1000


Cotton
Cave 01
CROW END

COTTON CAVE 01, plan below ground, electronic drawing, 300 dpi @ scale 1:100


A
A

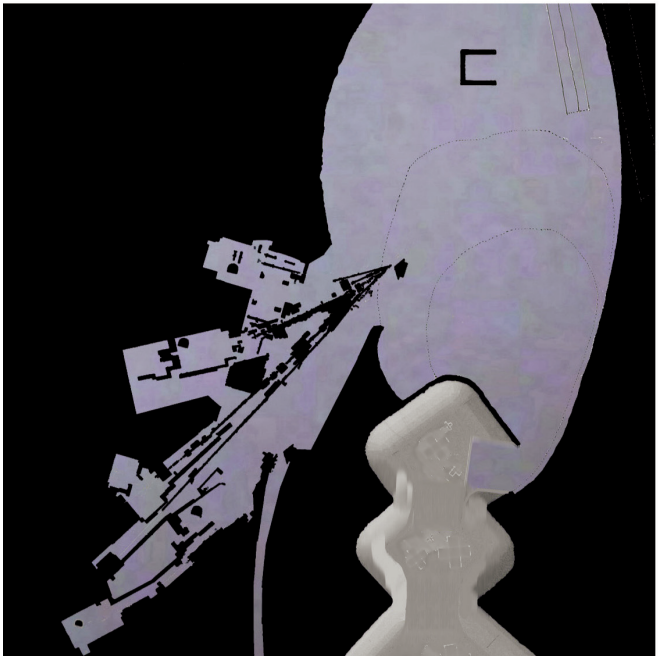
COTTON CAVE 01, section AA, electronic drawing, 300 dpi @ scale 1:100

DETAIL, goods entrance and house of living being

DETAIL, junction of two grid chamber sequences and tunnel

DETAIL, sequence of grid chambers & anti-chamber

DETAIL, material & equipment store and experimentation cavern

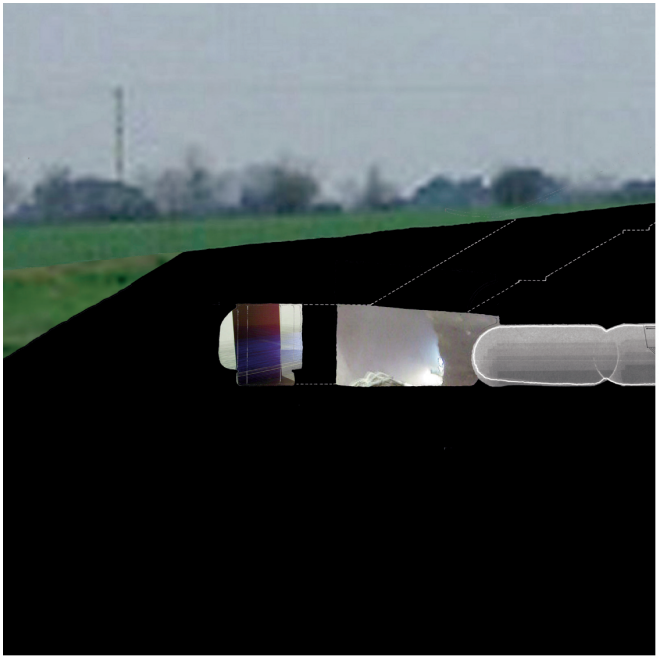


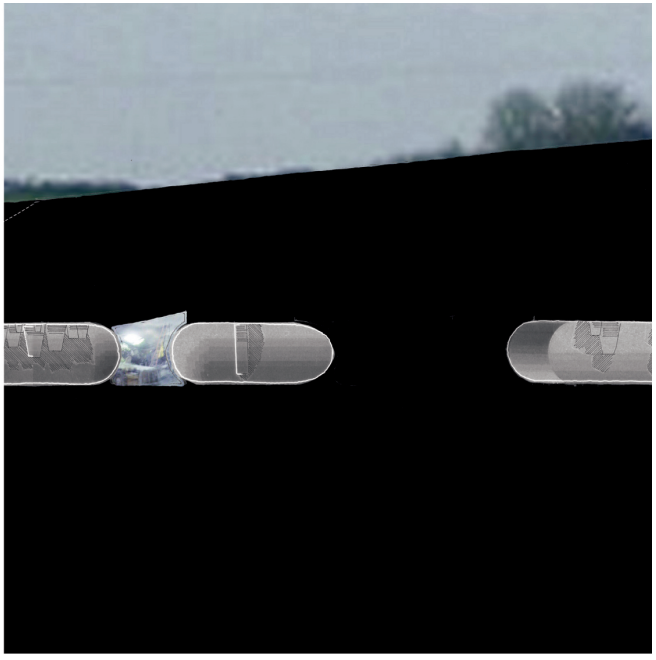
DETAIL, house of living being and underground goods yard

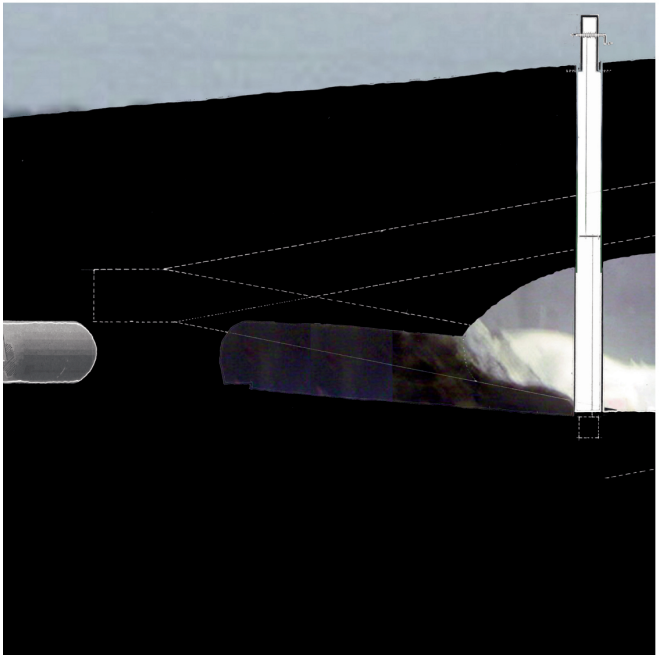
DETAIL, sequence of grid chambers & anti-chamber

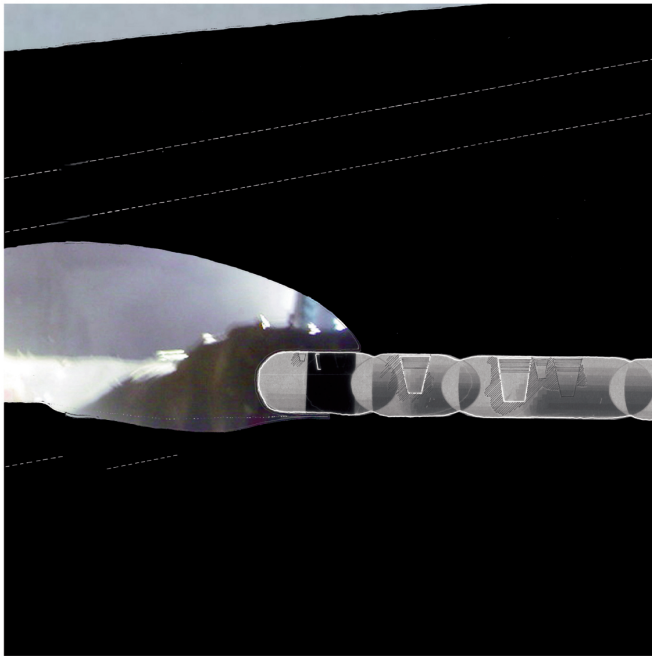
DETAIL, tunnel and shaft to experimentation cavern

DETAIL, junction of experimentation cavern and grid chamber sequence





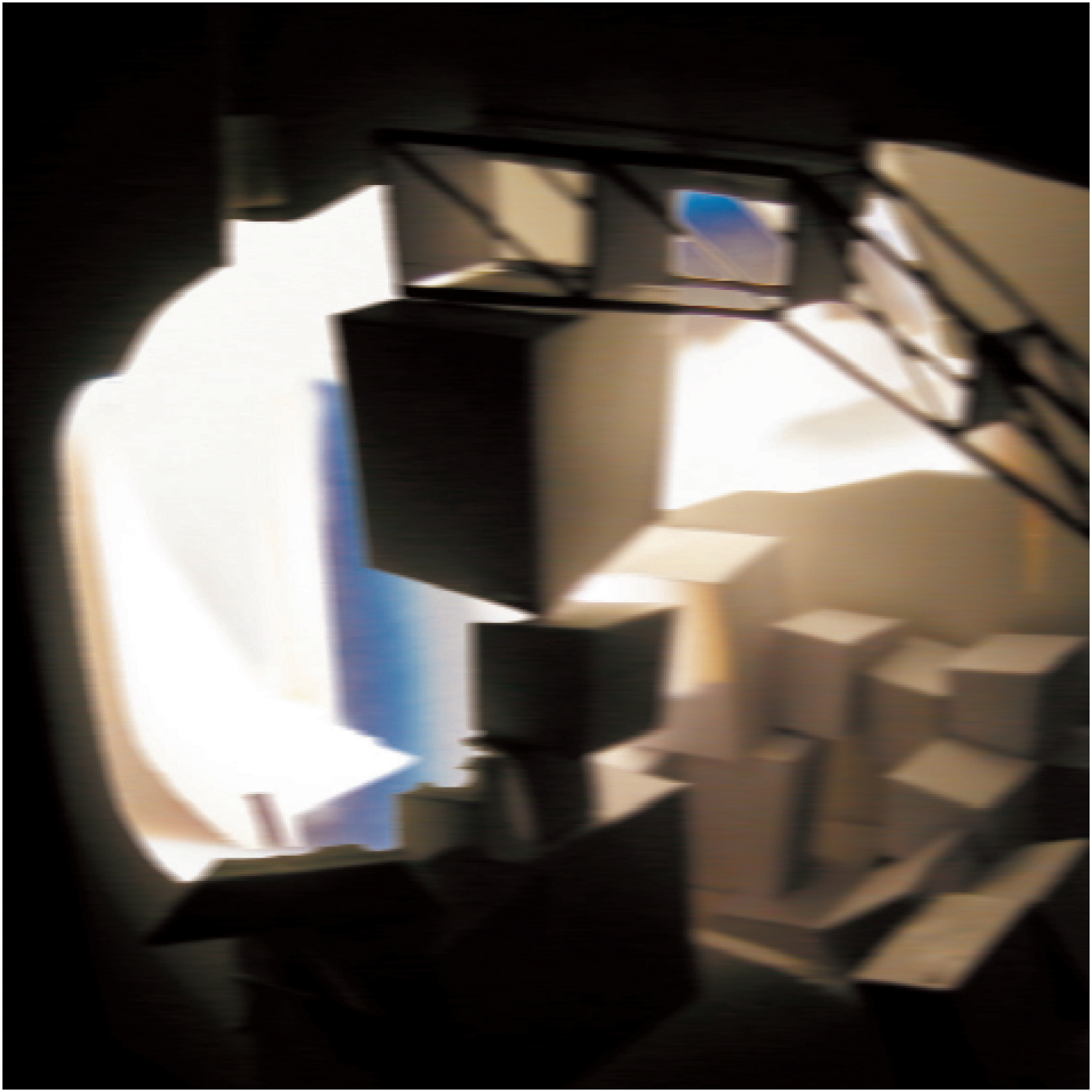




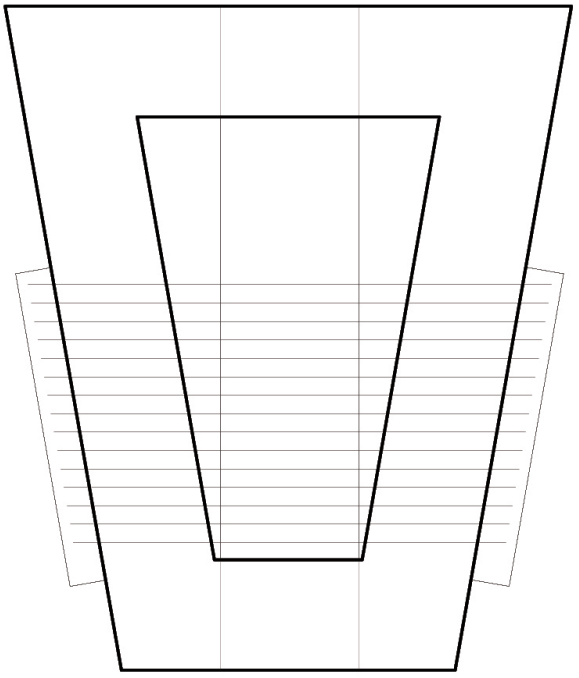
A CONTINUING PROCESS OF EXPANSION, the slow work of excavation persists, four views of machinery, each @ 6 x 6 cm x 240 dpi

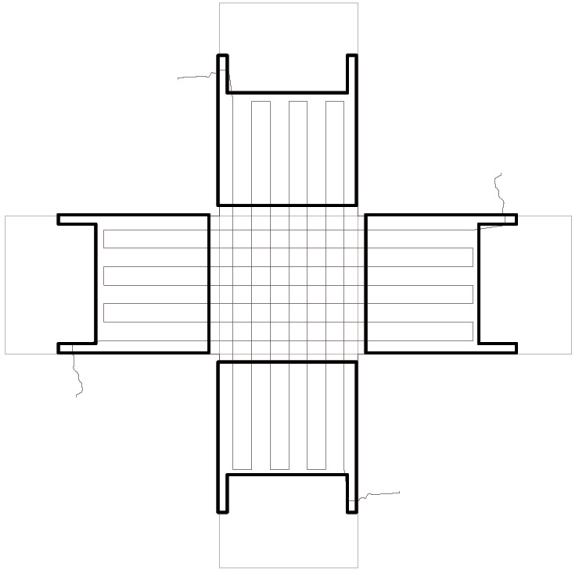
CAVE LOGISTICS, storing, sorting, moving materials & equipment, electronic montage, 17 x 17 cm x 180 dpi

BULK STORAGE, embroidery thread, calcium carbonate, grid support units, electronicmontage,
17 x 17 cm x 180 dpi

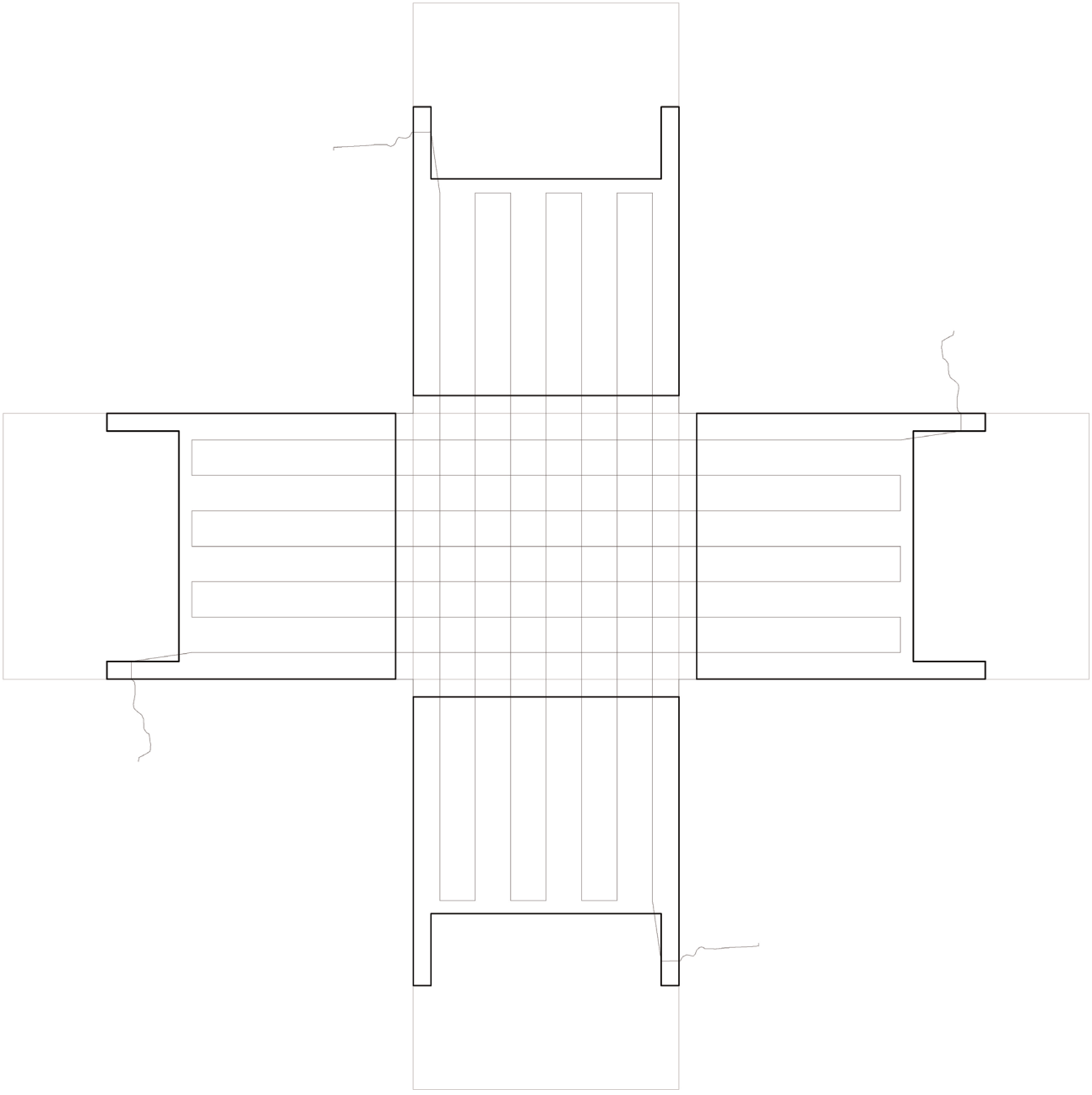


GRID CONSTRUCTION MANUAL, sample page, diagram A, electronic vector drawing

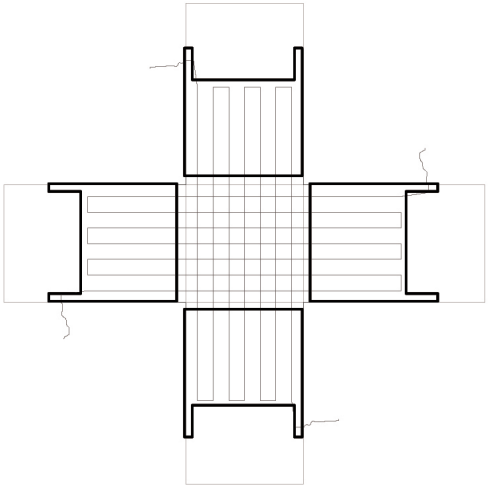


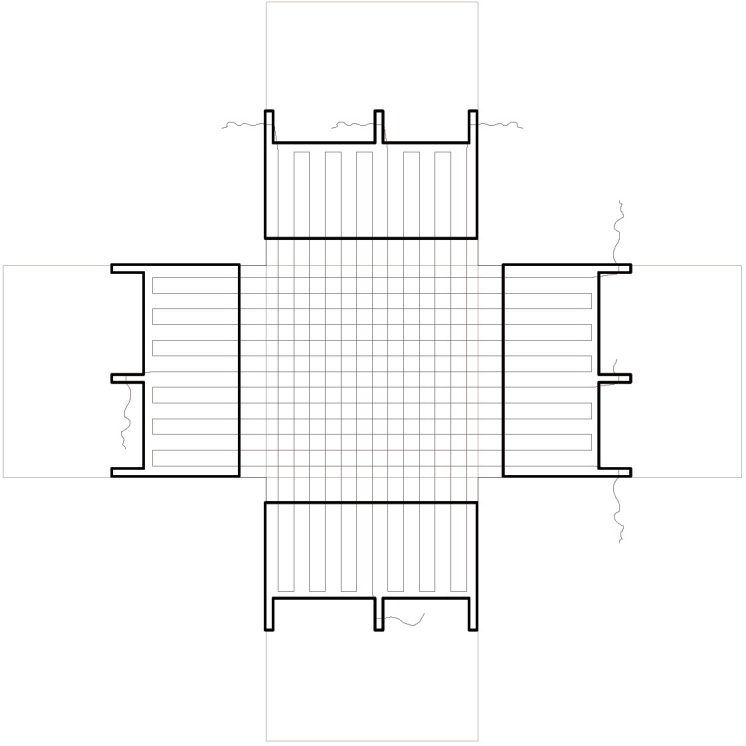


GRID CONSTRUCTION MANUAL, sample page, diagram O, electronic vector drawing

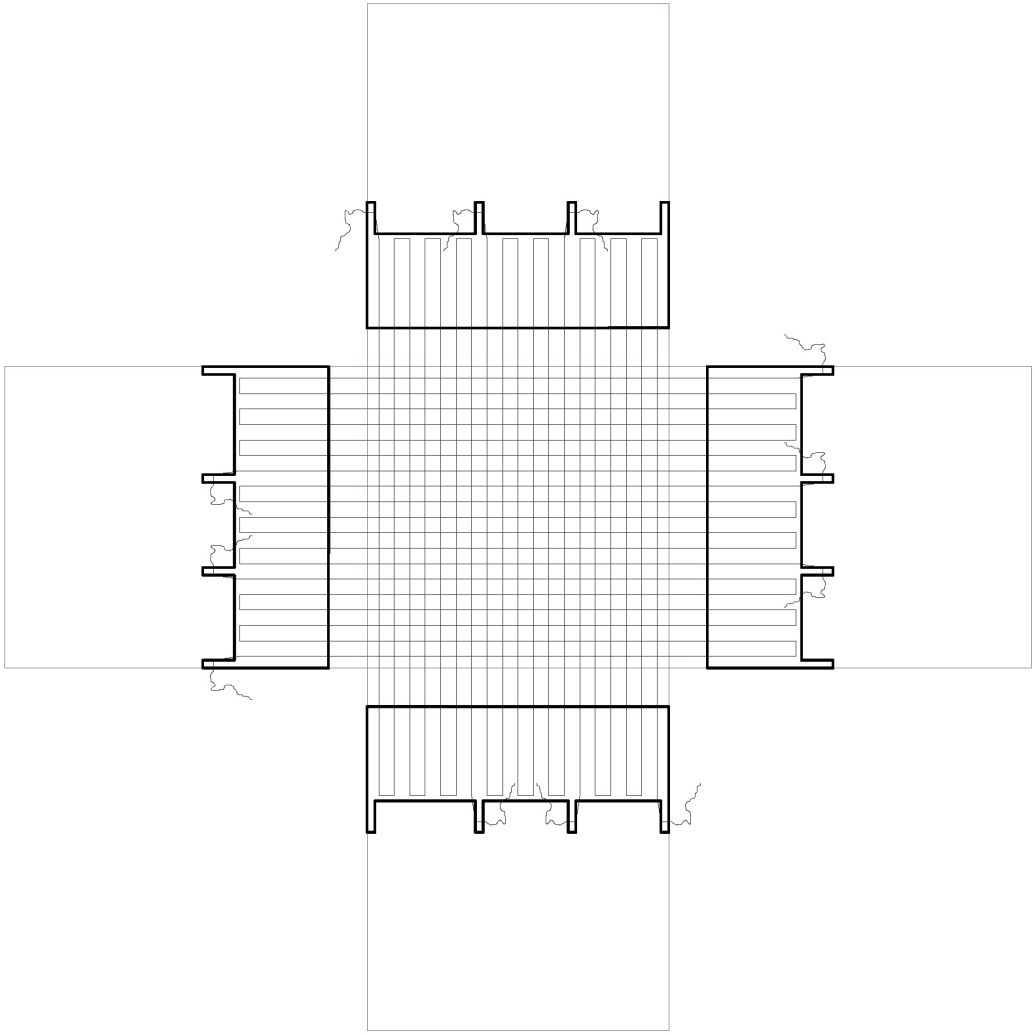


GRID CONSTRUCTION MANUAL, sample page, diagram D, electronic vector drawing

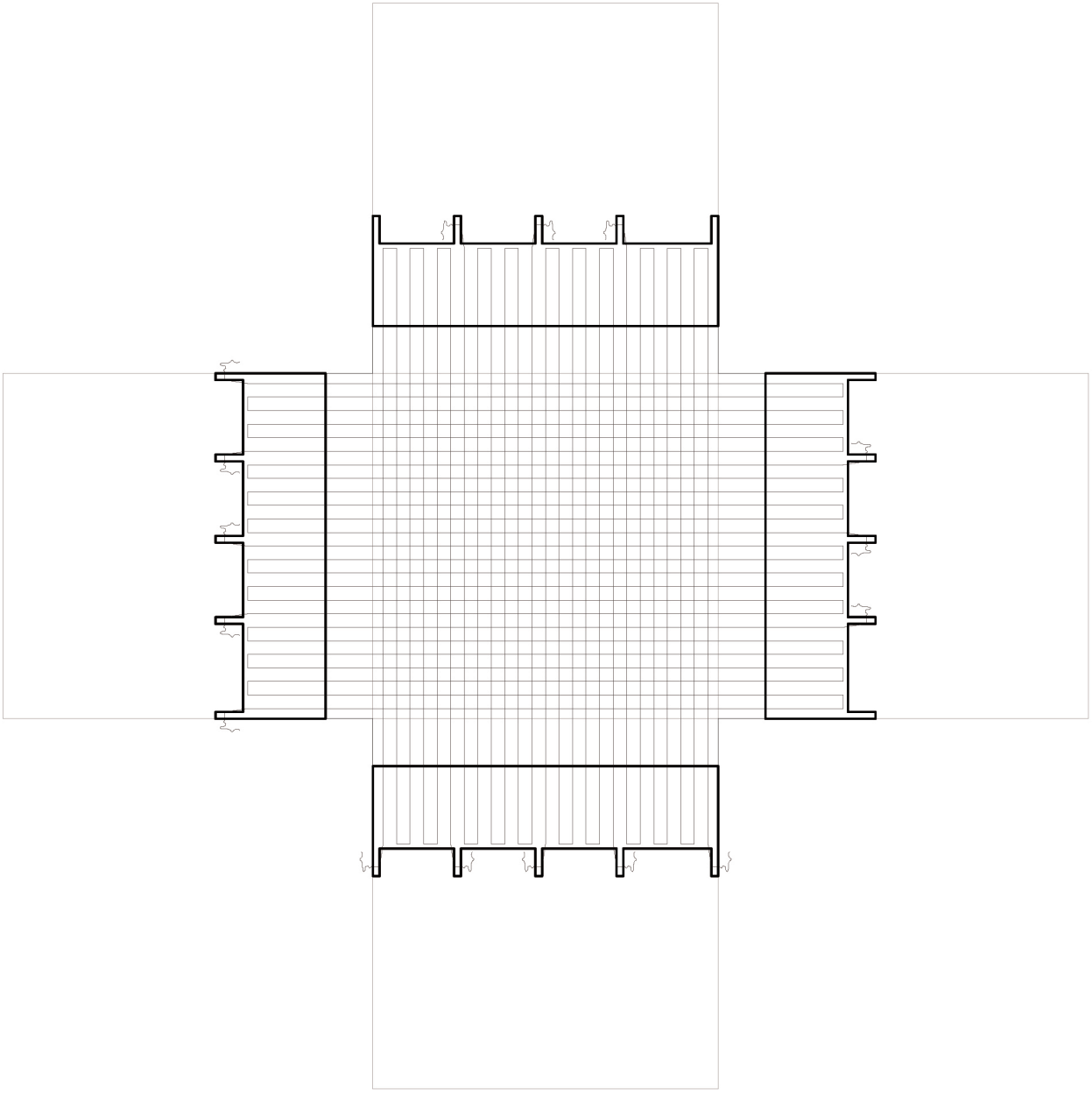




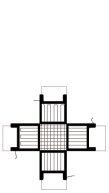
GRID CONSTRUCTION MANUAL, sample page, diagram G, electronic vector drawing

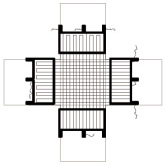


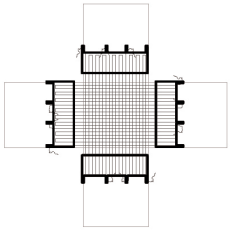
GRID CONSTRUCTION MANUAL, sample page, diagram H, electronic vector drawing

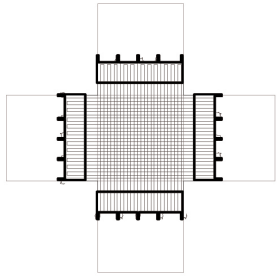


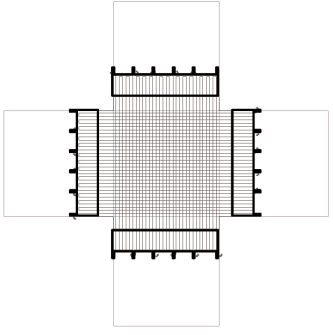
GRID CONSTRUCTION MANUAL, sample page, diagram P, electronic vector drawing

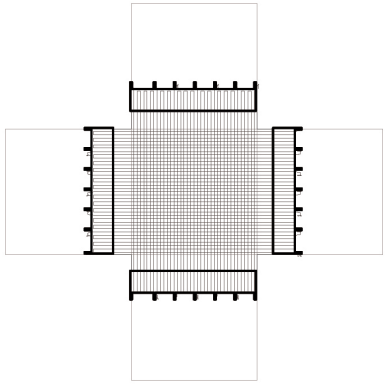


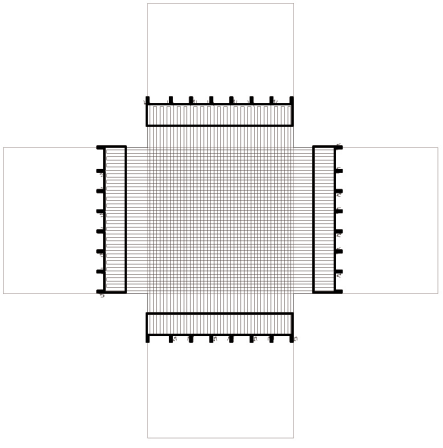


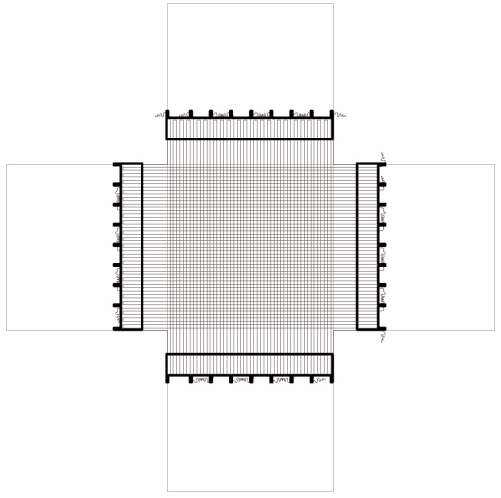




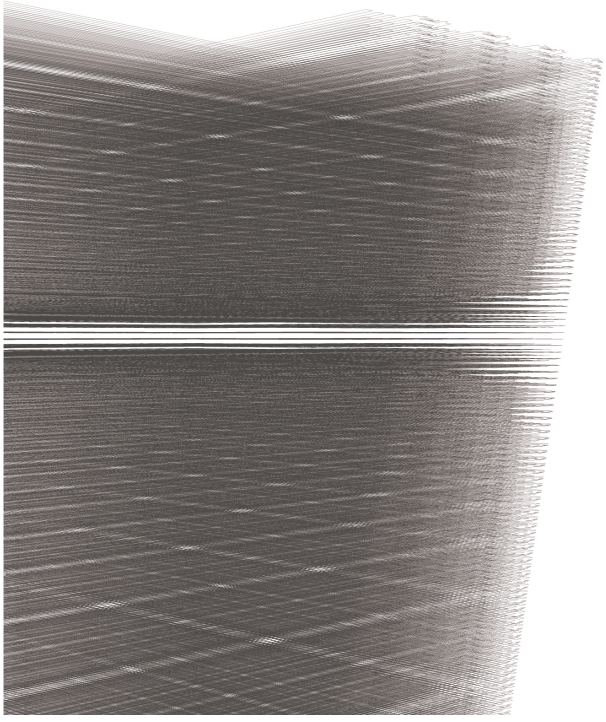


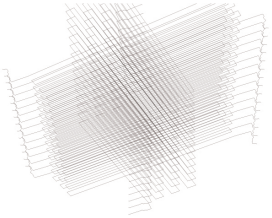


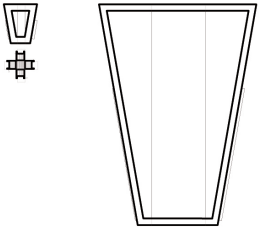


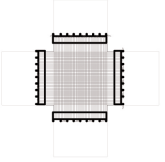


GRID CONSTRUCTION MANUAL, sample page, diagram W[1], electronic vector drawing

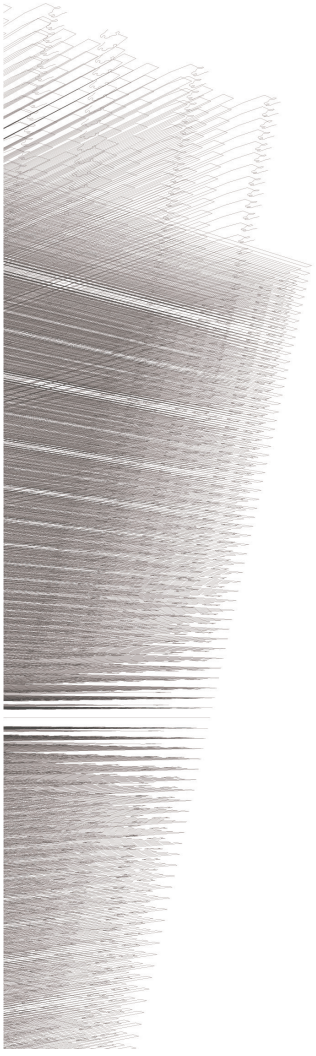


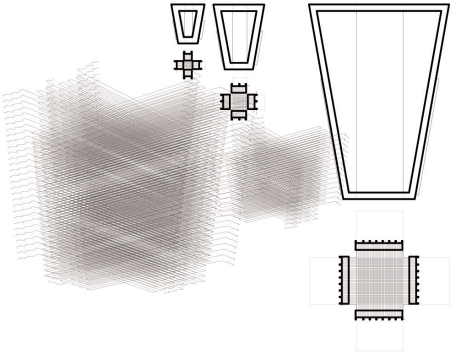




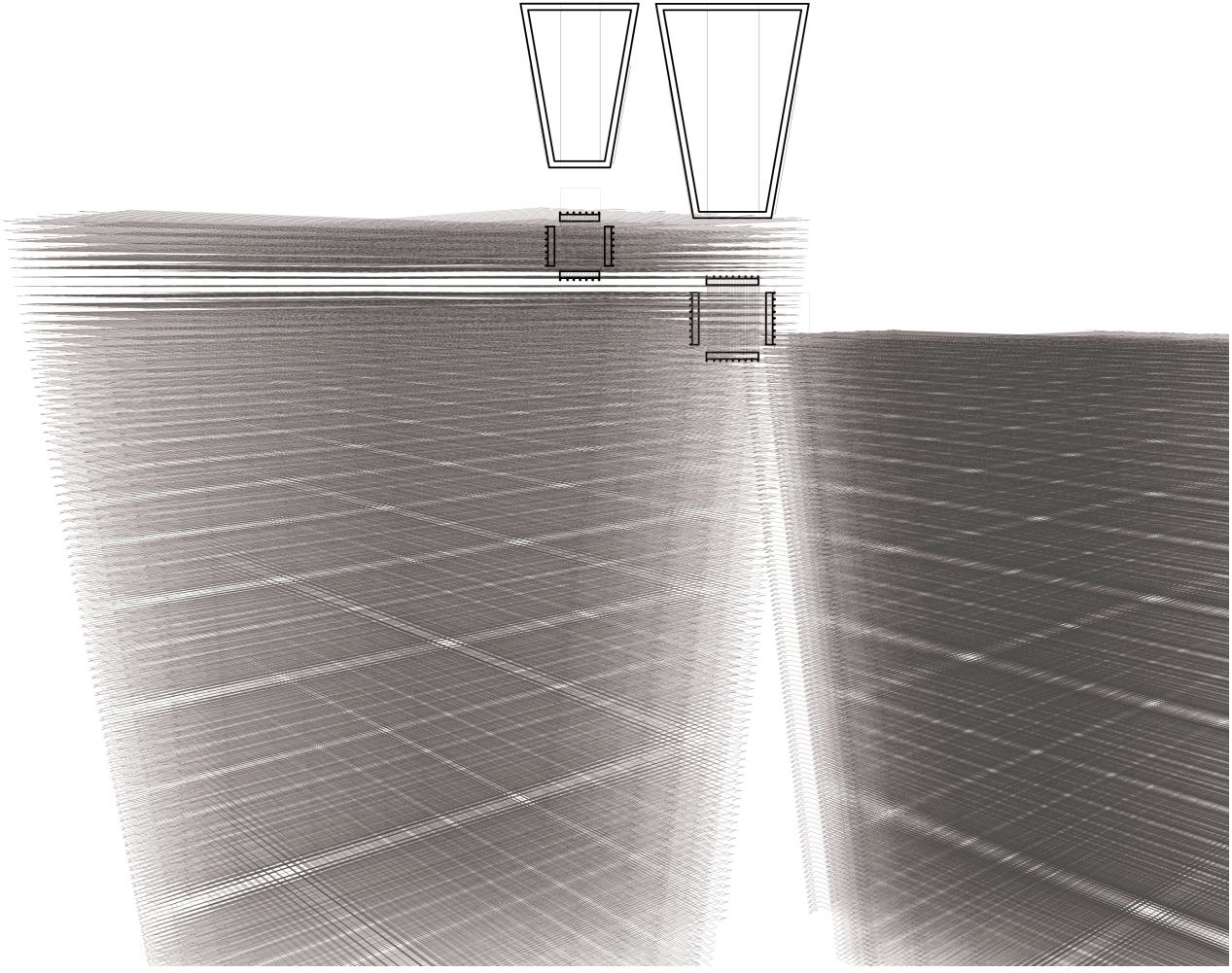


GRID CONSTRUCTION MANUAL, sample page, diagram W^5, electronic vector drawing

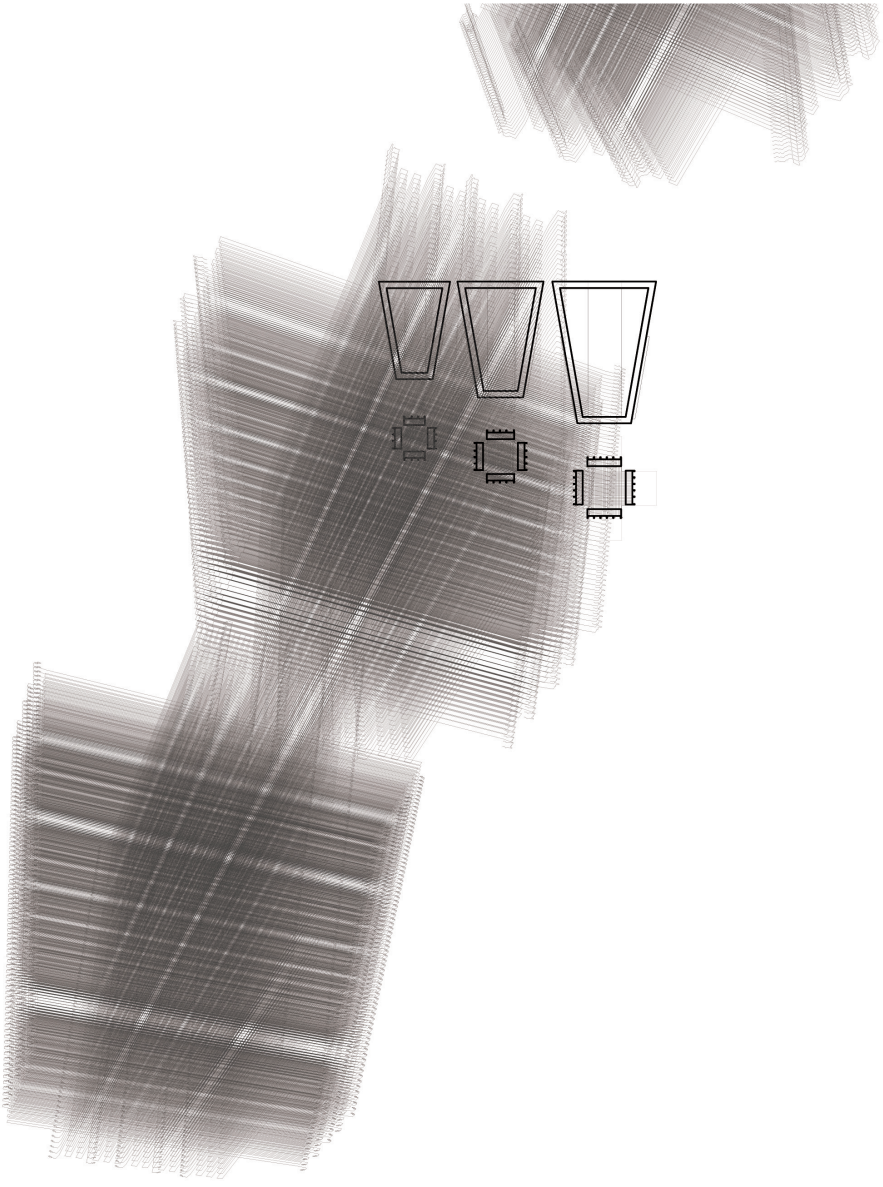




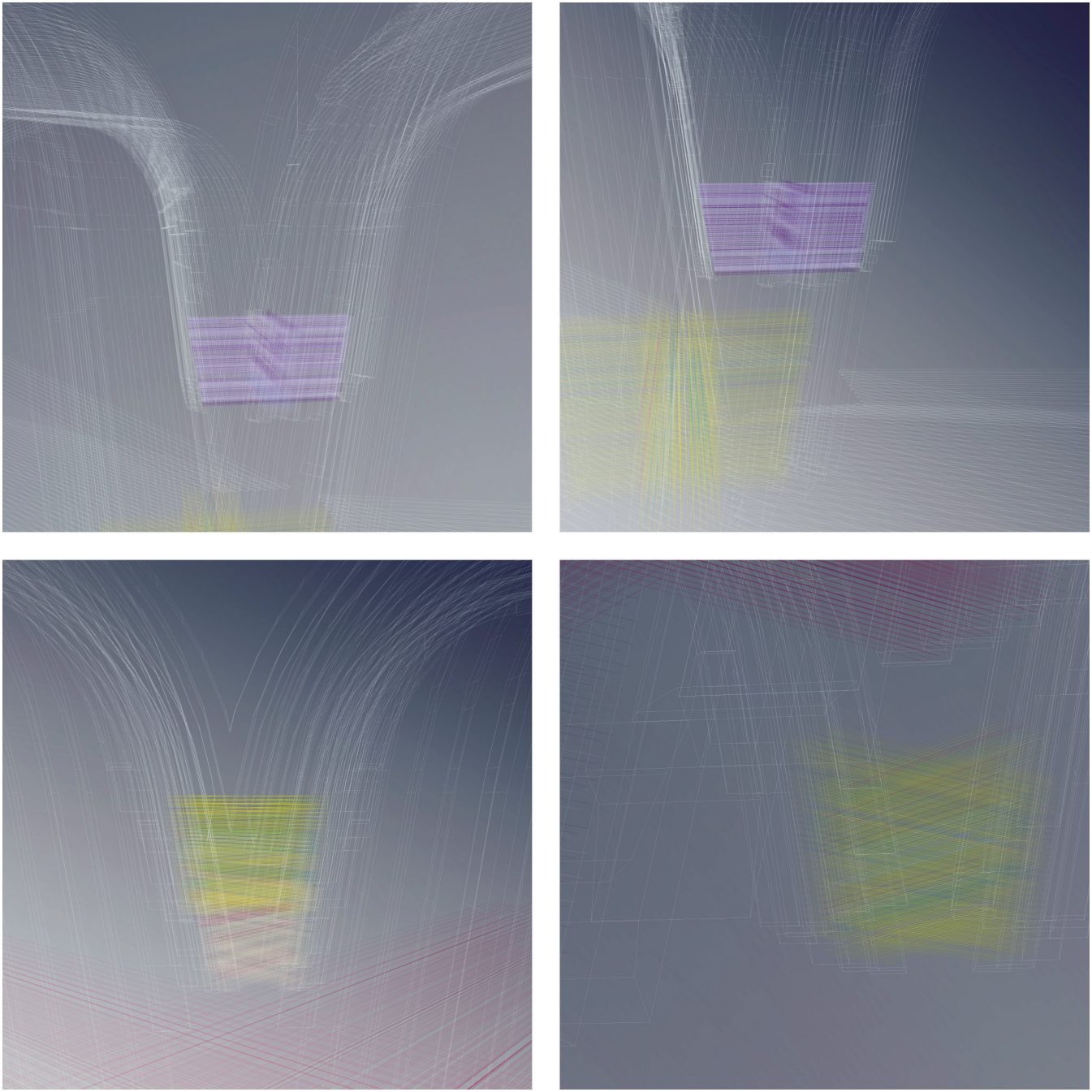
GRID CONSTRUCTION MANUAL, sample page, diagram W^7, electronic vector drawing



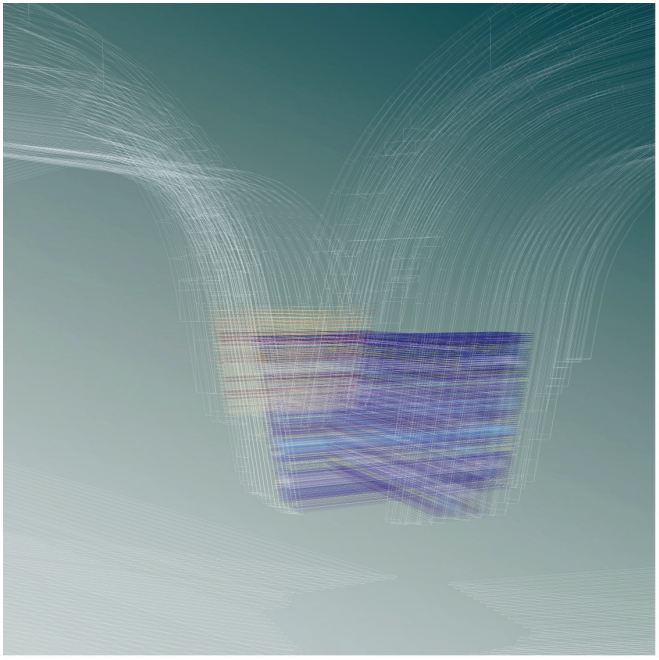
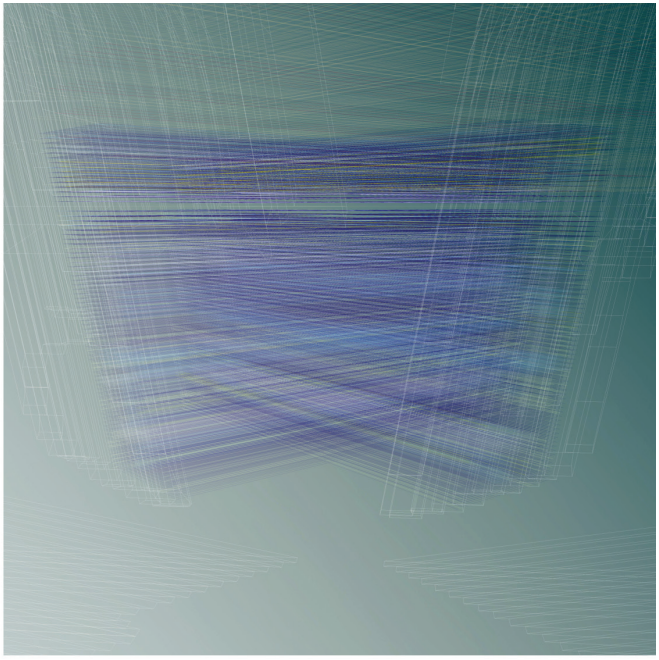
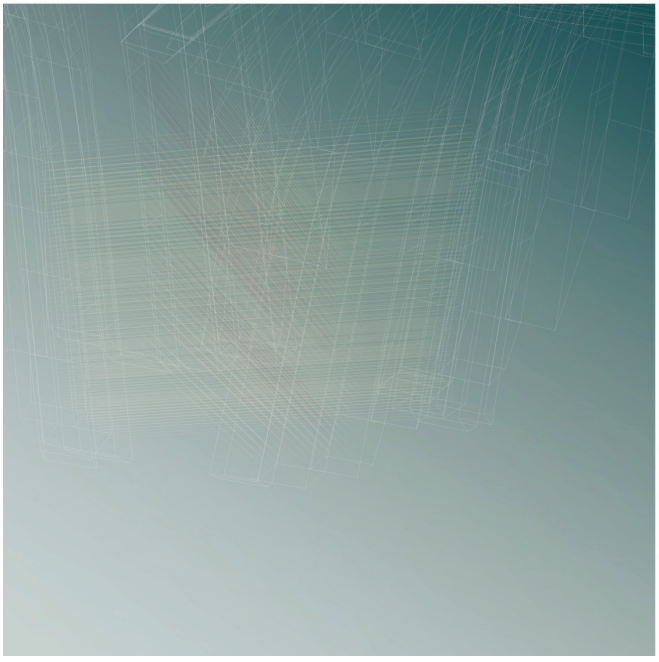
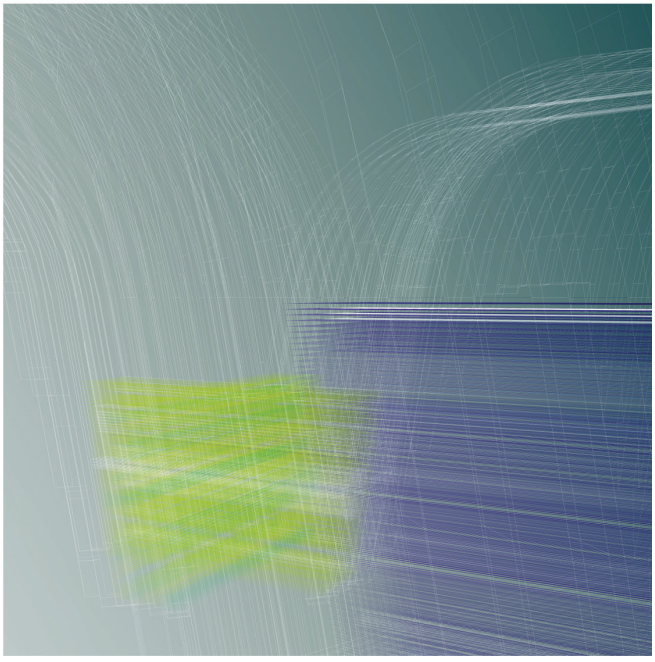
GRID CONSTRUCTION MANUAL, sample page, diagram W^8, electronic vector drawing



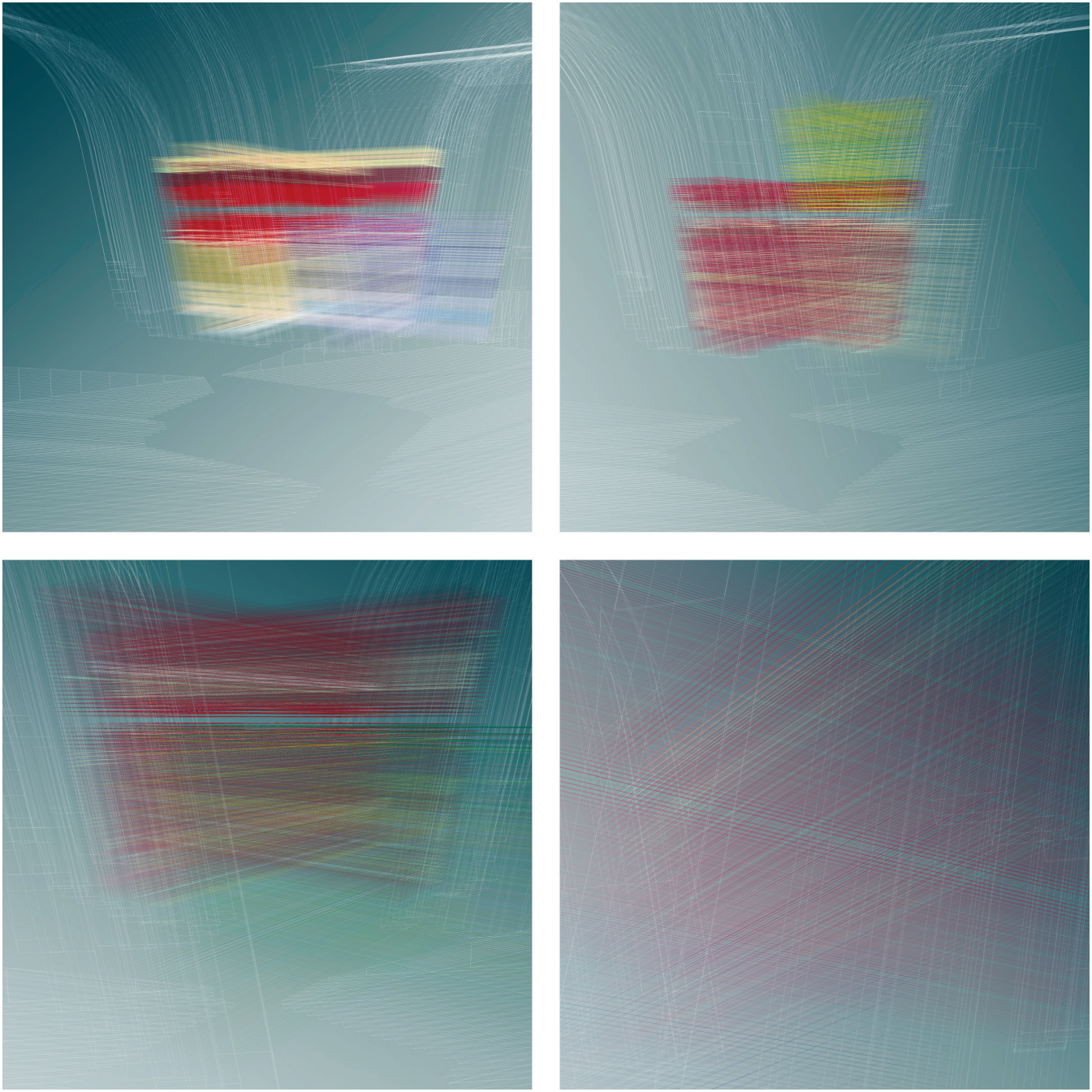
AIR (nee COTTON) GRID LIGHT, electronic model, views 01-04



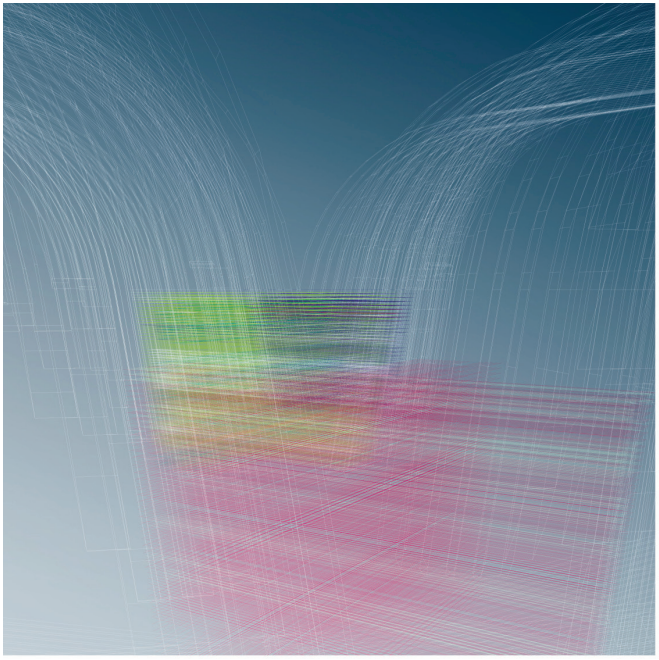
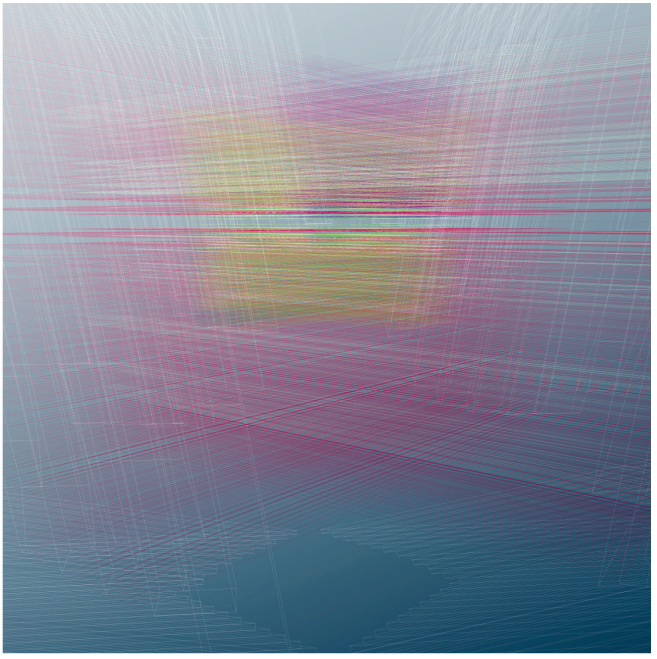
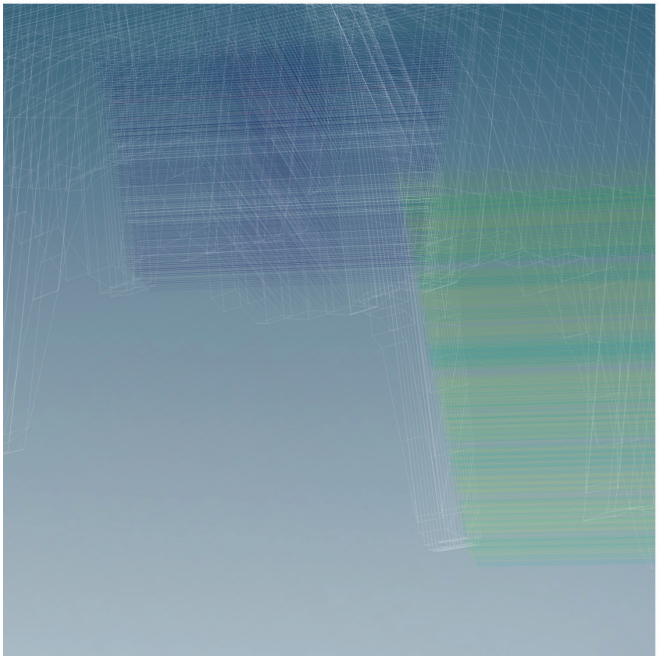
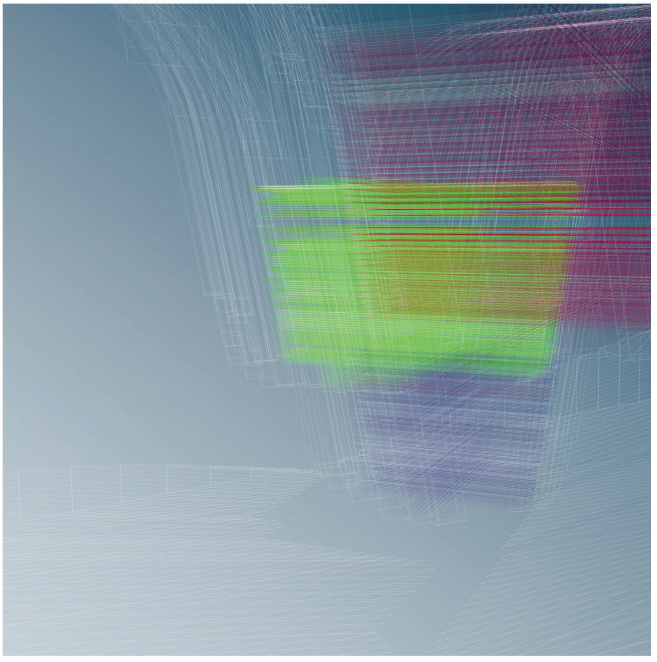
AIR (nee COTTON) GRID LIGHT, electronic model, views 05-08

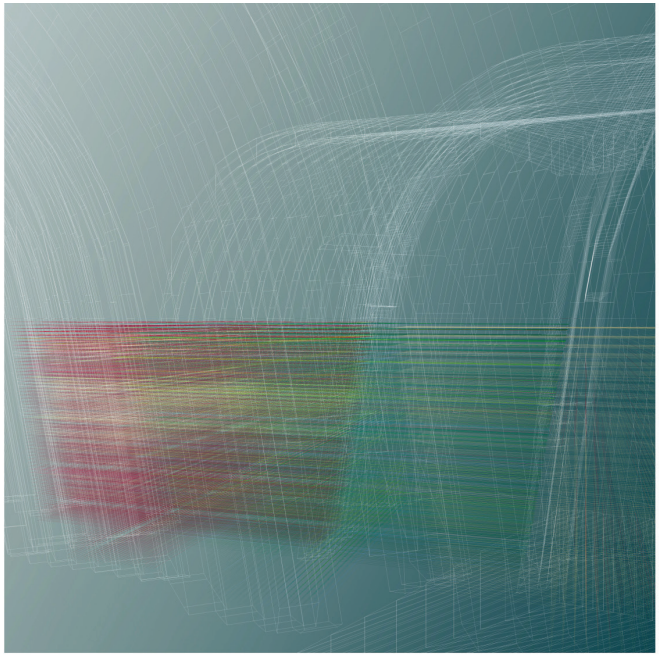
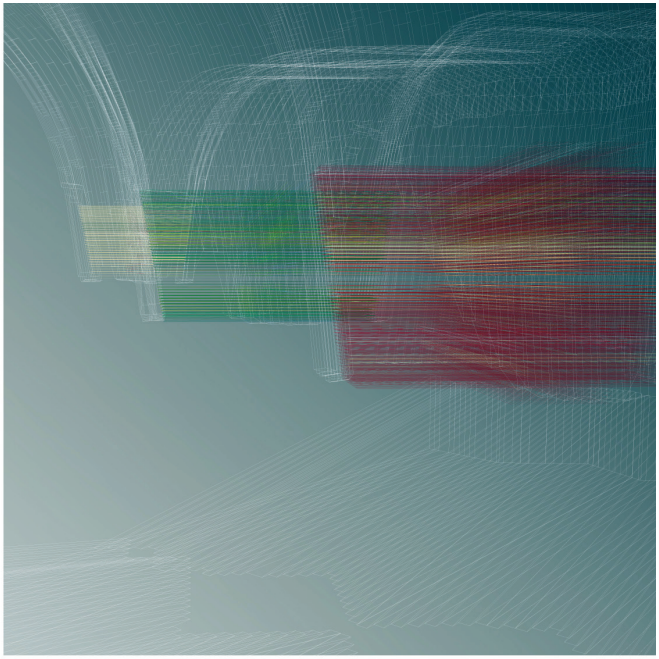
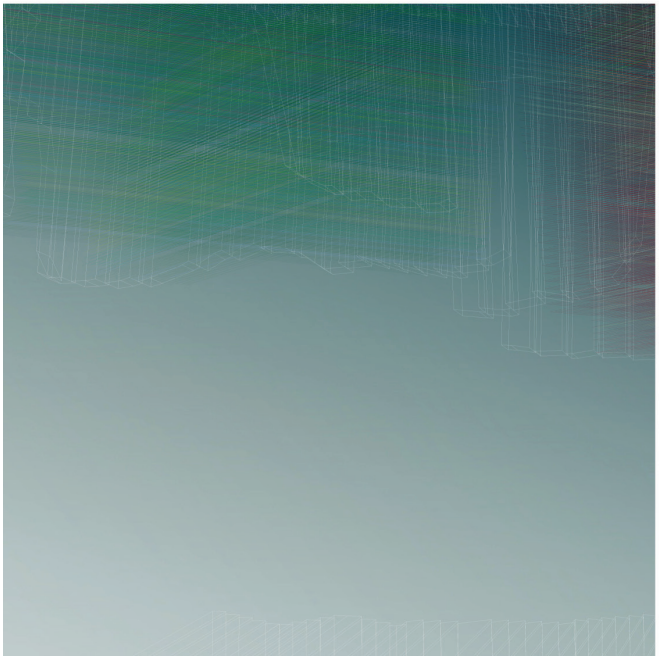
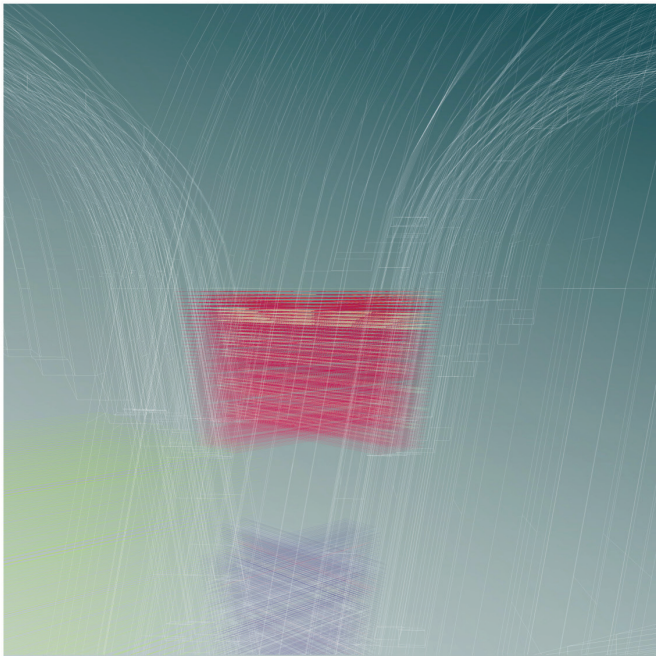
AIR (nee COTTON) GRID LIGHT, electronic model, views 09-12



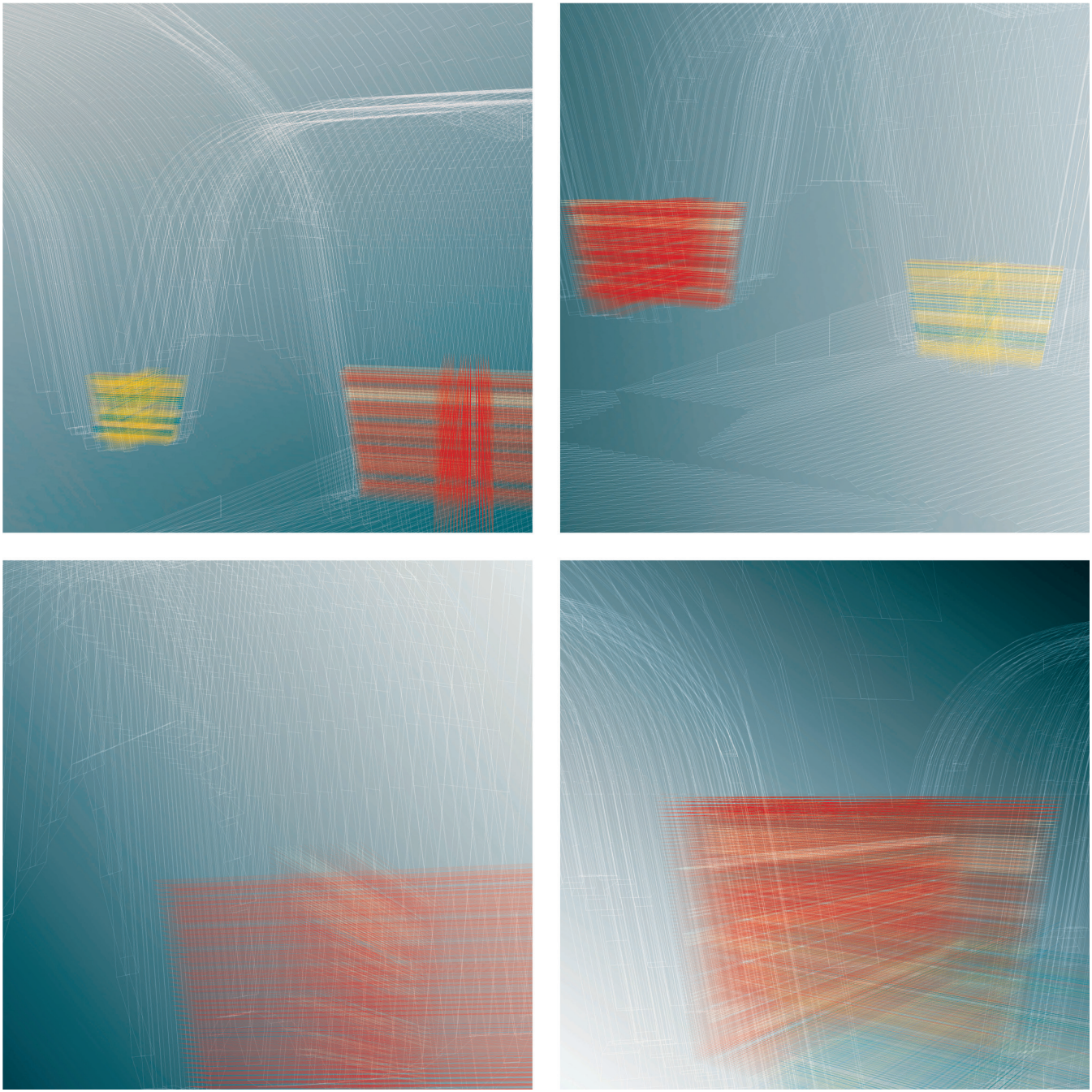
AIR (nee COTTON) GRID LIGHT, electronic model, views 13-16

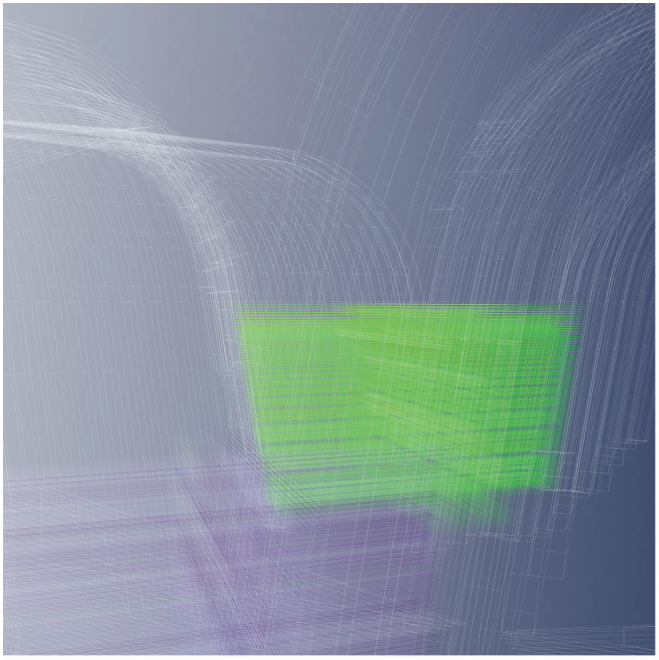
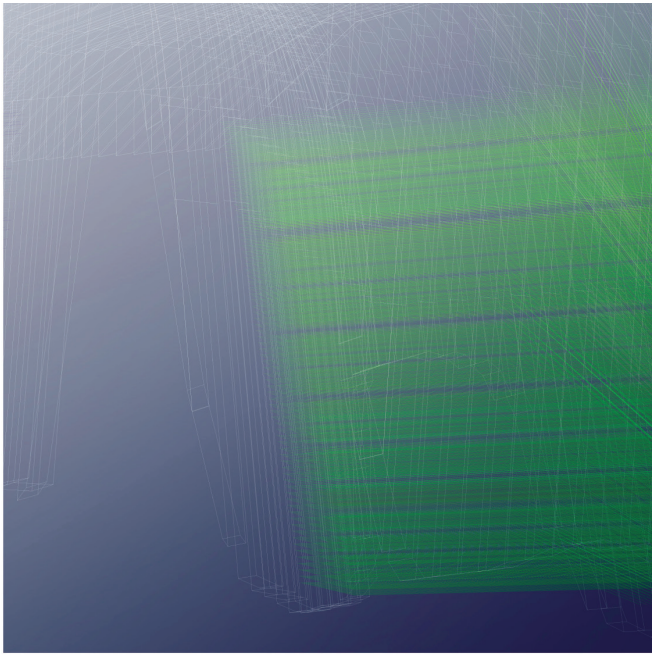
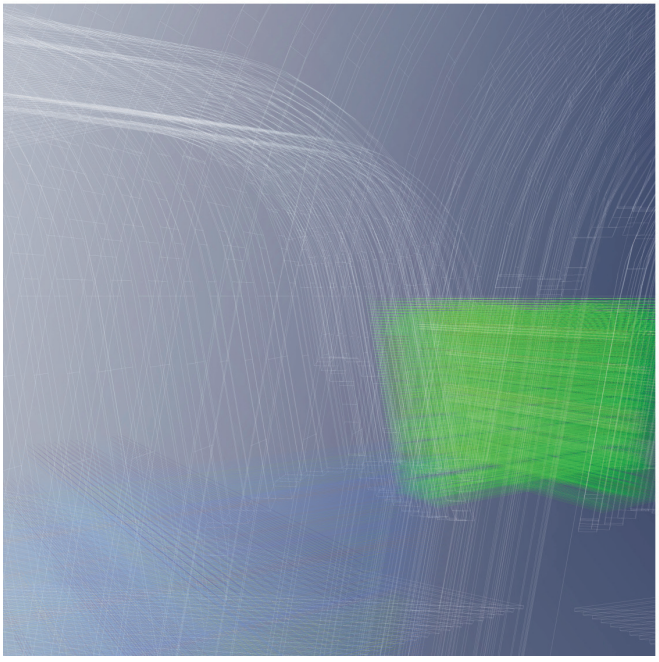
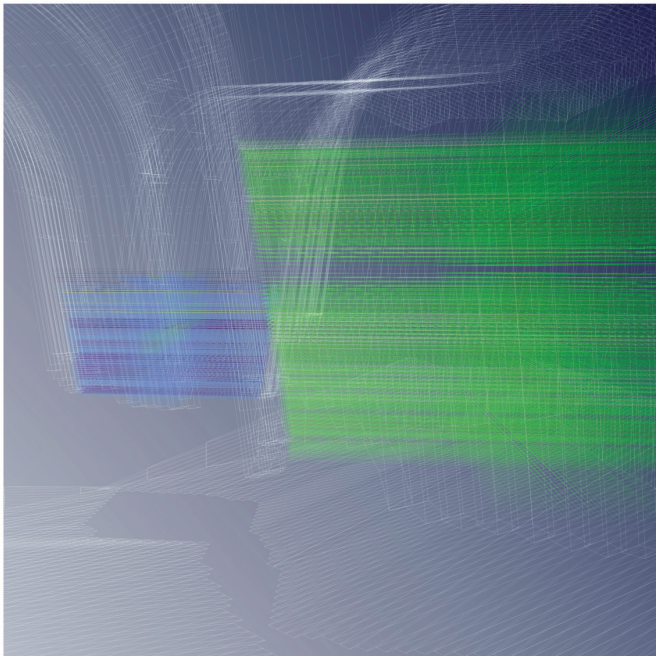
AIR (nee COTTON) GRID LIGHT, electronic model, views 17-20

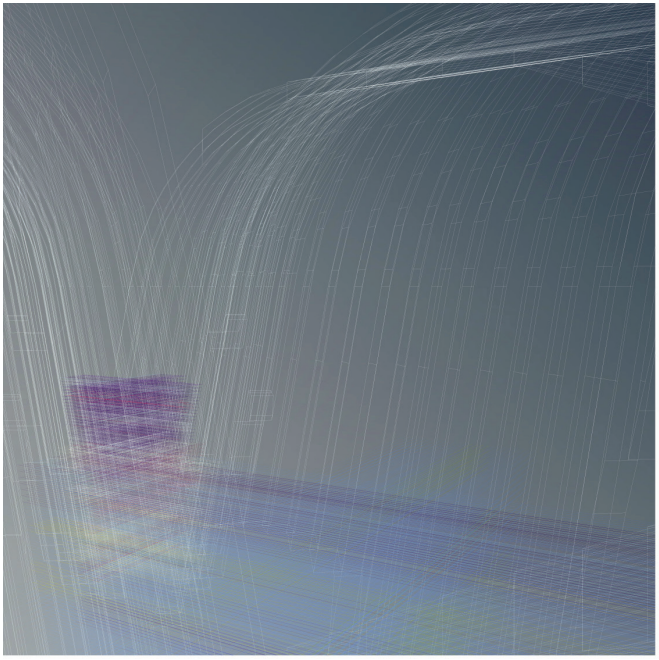
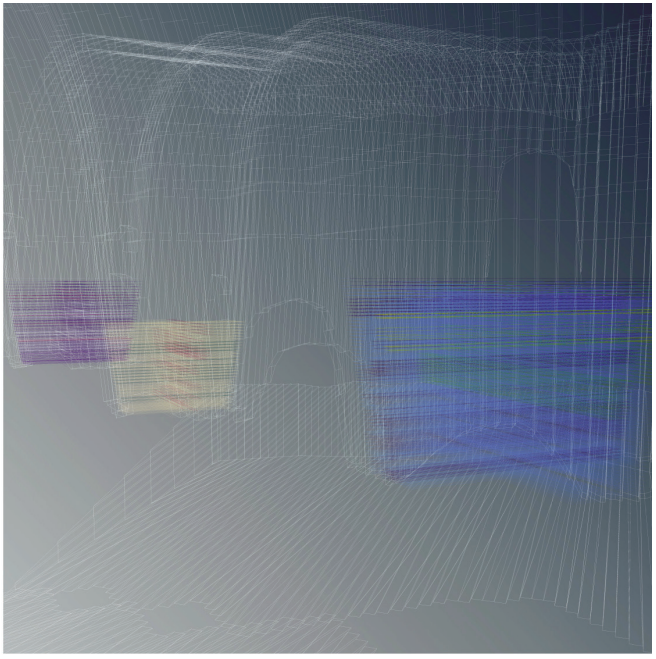
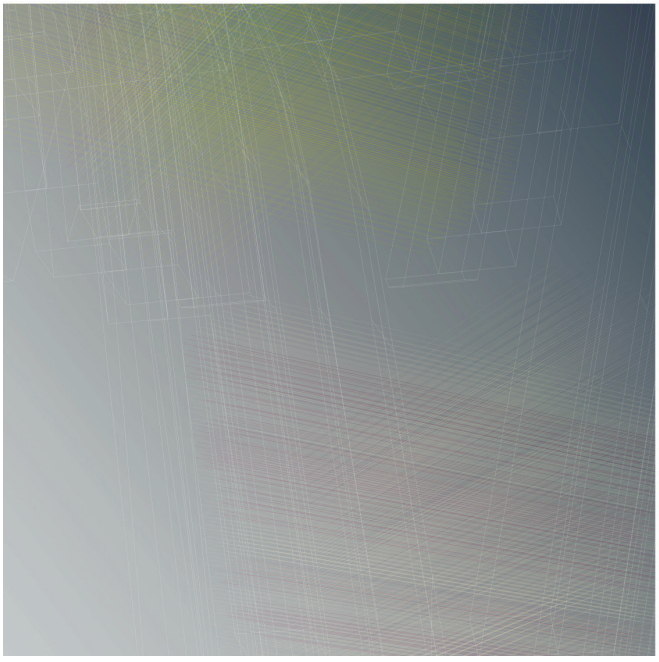
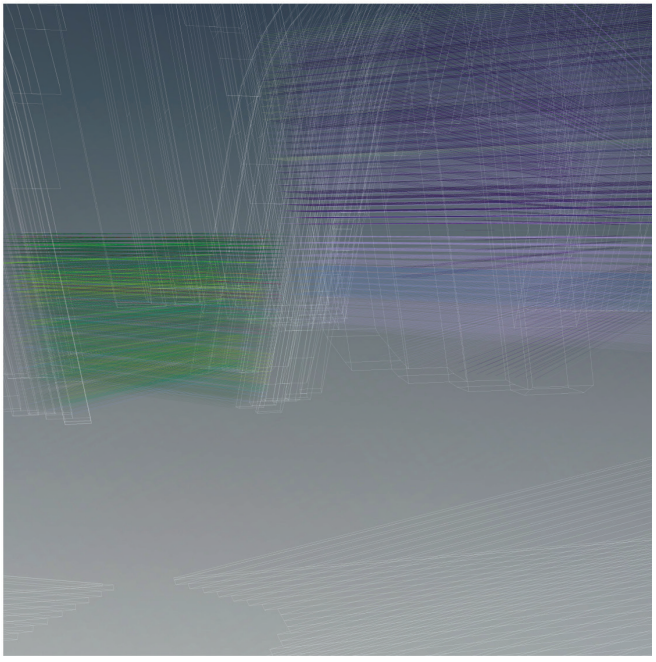
AIR (nee COTTON) GRID LIGHT, electronic model, views 21-24



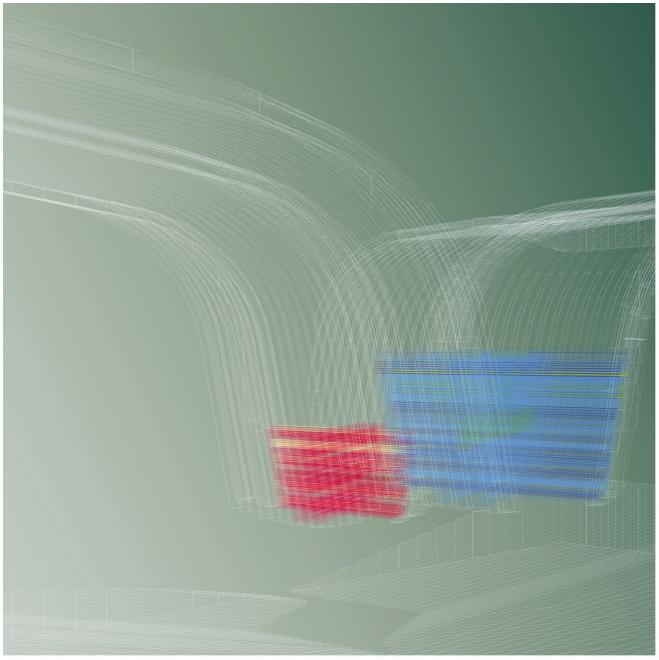
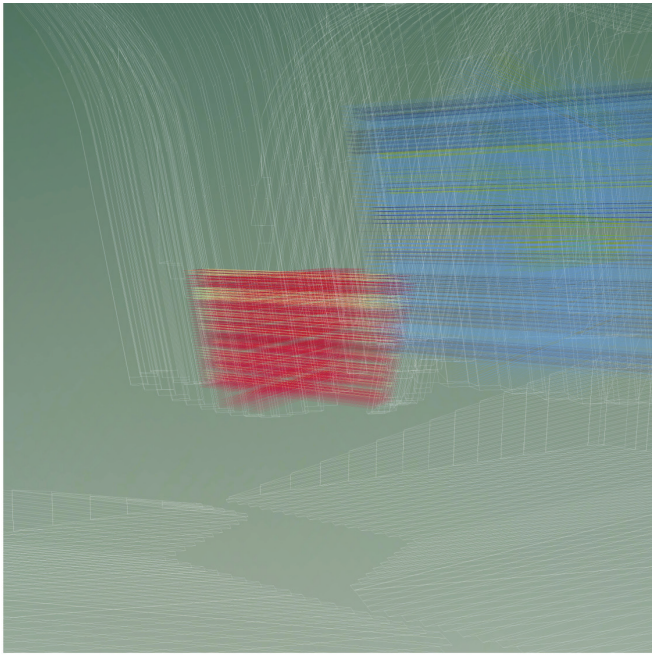
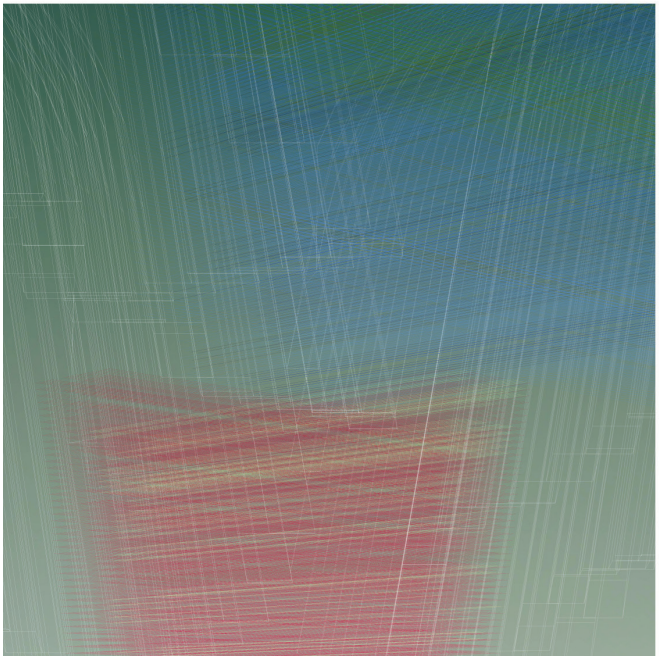
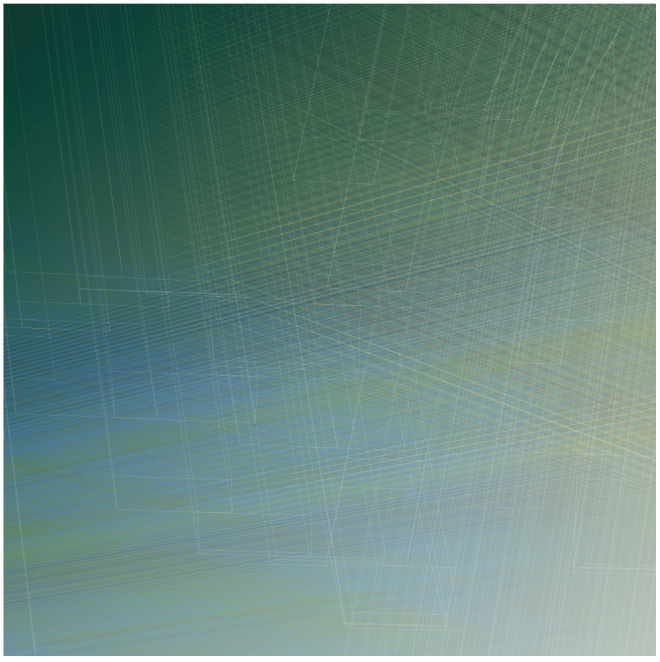
AIR (nee COTTON) GRID LIGHT, electronic model, views 25-28

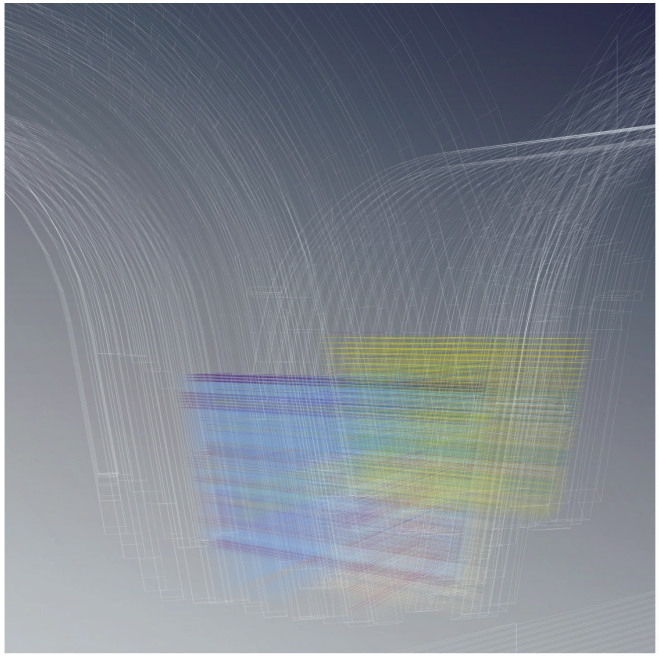
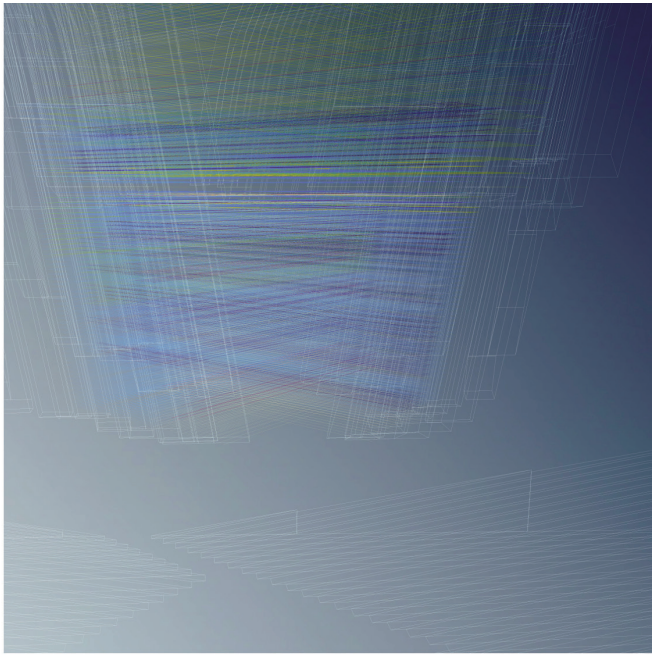
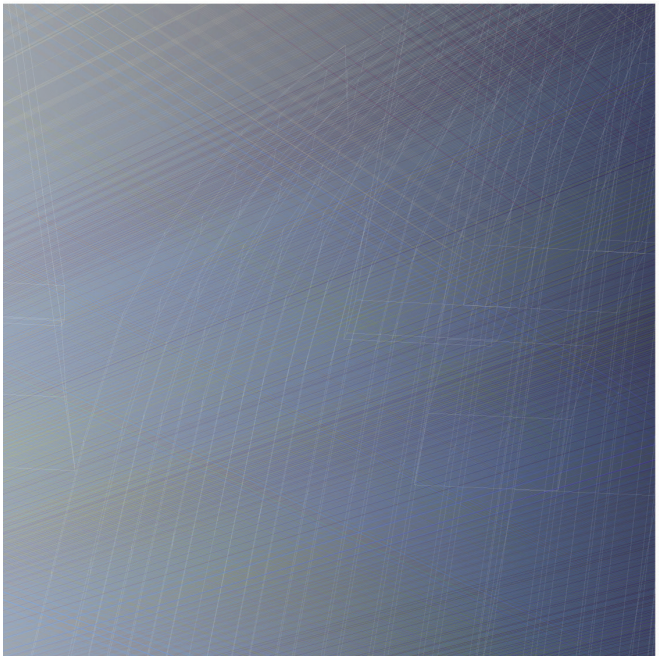
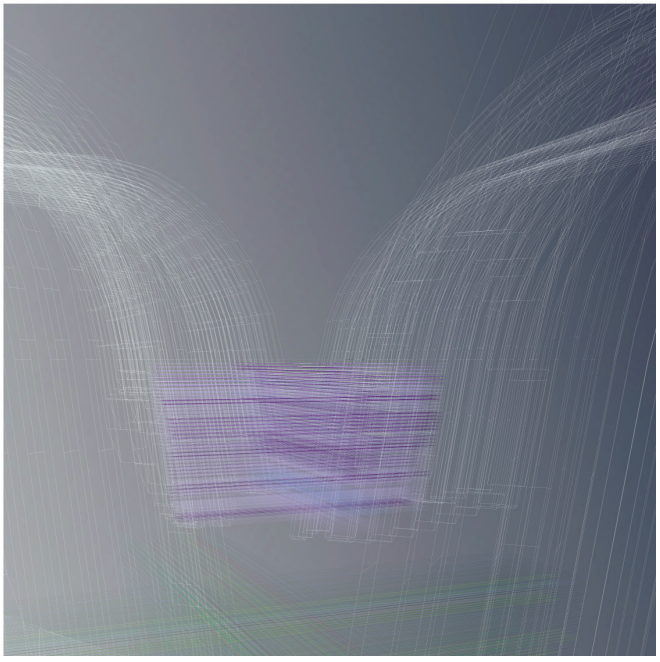
AIR (nee COTTON) GRID LIGHT, electronic model, views 29-32

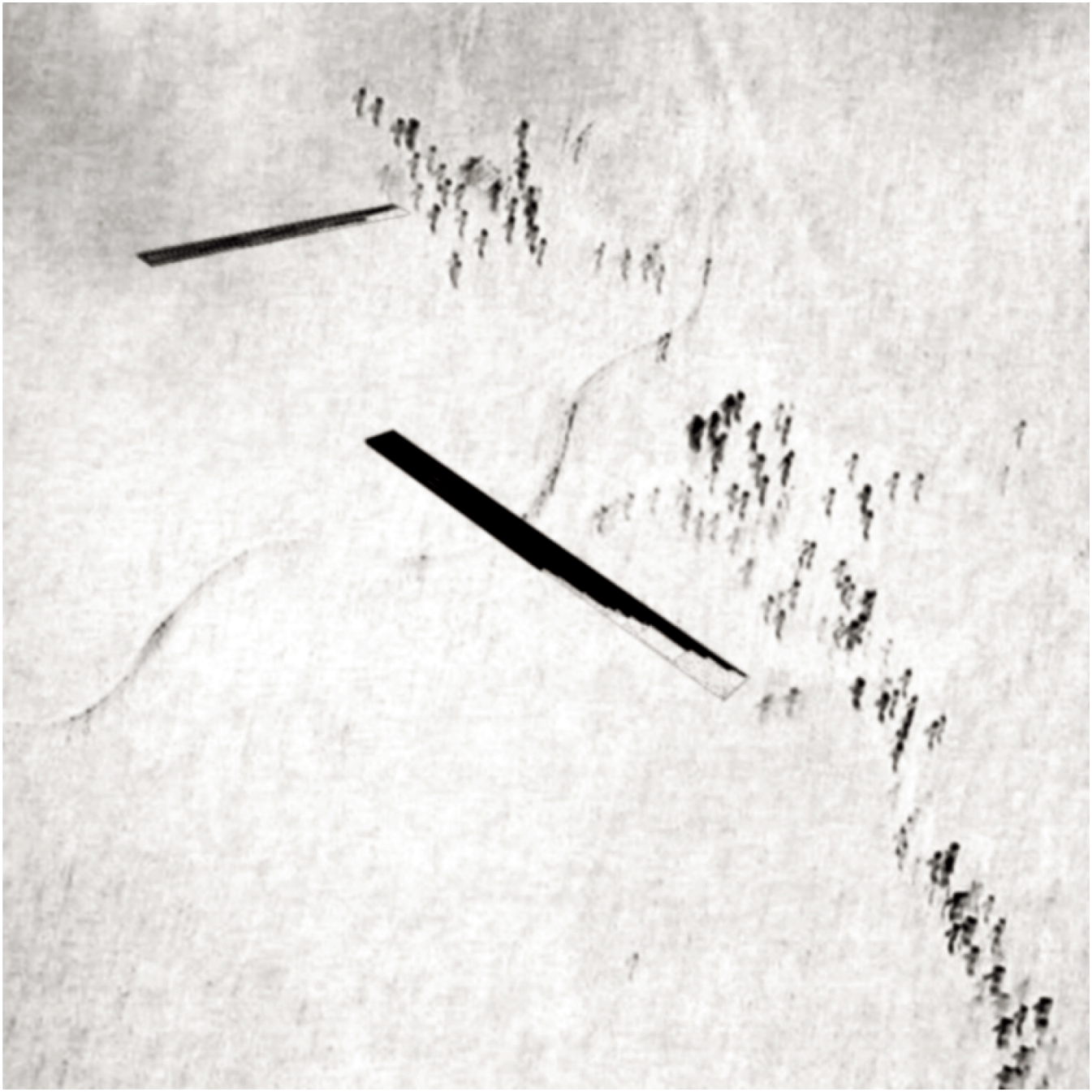
AIR (nee COTTON) GRID LIGHT, electronic model, views 33-36

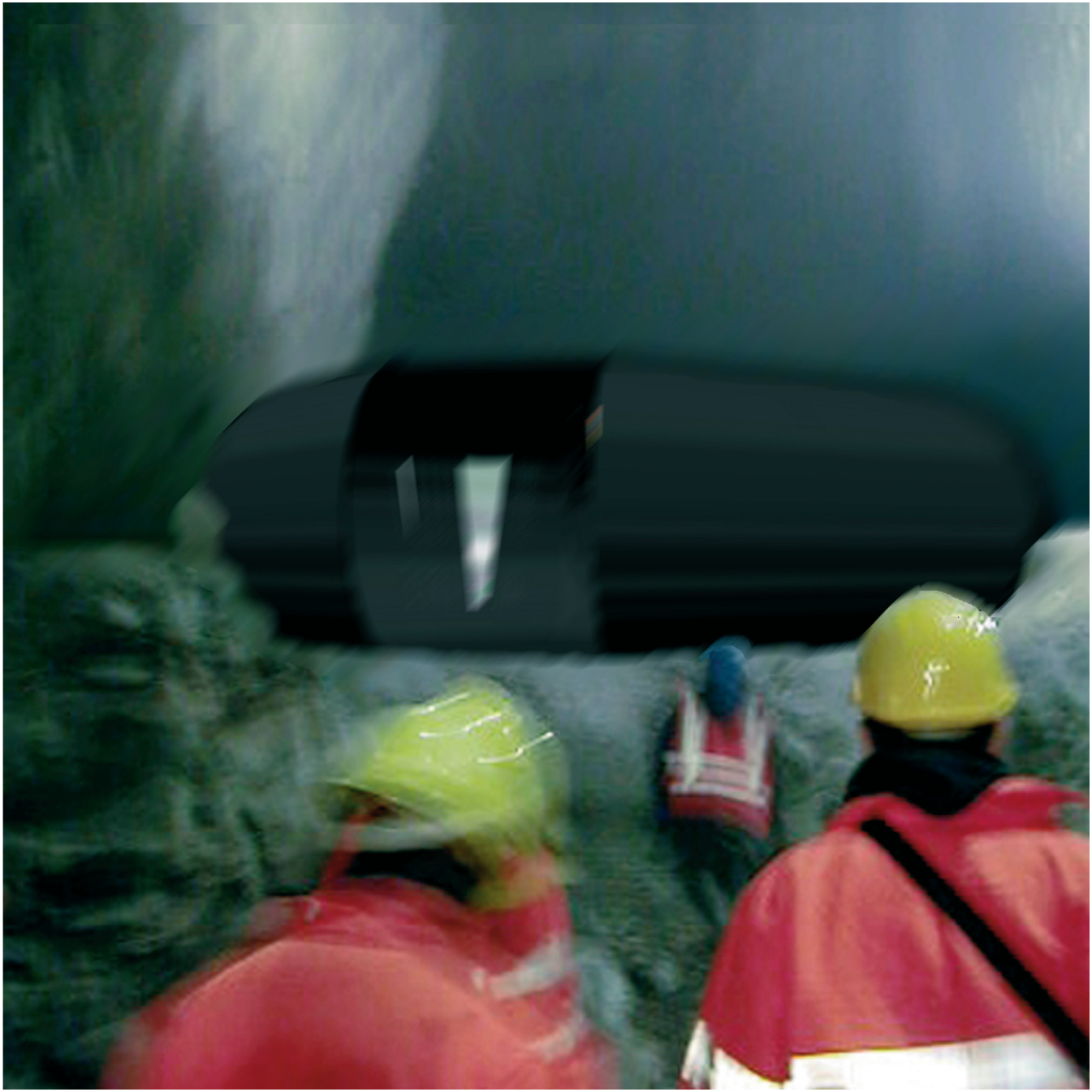
AIR (nee COTTON) GRID LIGHT, electronic model, views 37-40

AERIAL VIEW, a mass of visitors about to descend into the caves via the ramped stair located in the two gashed slots seen on the surface, electronicmontage, 15 x 15 cm x 142 dpi



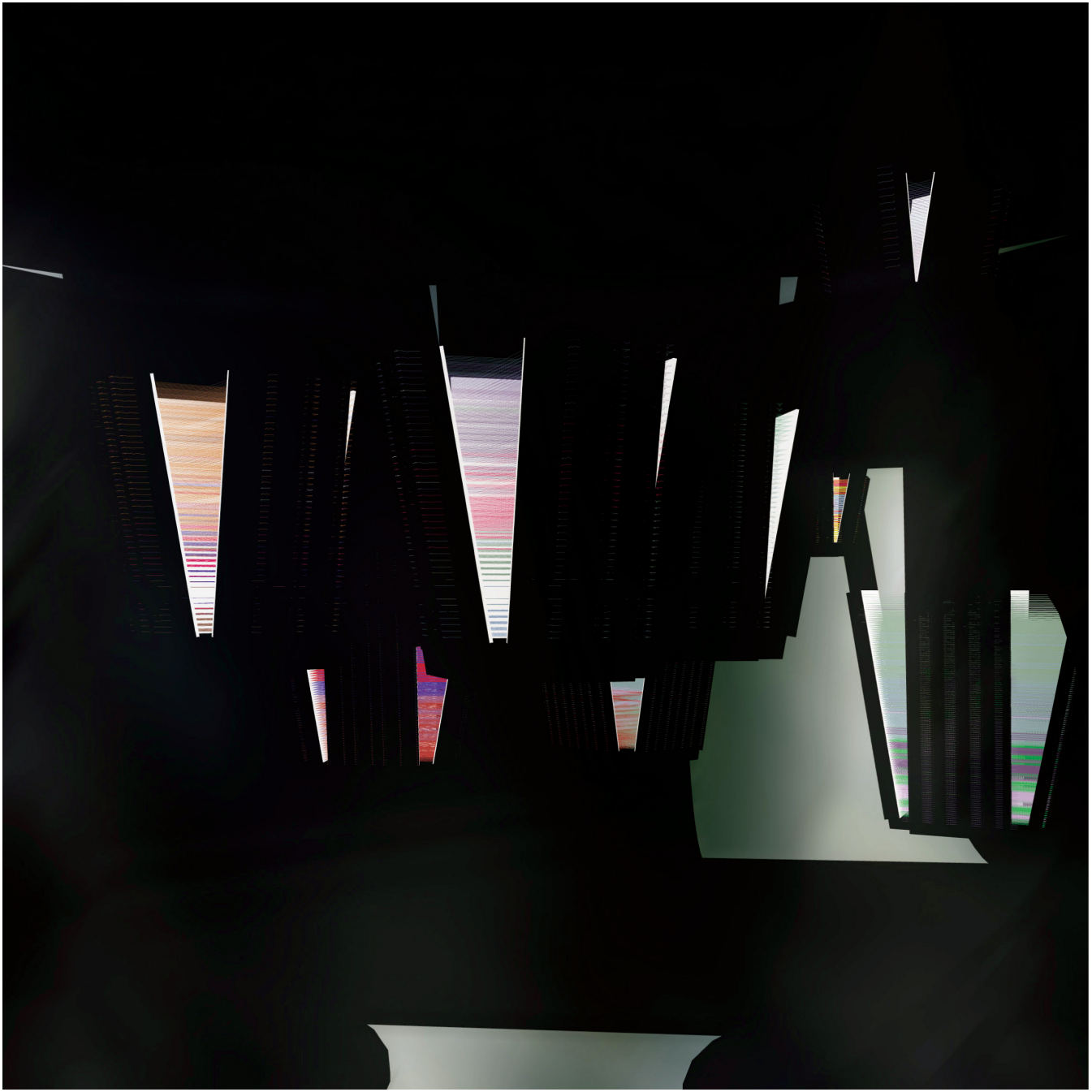
IN A CAVERN UNDERGROUND, a grid chamber is found, electronicmontage, 25 x 25 cm x 300 dpi



A LARGE GRID BECKONS ENTRY, electronicmontage, 19 x 19 cm x 300 dpi

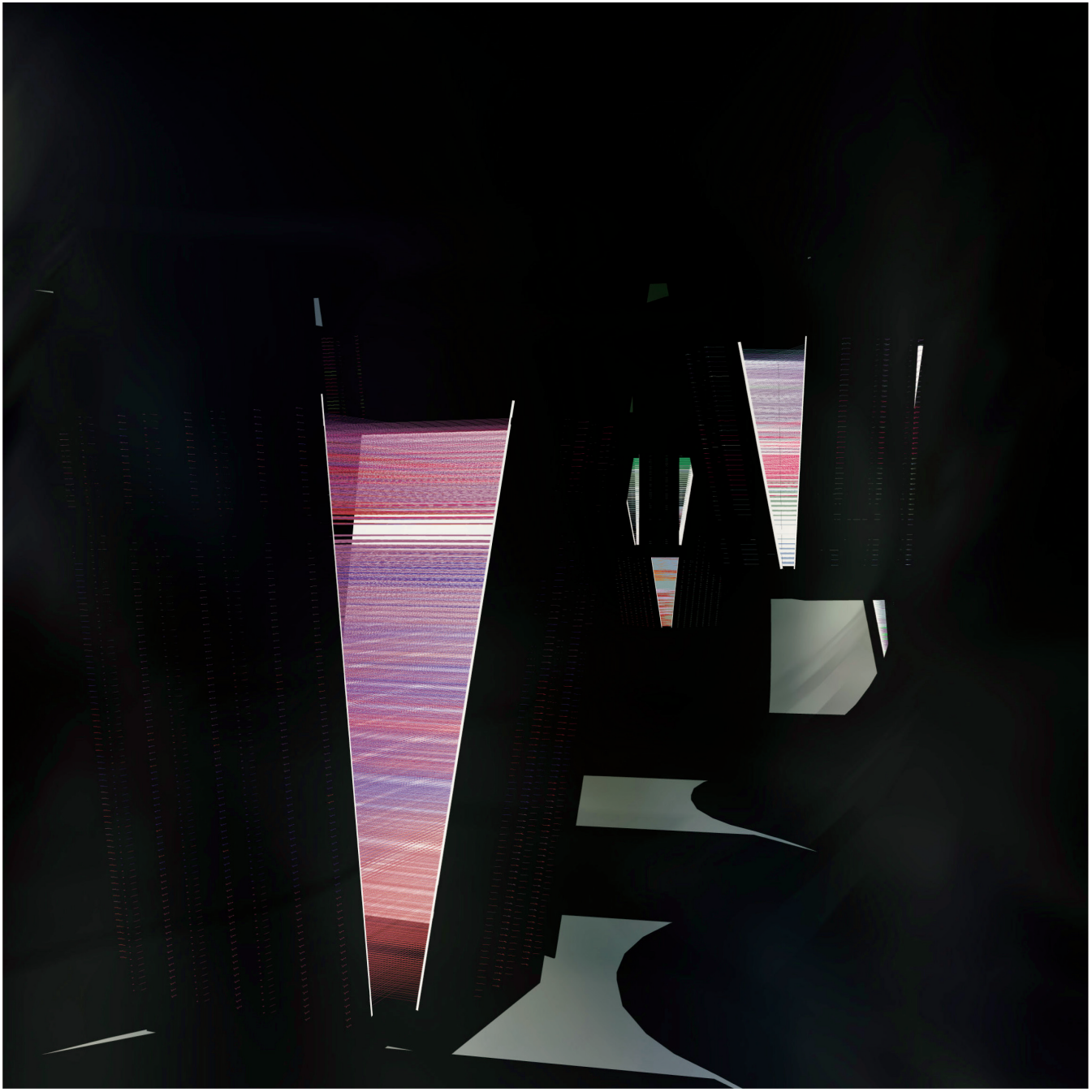
INSIDE THE GRID CHAMBER, view 01, electronicmontage, 24 x 24 cm x 300 dpi

INSIDE THE GRID CHAMBER, view 02, electronicmontage, 24 x 24 cm x 300 dpi

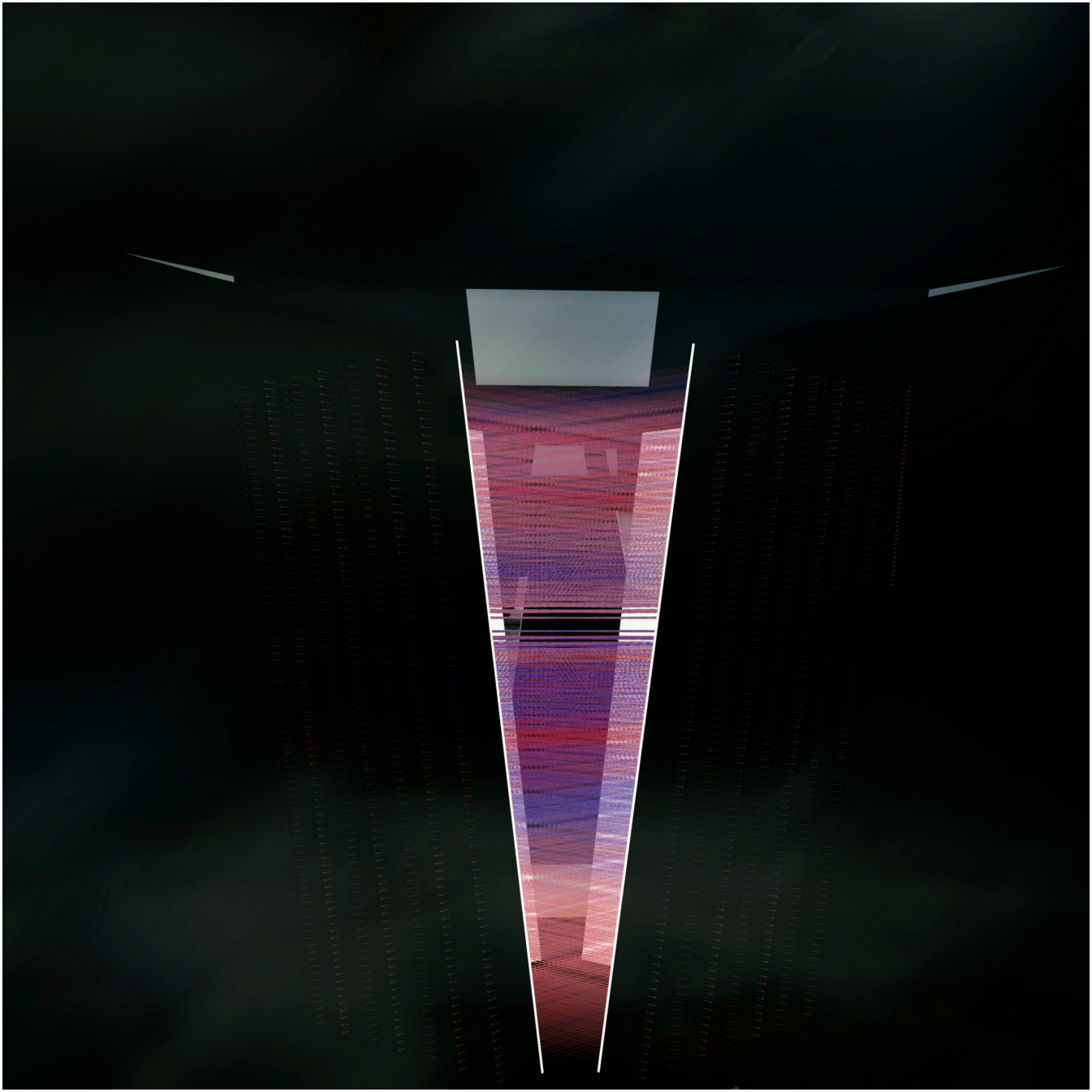


INSIDE THE GRID CHAMBER, view 03, electronicmontage, 24 x 24 cm x 300 dpi

INSIDE THE GRID CHAMBER, view 04, electronicmontage, 24 x 24 cm x 300 dpi

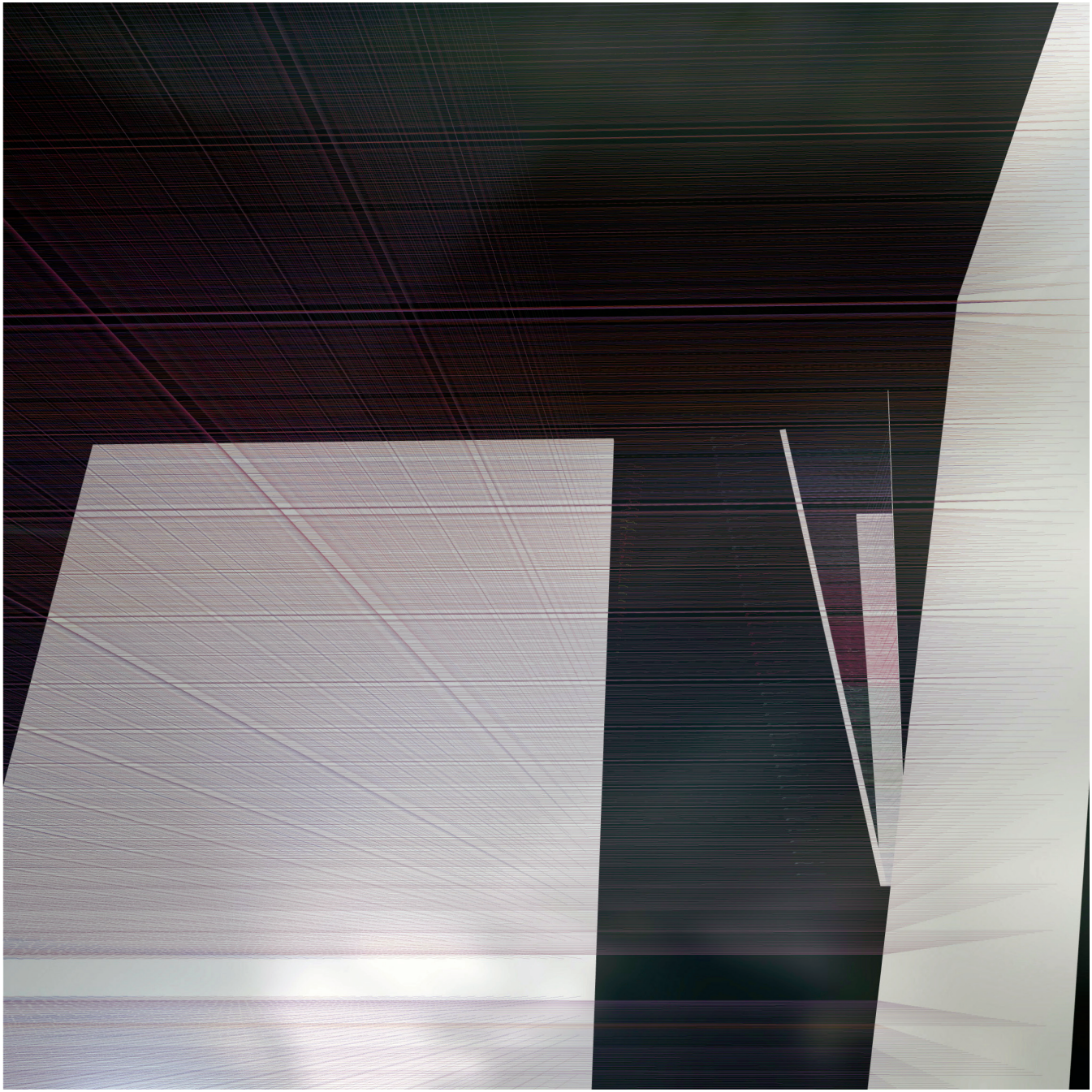


INSIDE THE GRID CHAMBER, view 05, electronicmontage, 24 x 24 cm x 300 dpi

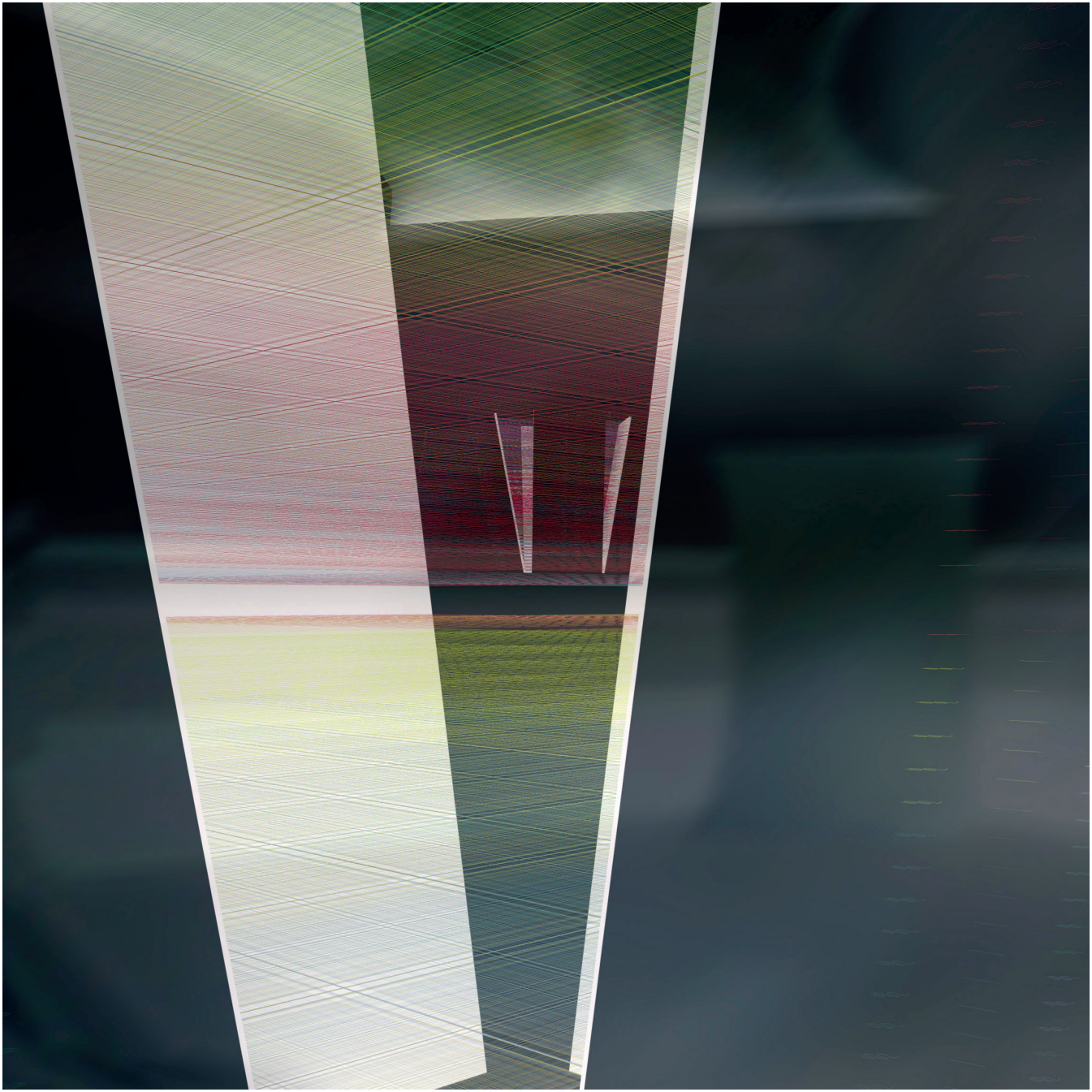


INSIDE THE GRID CHAMBER, view 06, electronicmontage, 24 x 24 cm x 300 dpi

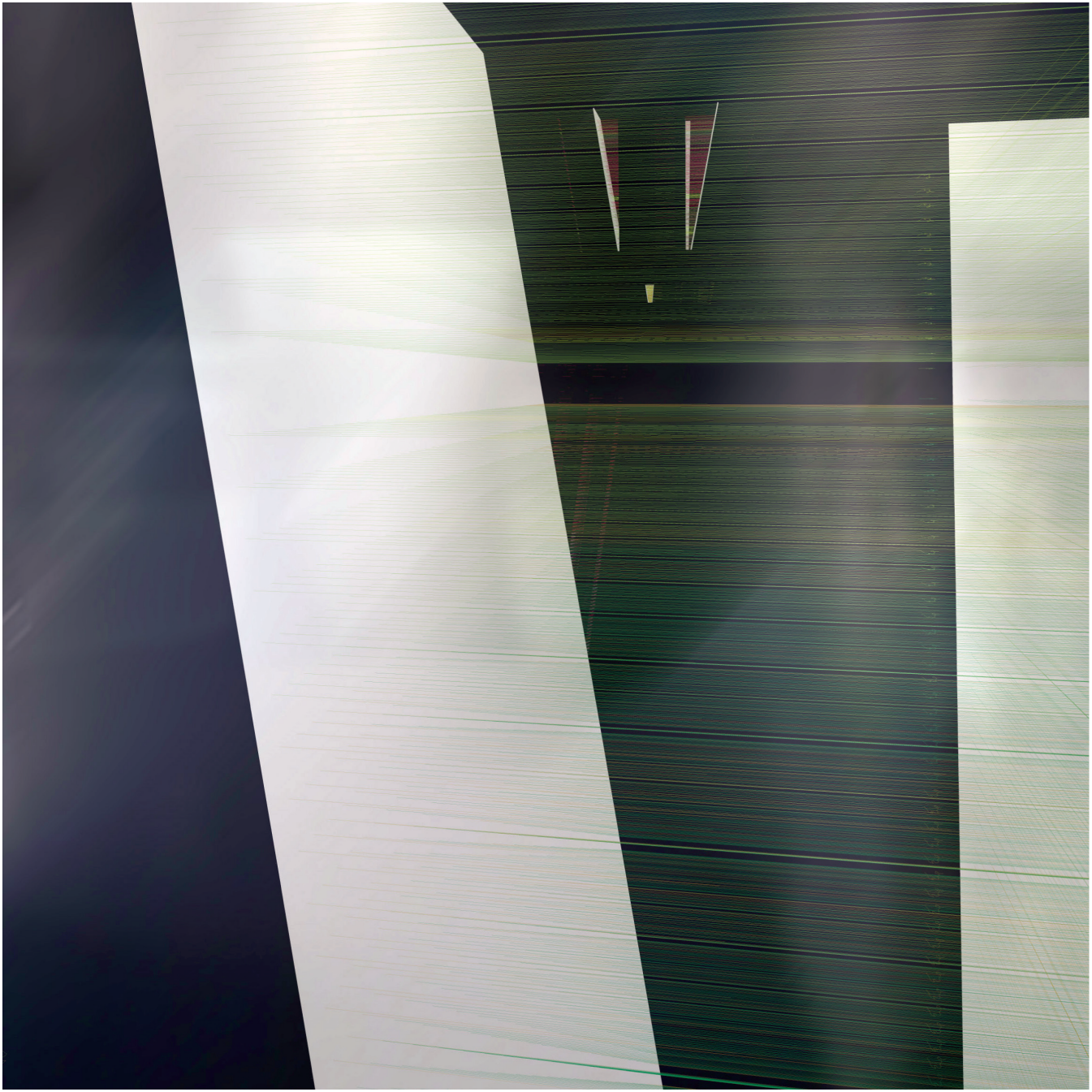
INSIDE THE GRID CHAMBER, view 07, electronicmontage, 24 x 24 cm x 300 dpi



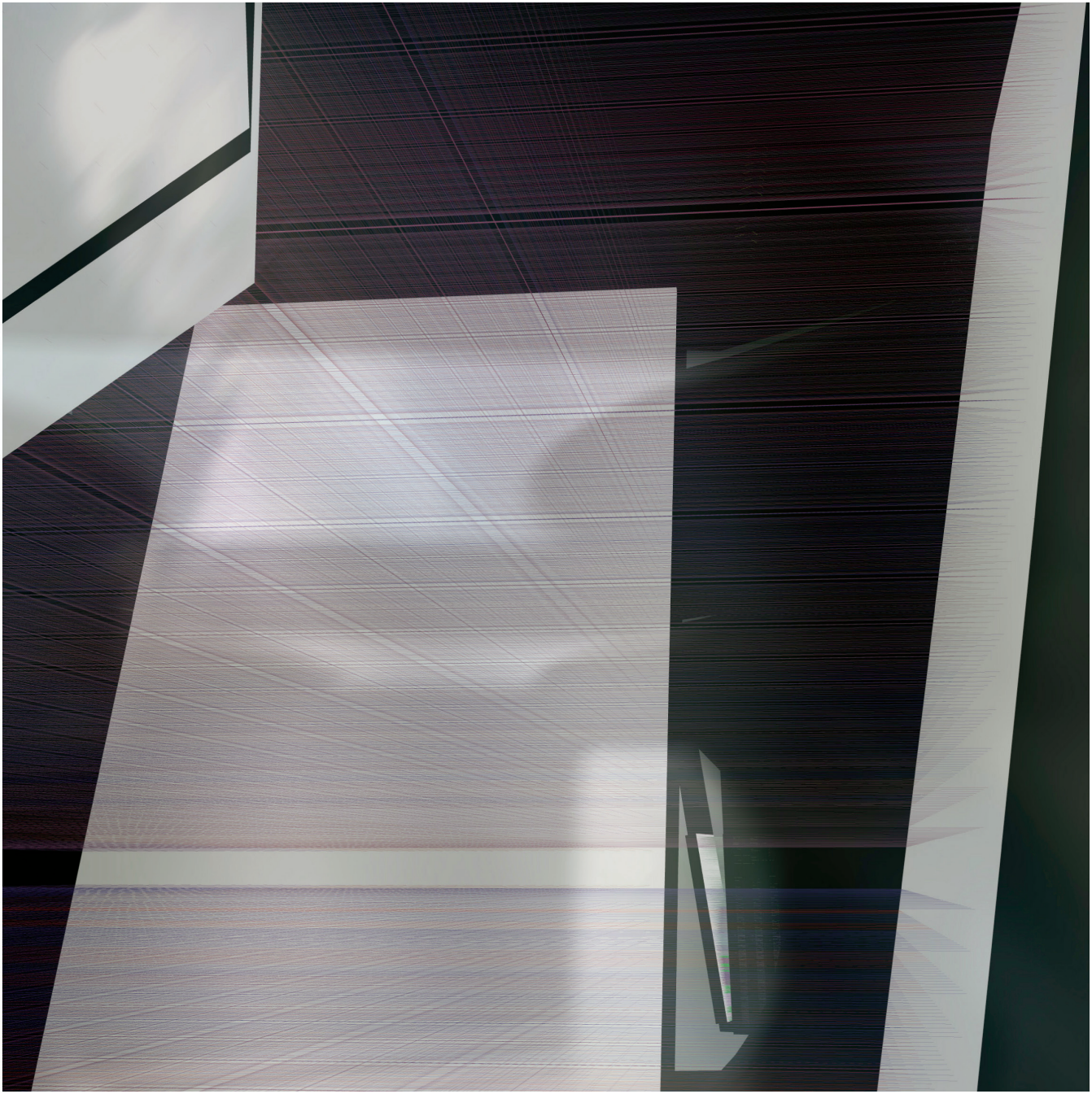
INSIDE THE GRID CHAMBER, view 08, electronicmontage, 24 x 24 cm x 300 dpi



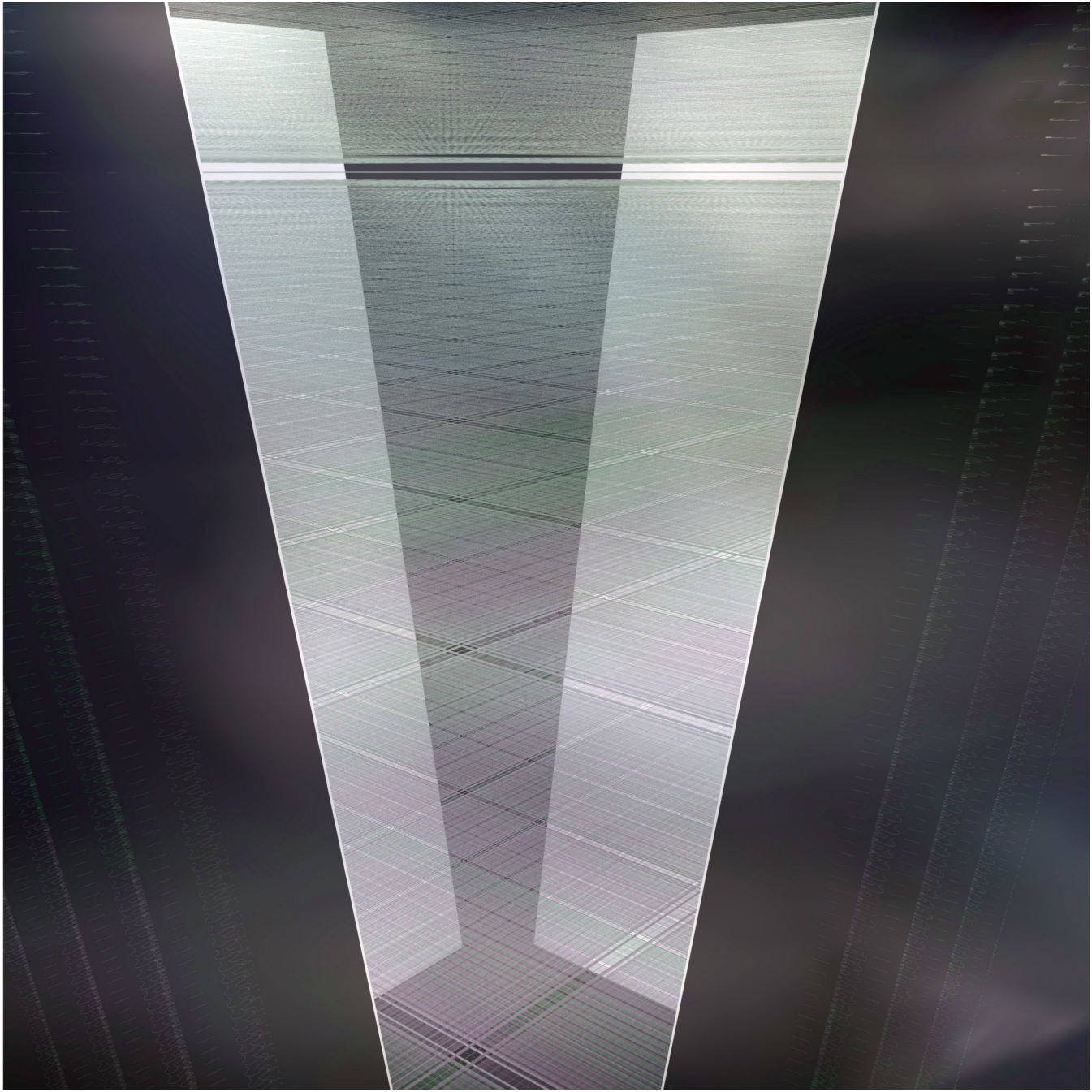
INSIDE THE GRID CHAMBER, view 09, electronicmontage, 24 x 24 cm x 300 dpi



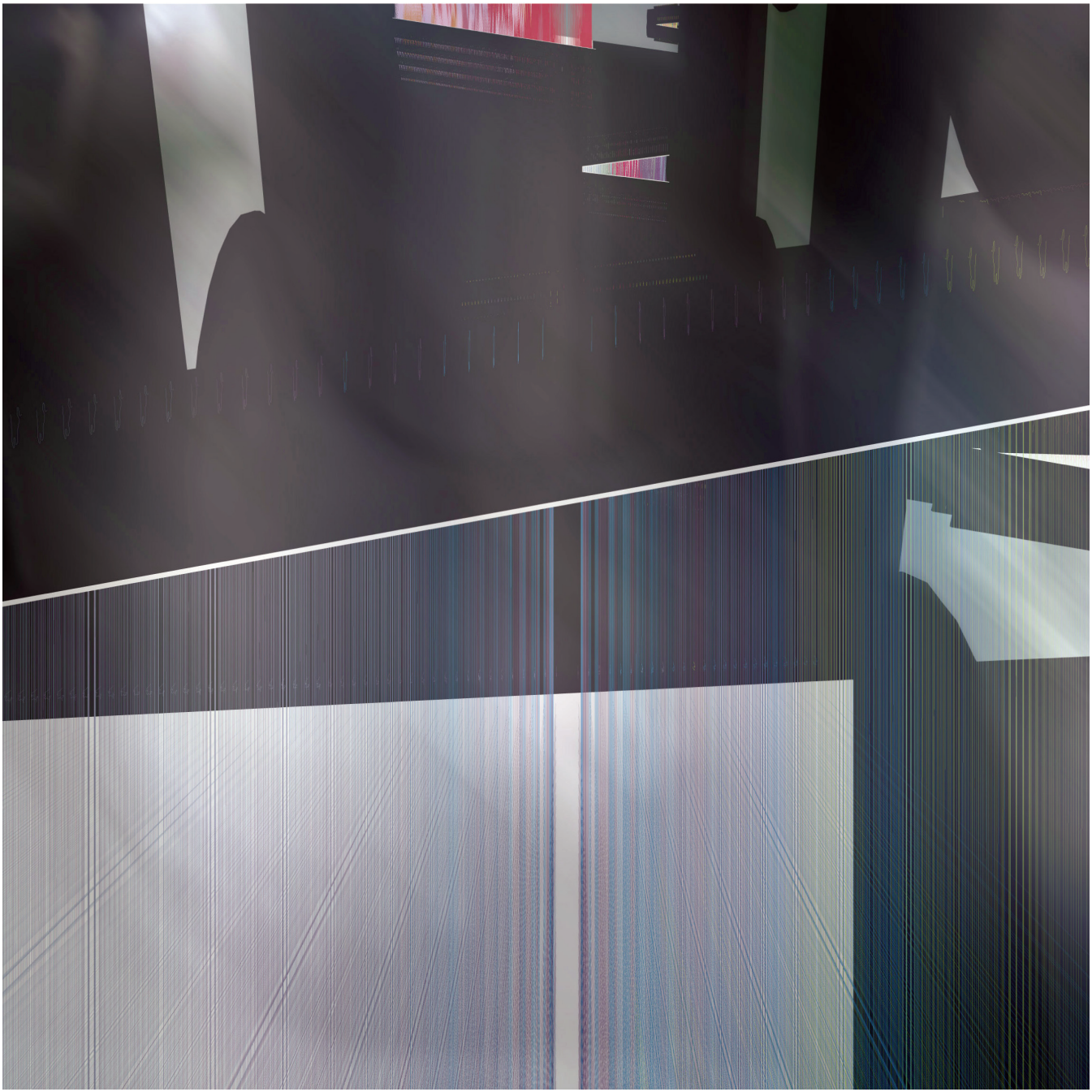
INSIDE THE GRID CHAMBER, view 10, electronicmontage, 24 x 24 cm x 300 dpi



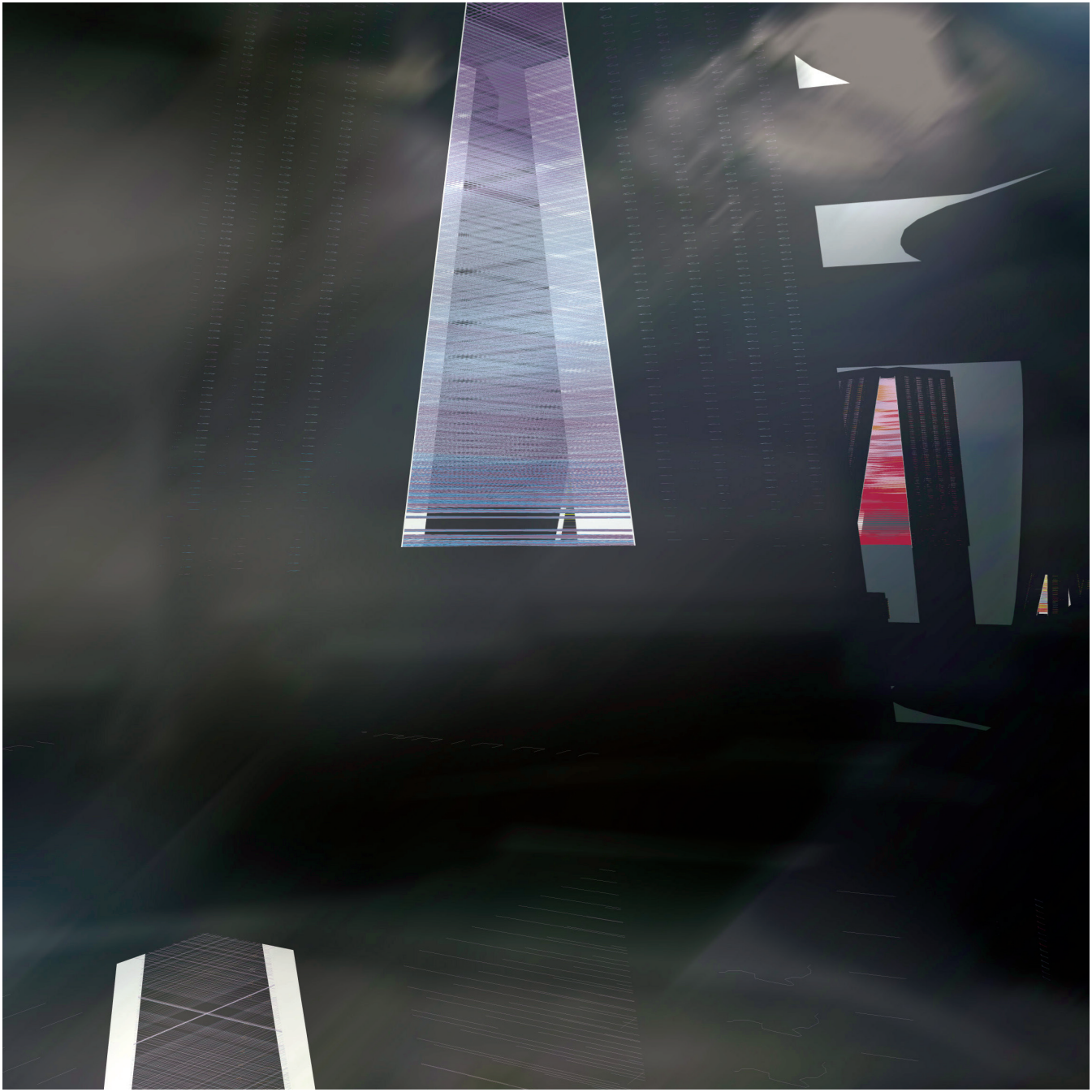
INSIDE THE GRID CHAMBER, view 11, electronicmontage, 24 x 24 cm x 300 dpi



INSIDE THE GRID CHAMBER, view 12, electronicmontage, 24 x 24 cm x 300 dpi



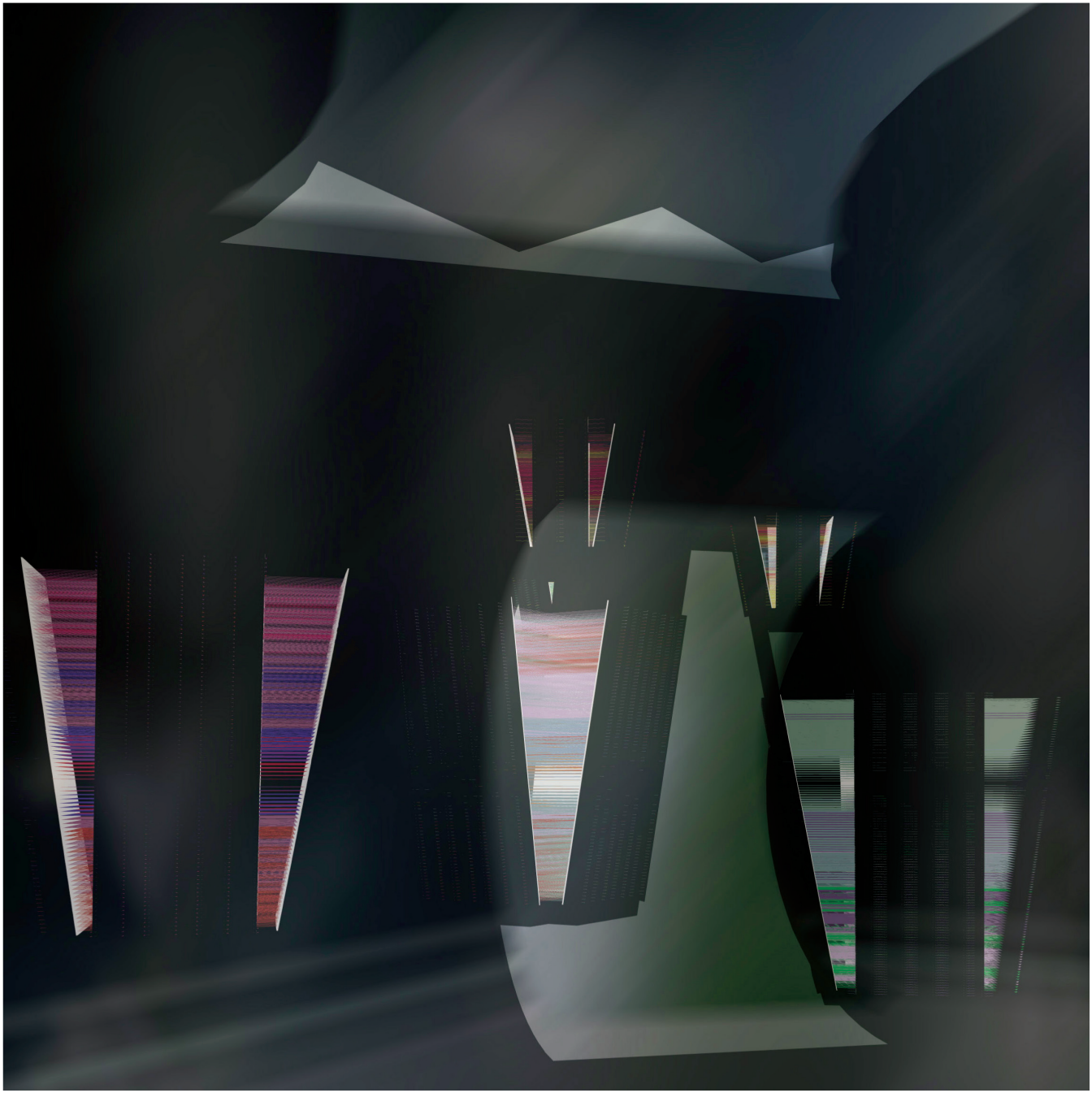
INSIDE THE GRID CHAMBER, view 13, electronicmontage, 24 x 24 cm x 300 dpi



INSIDE THE GRID CHAMBER, view 14, electronicmontage, 24 x 24 cm x 300 dpi

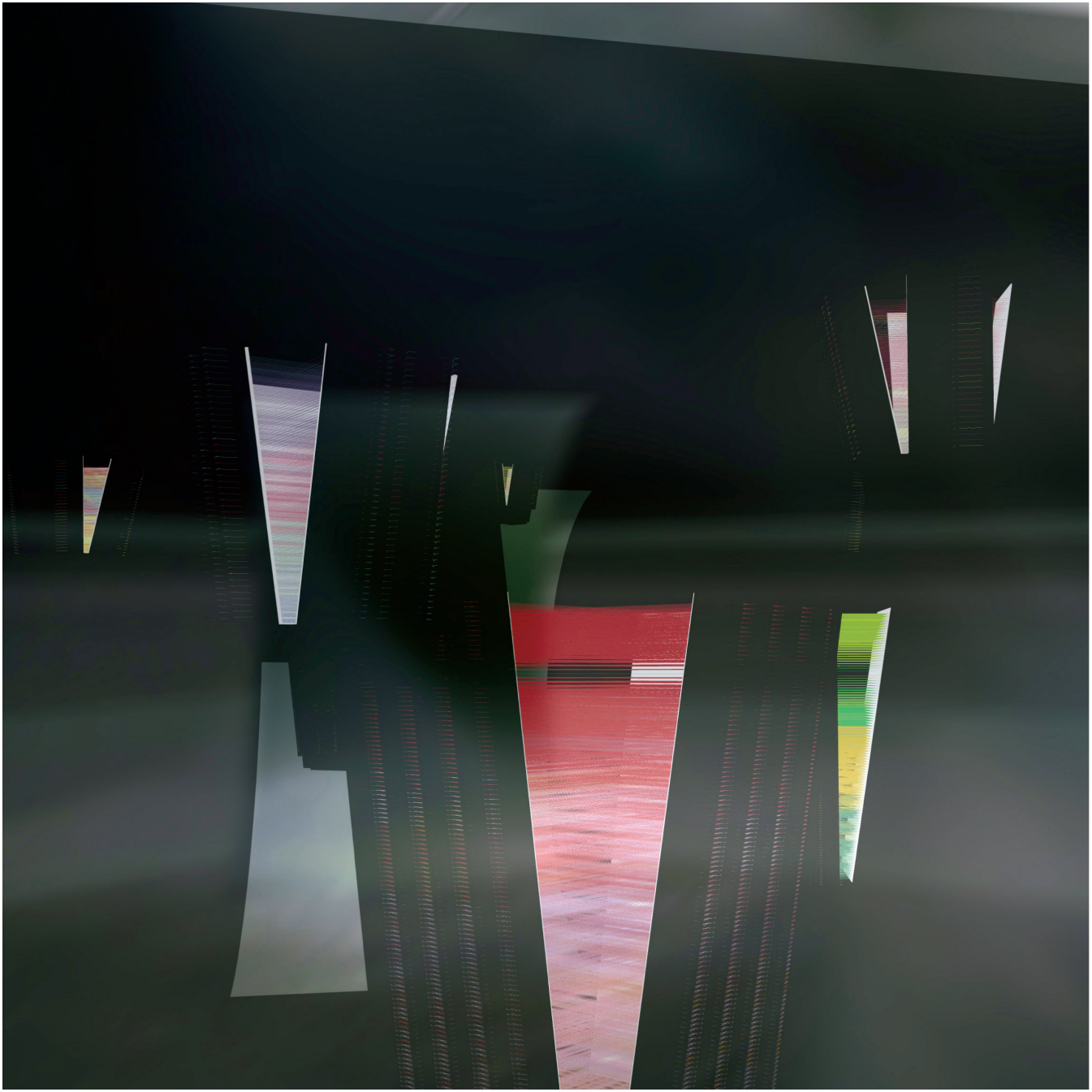
INSIDE THE GRID CHAMBER, view 15, electronicmontage, 24 x 24 cm x 300 dpi

INSIDE THE GRID CHAMBER, view 16, electronicmontage, 24 x 24 cm x 300 dpi

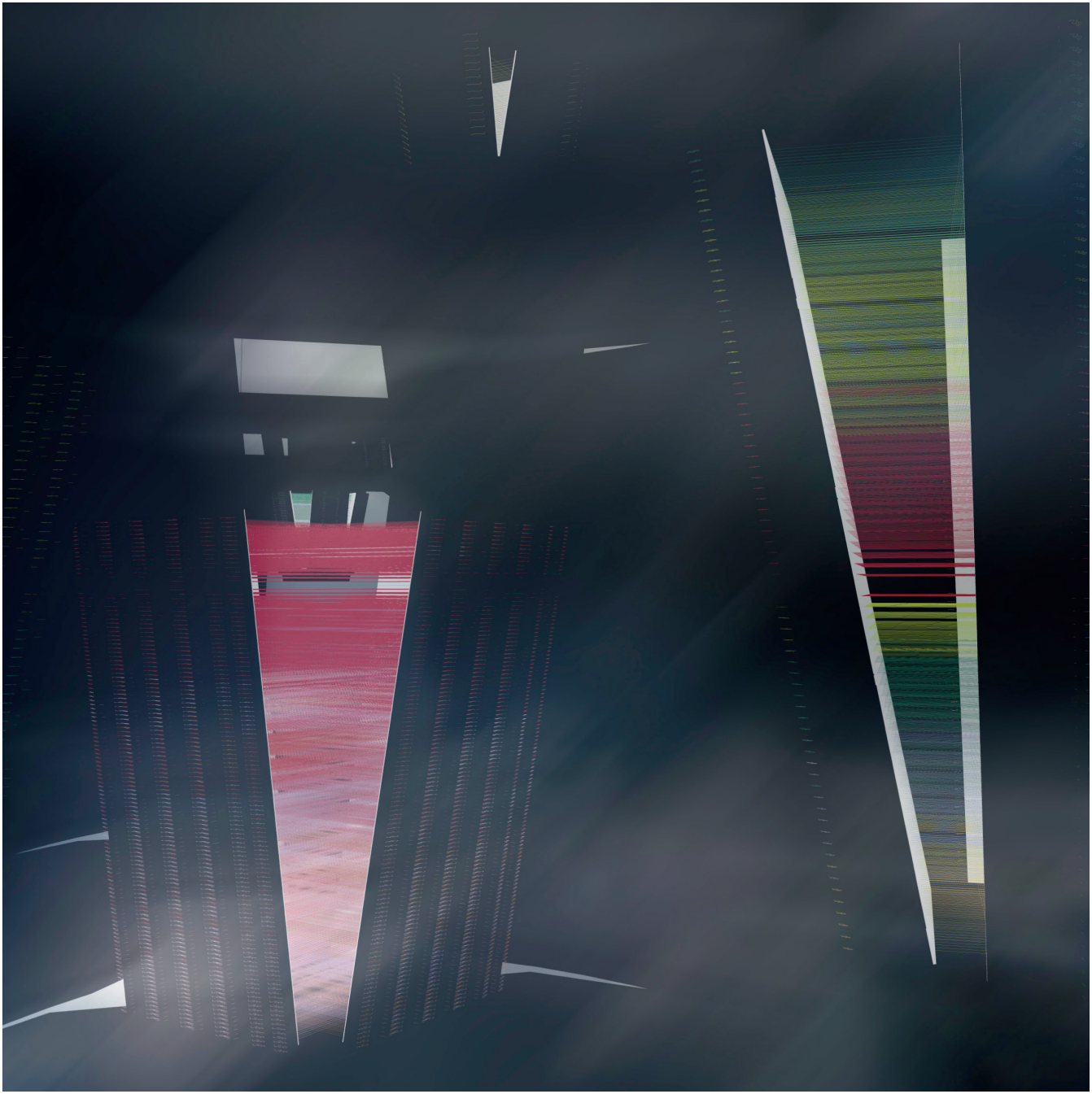


INSIDE THE GRID CHAMBER, view 17, electronicmontage, 24 x 24 cm x 300 dpi

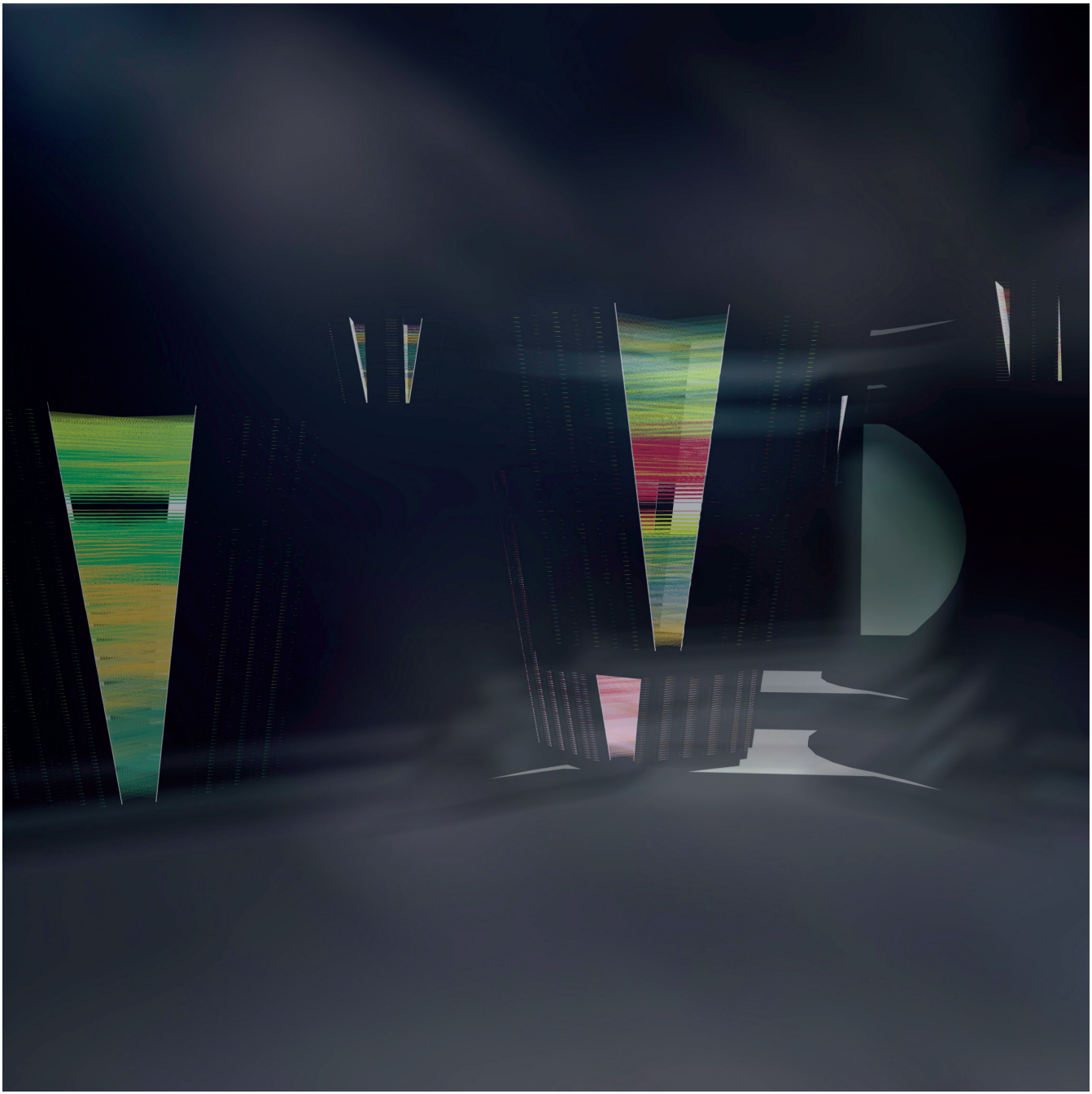
INSIDE THE GRID CHAMBER, view 18, electronicmontage, 24 x 24 cm x 300 dpi



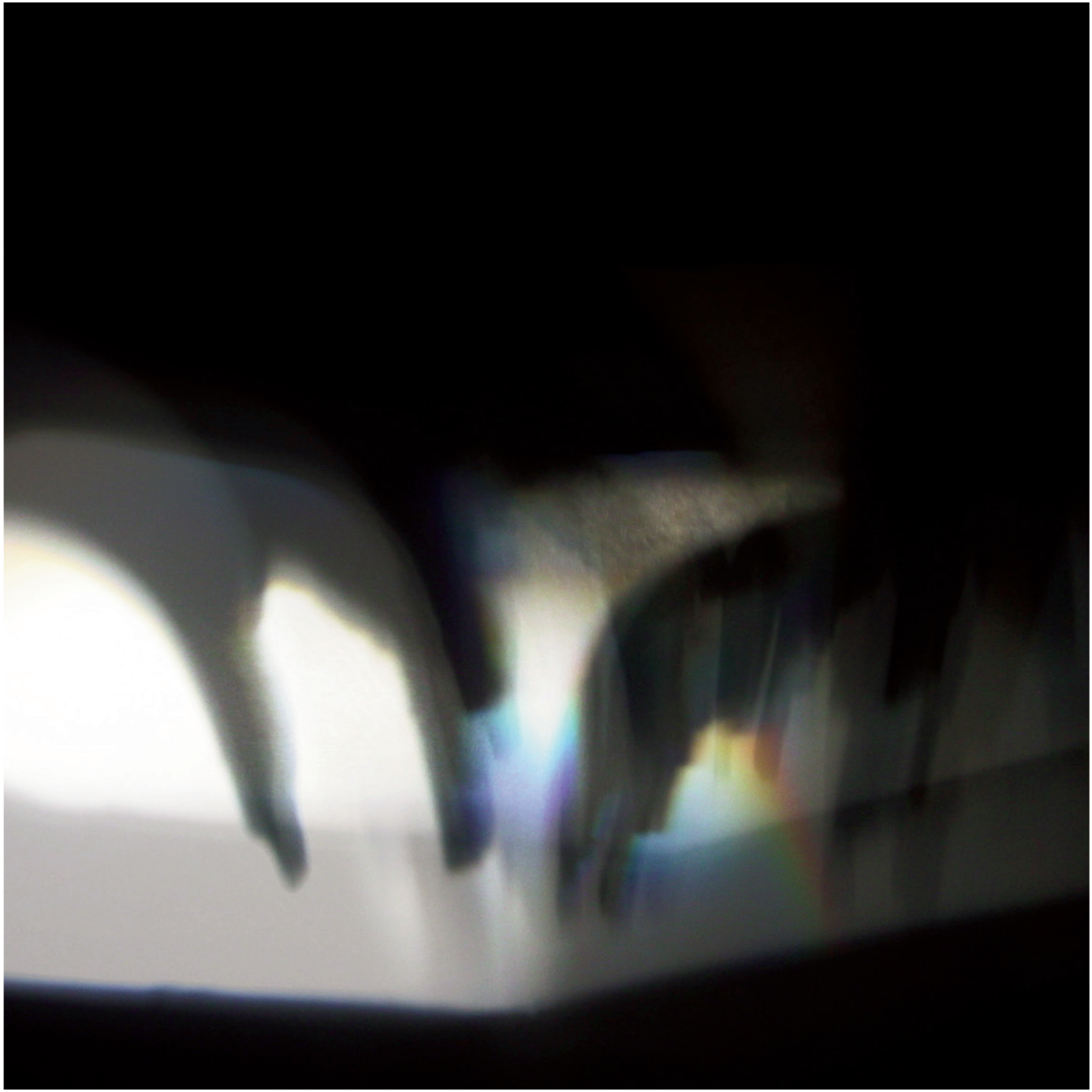
INSIDE THE GRID CHAMBER, view 19, electronicmontage, 24 x 24 cm x 300 dpi



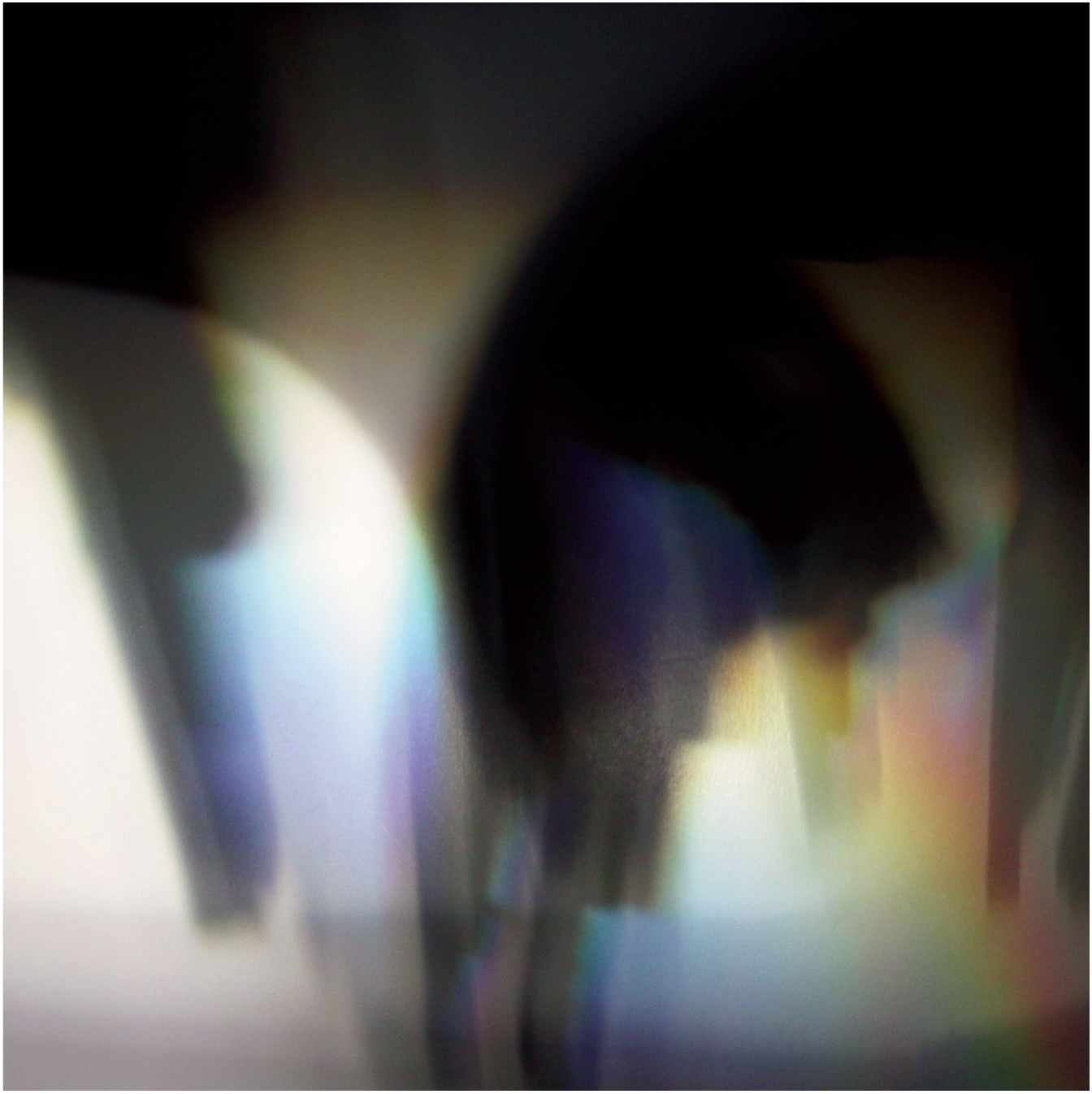
INSIDE THE GRID CHAMBER, view 20, electronicmontage, 24 x 24 cm x 300 dpi



VISITORS MERGE WITH COLOURED LIGHT, prismagram 0^{Z}, 17 x 17 cm x 180 dpi



VISITORS MERGE WITH COLOURED LIGHT, prismagram 0^{Y}, 17 x 17 cm x 180 dpi



ANIMATION SEQUENCE, prismagrams

EXCAVATION WORK CONTINUES, AIR (nee Cotton) Grid looks on, electronicmontage, 25 x 25 x 300 dpi