

# The End of Architecture 2

**OLLI at PIT - Lecture 5**  
**Jun'ya Ishigami (2022.04.13)**  
**Matthew Schlueb, Instructor**



AX-1

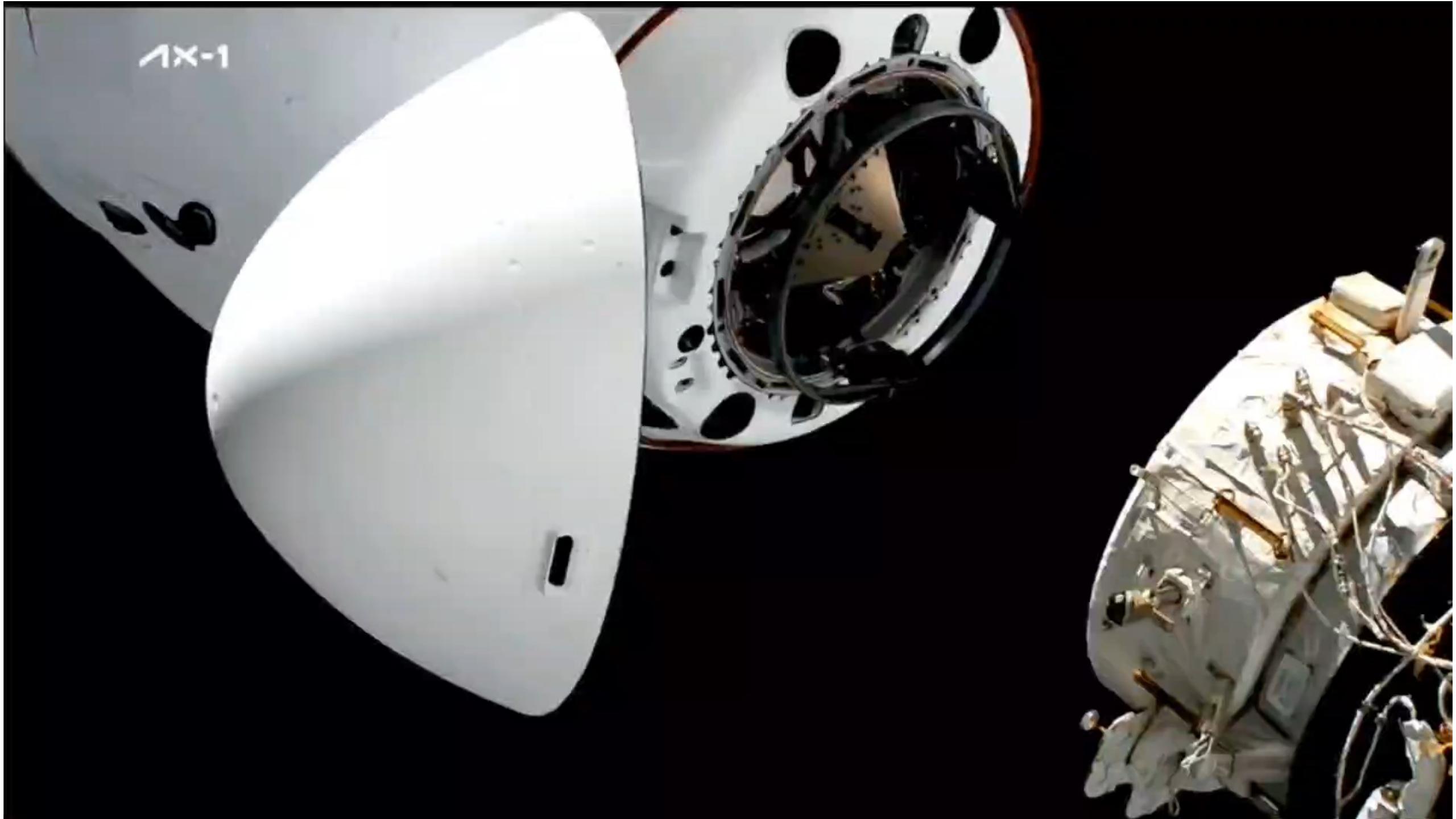


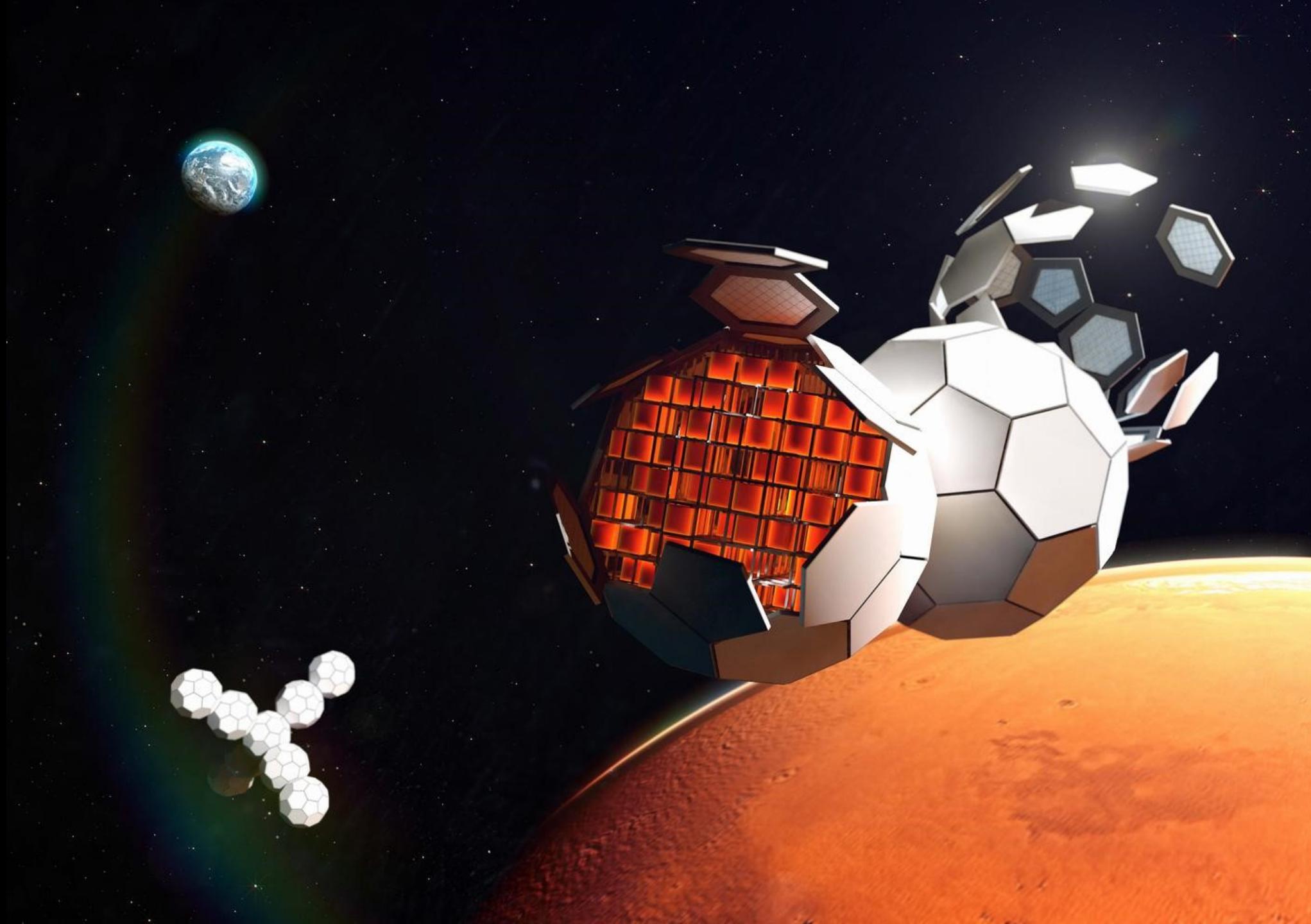


1X-1

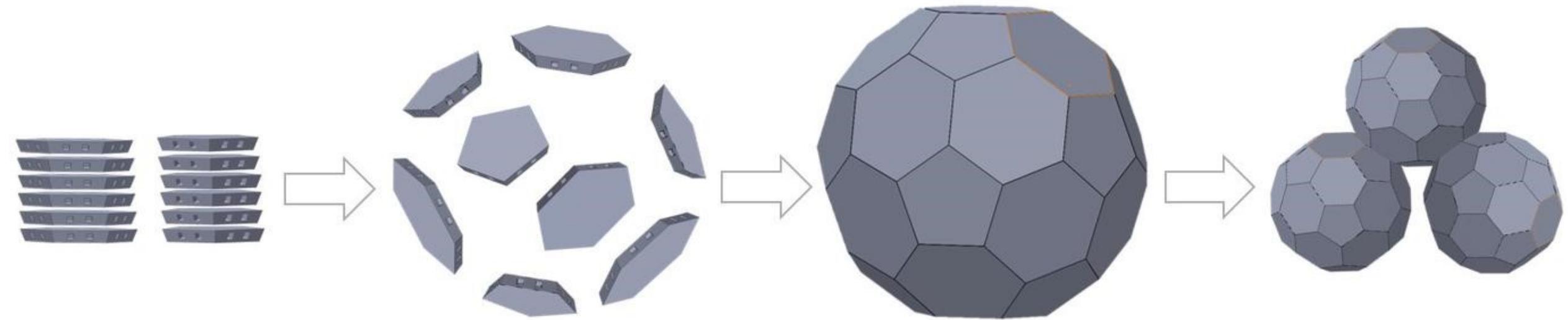


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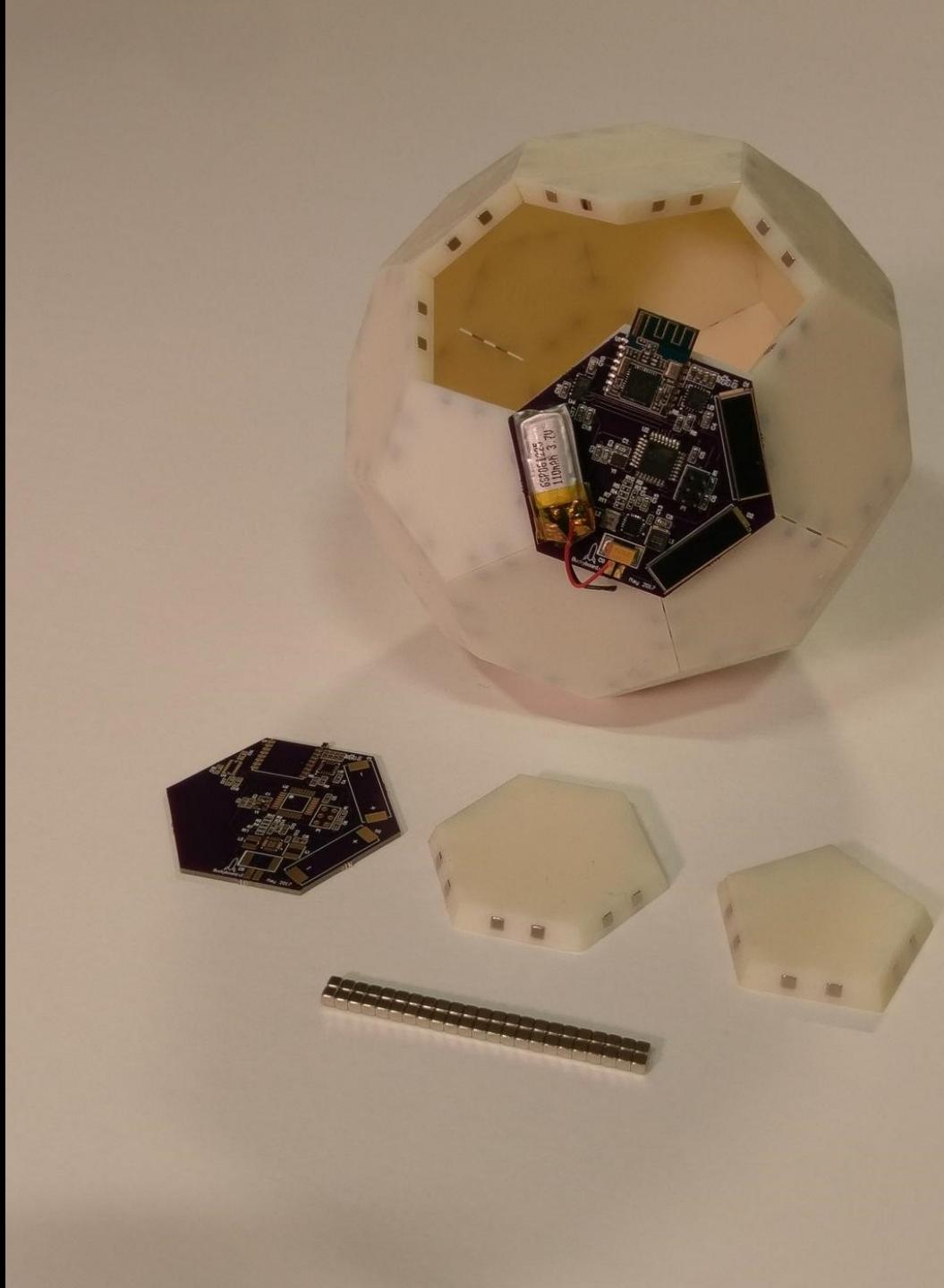


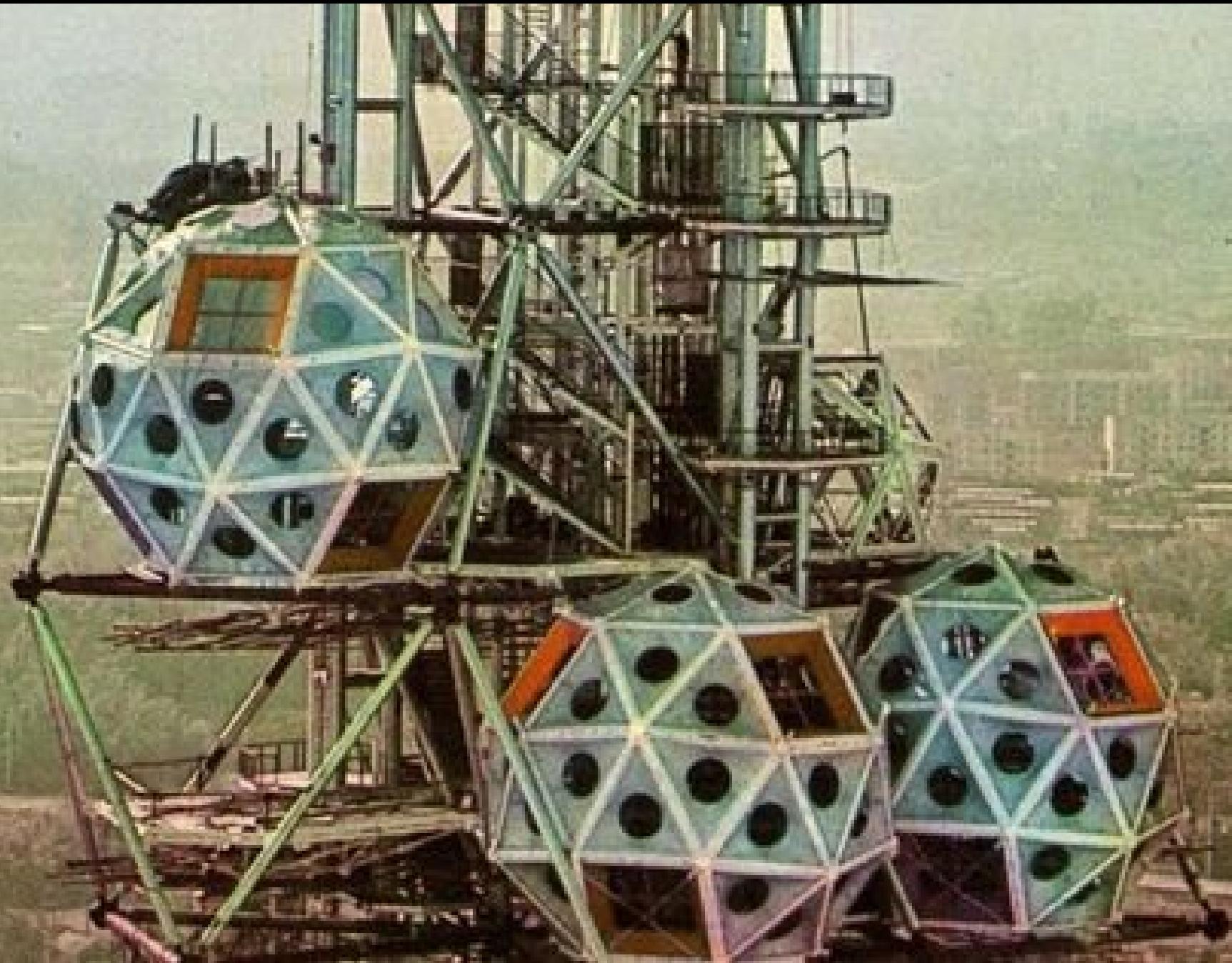






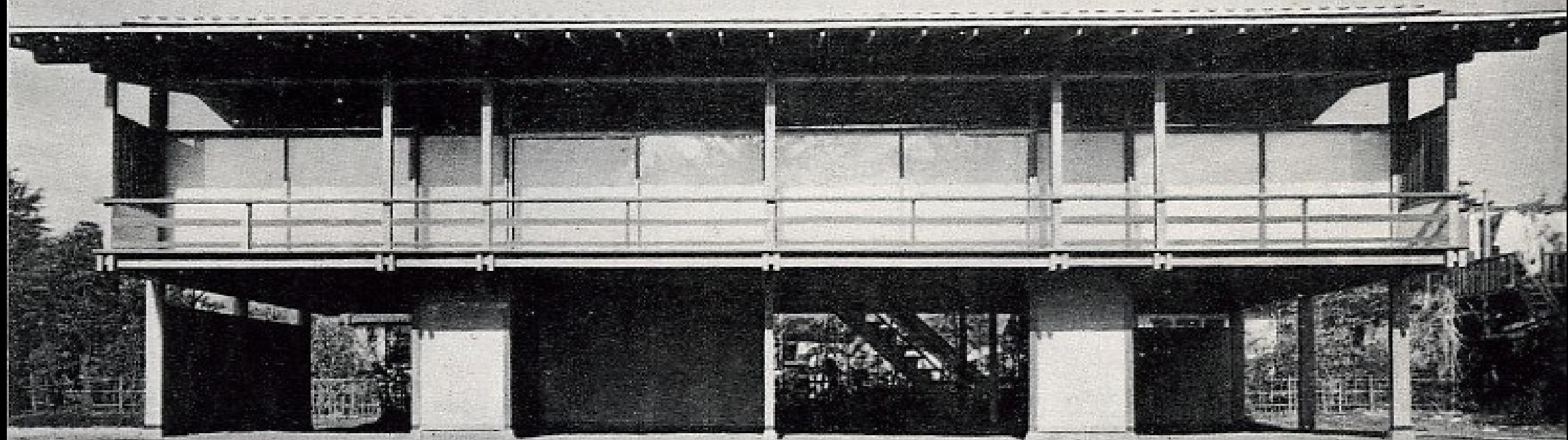






●設計／愛竹高級建築設計事務所 ●設計  
協力／DRS 延勢構造設計事務所 ●展示  
設計／現代美術研究所 ●施工／大成建  
設・大林總・興島建設・清水建設・竹中  
工務店・齊藤企業 ●敷地面積／2万  
5474m<sup>2</sup> ●建築面積／1764.1 ●延床面積／  
7594m<sup>2</sup> ●高さ／127m ●構造／鋼筋混  
凝土造／7億4500万円

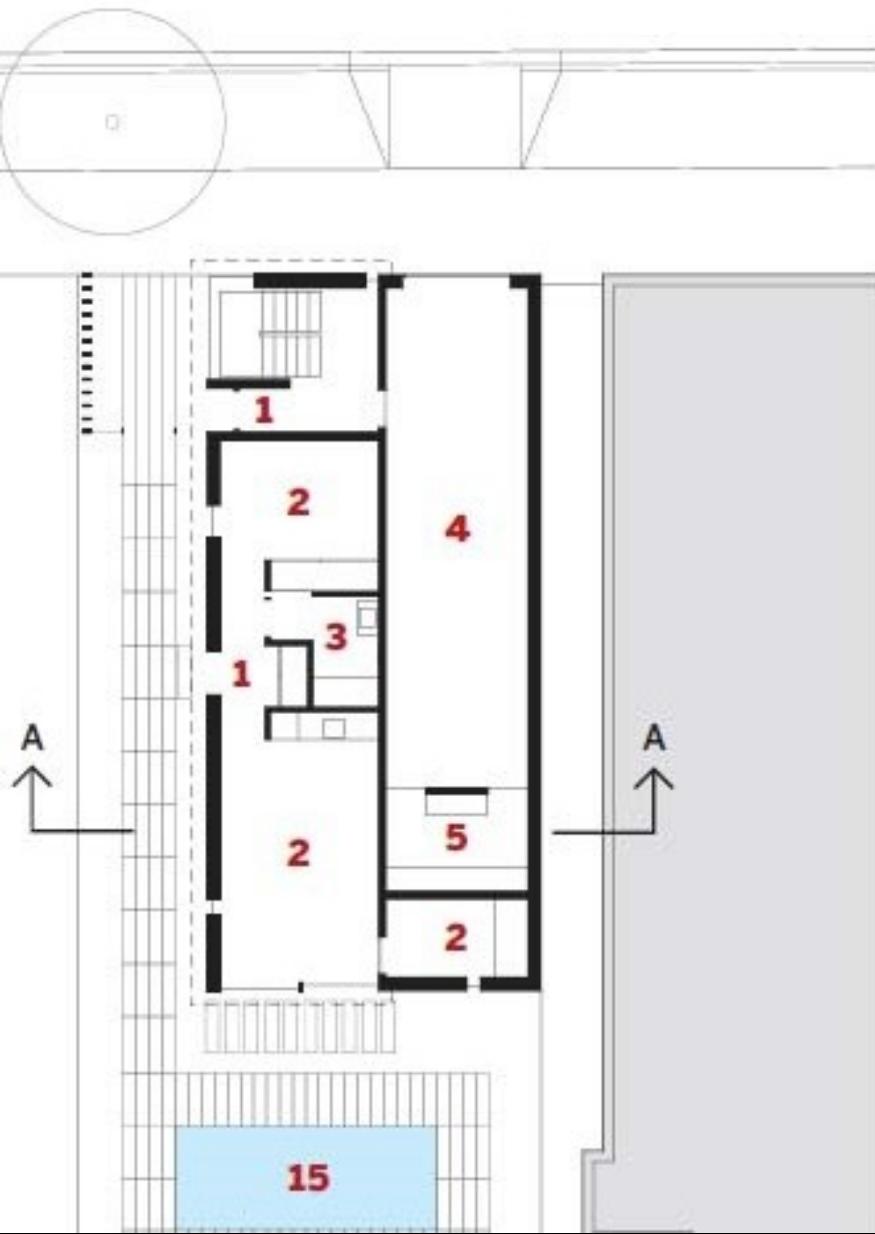




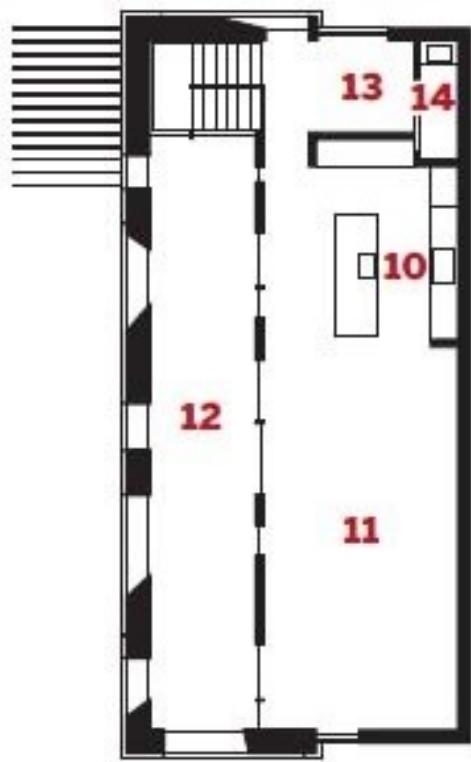








SECOND-FLOOR PLAN



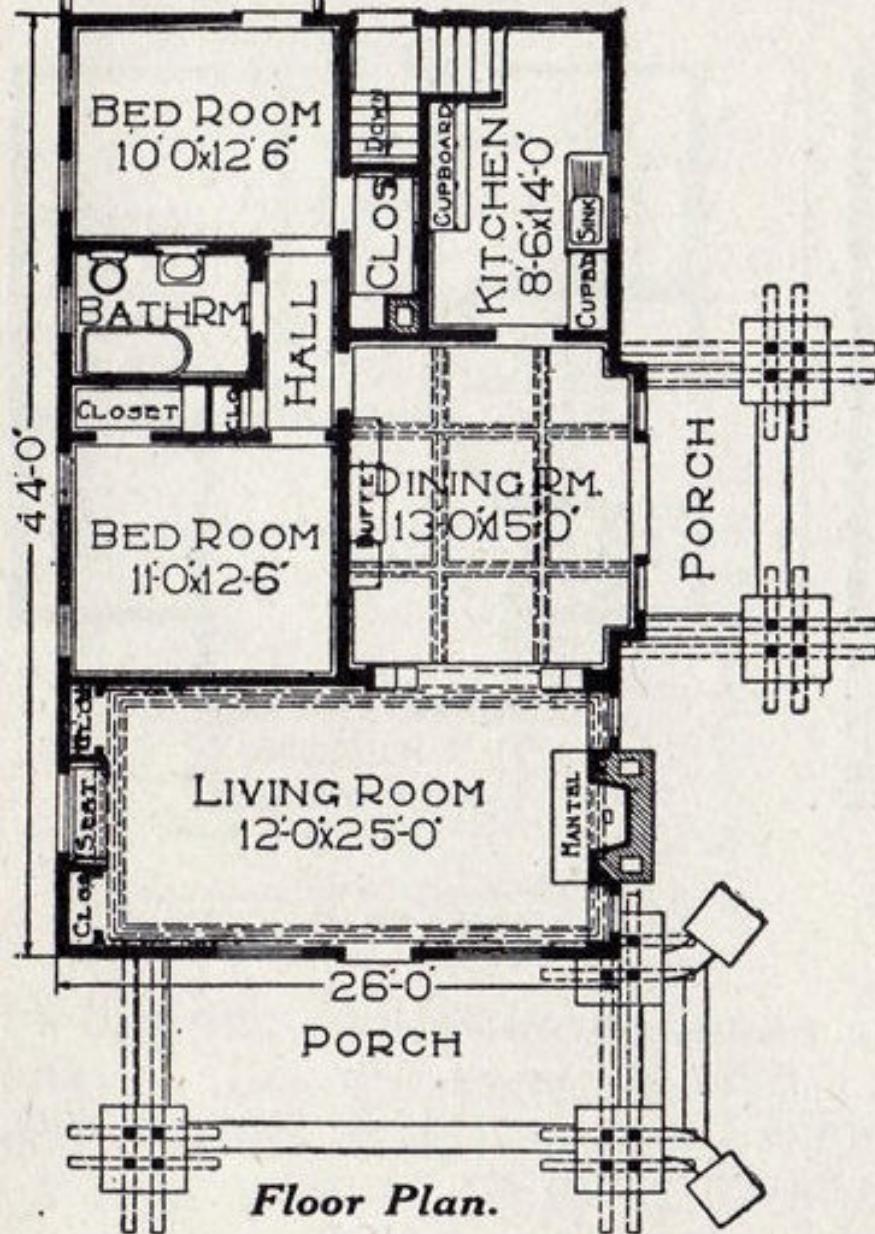
THIRD-FLOOR PLAN





SLEEPING  
PORCH  
7'-9" x 6'

\$1,163<sup>00</sup>

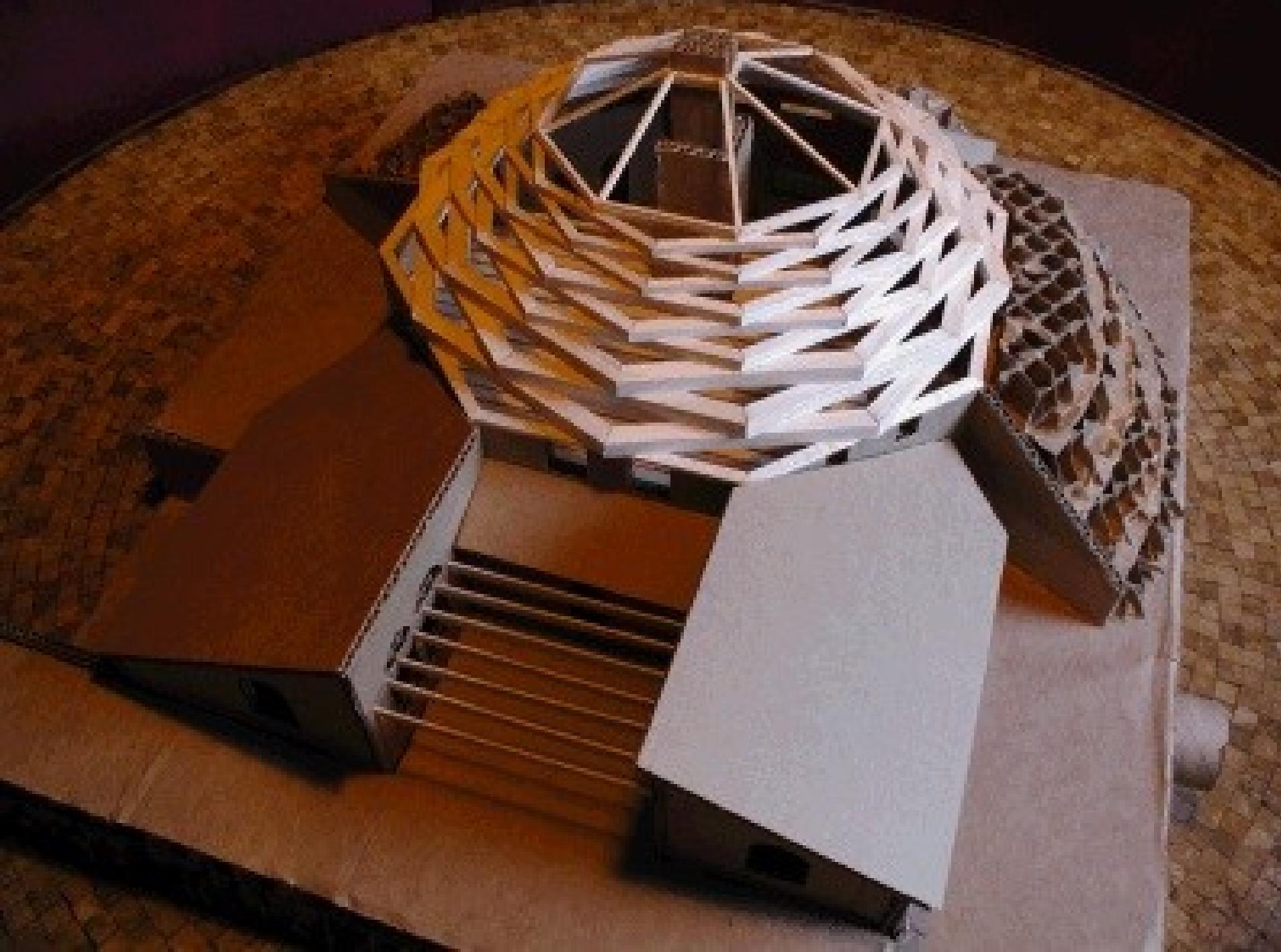


*Floor Plan.*











































GlasSalon

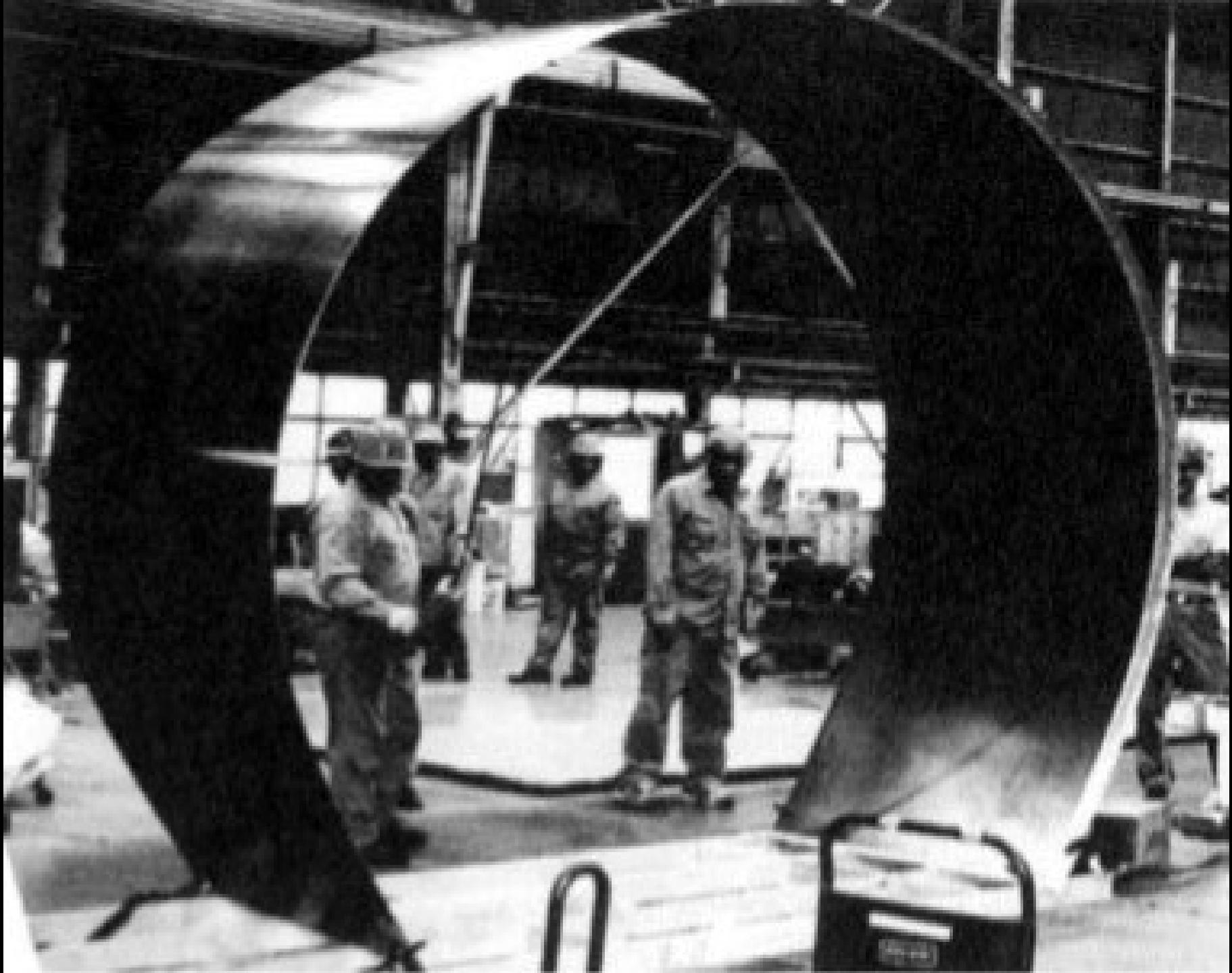




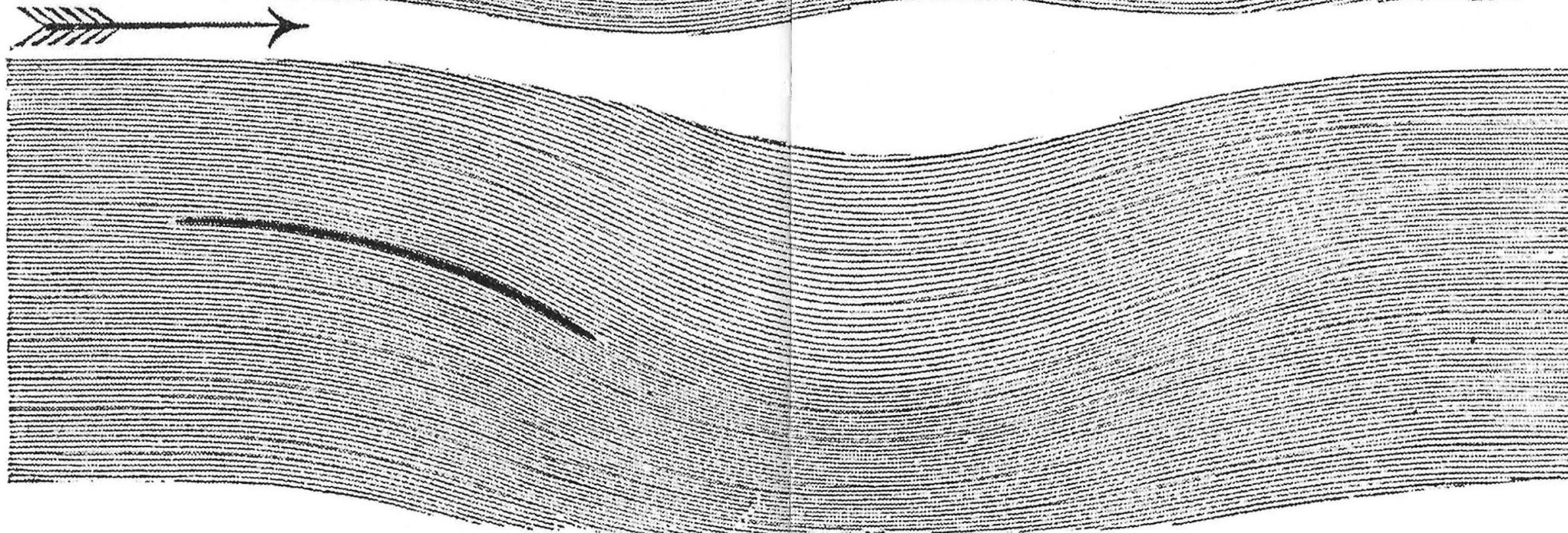
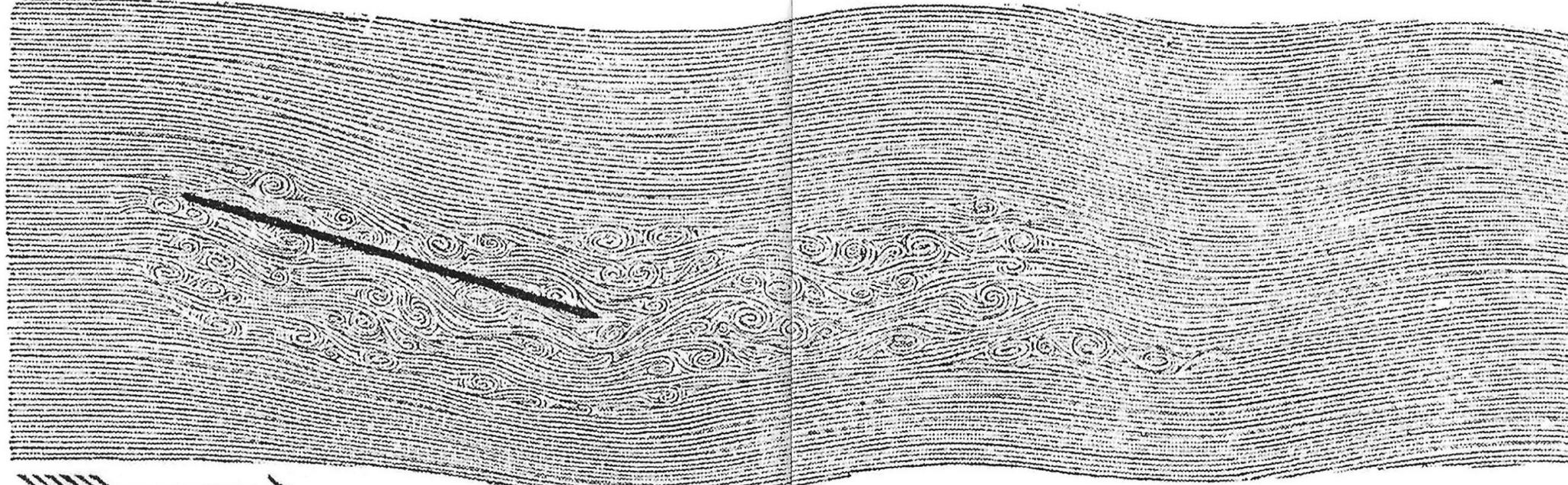
AdamCNeilson

Platform  
Structure



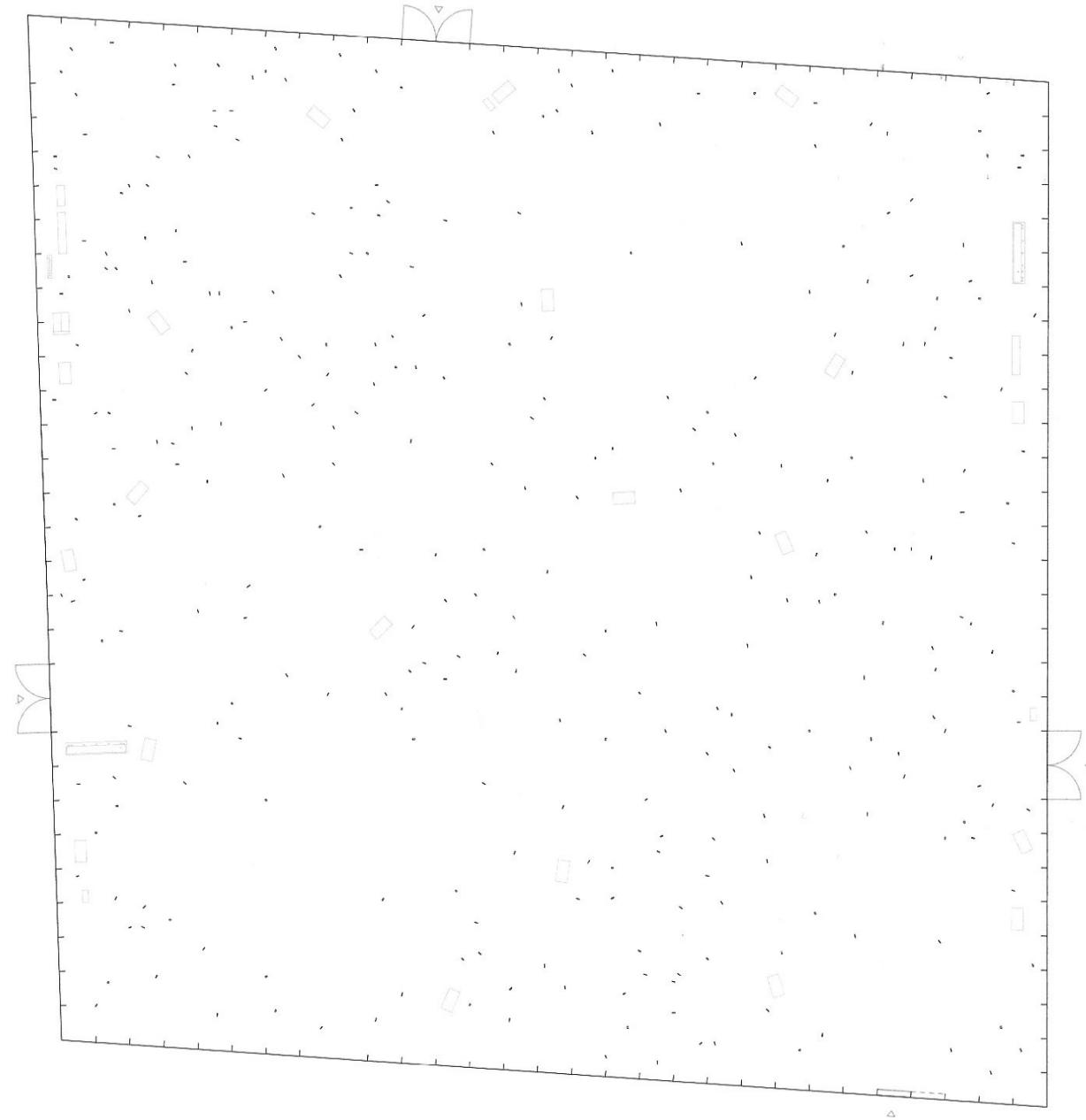




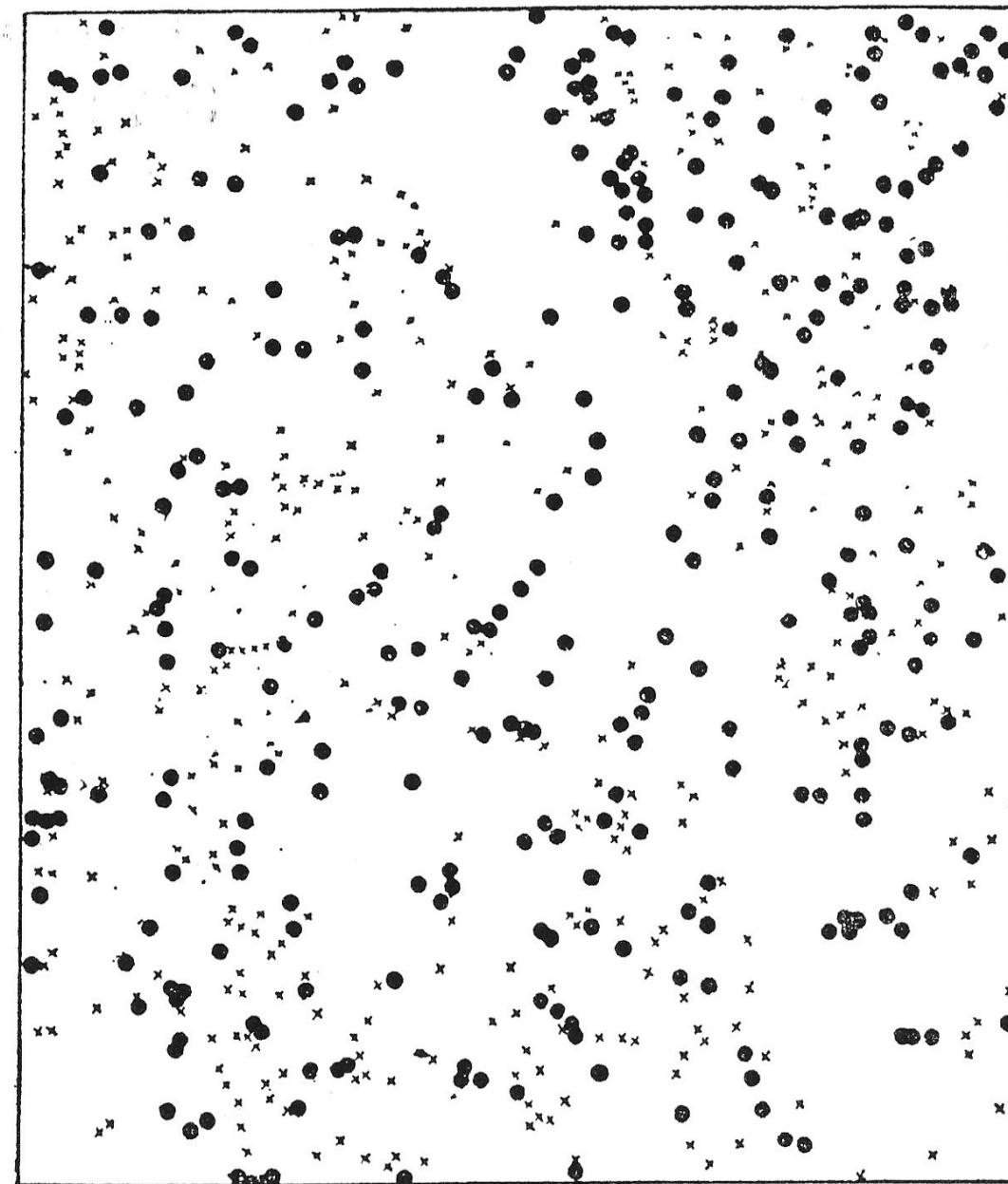


水平な空気流のなかの、平らな断面をもつ翼面(上)とかすかにアーチを描いた翼面(下)の受ける力の相違。アーチのある翼のほうが、飛翔の際の空気抵抗が少なく優位性が高いことがわかる。

The difference in force exerted, in a horizontal airflow, on a wing surface with a level cross-section (upper) and on a slightly arched wing surface (lower). The arched wing has less air resistance and is clearly superior in flight.



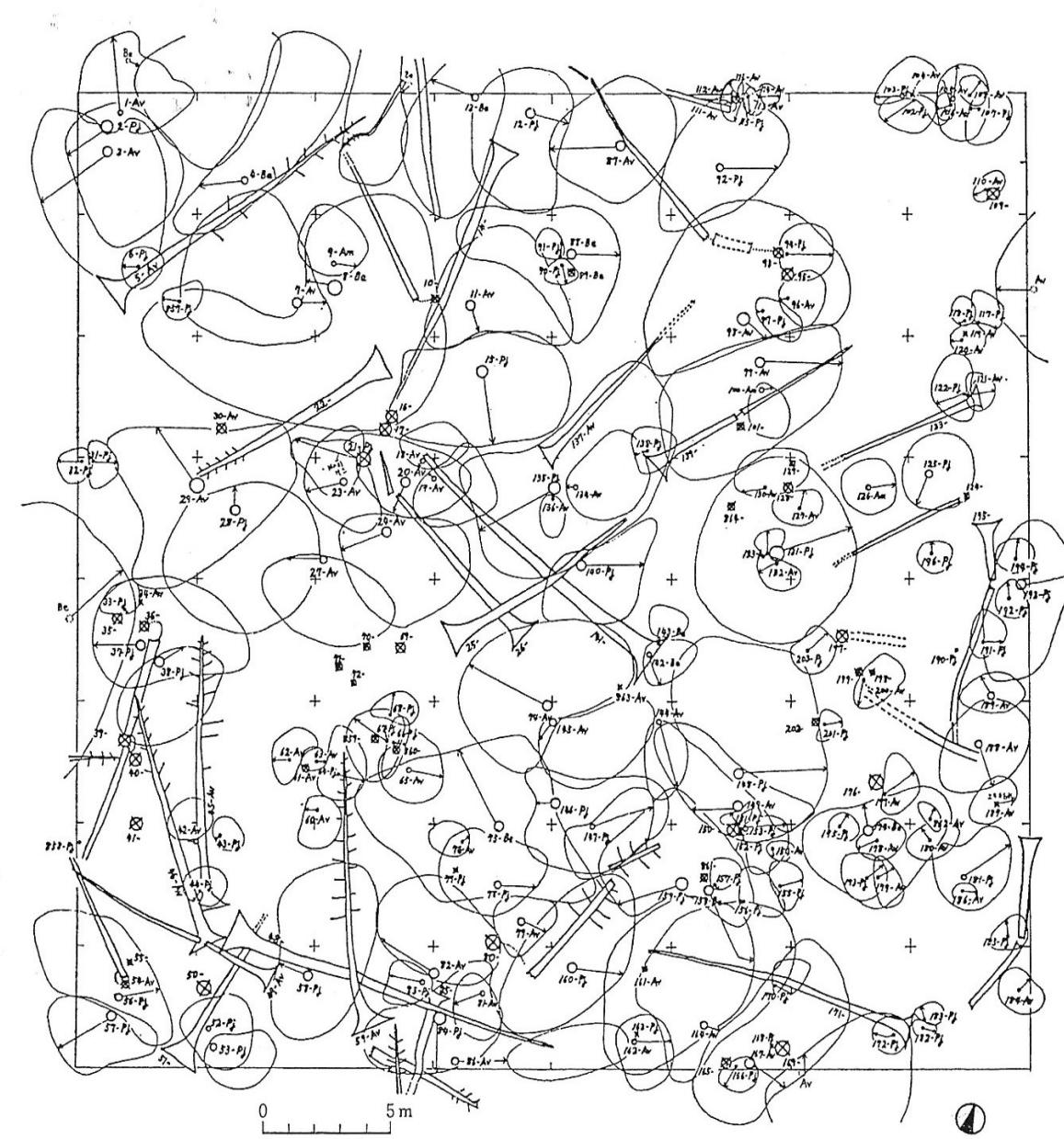
工房平面図 S=1:400  
Workshop plan S=1:400



マダケの分散図(16×20m)。●は現在の竹幹、×は切り株の位置。  
Dispersion diagram of madake timber bamboo (16 × 20 m). The ● marks are current standing trunks, and the X's are stumps.

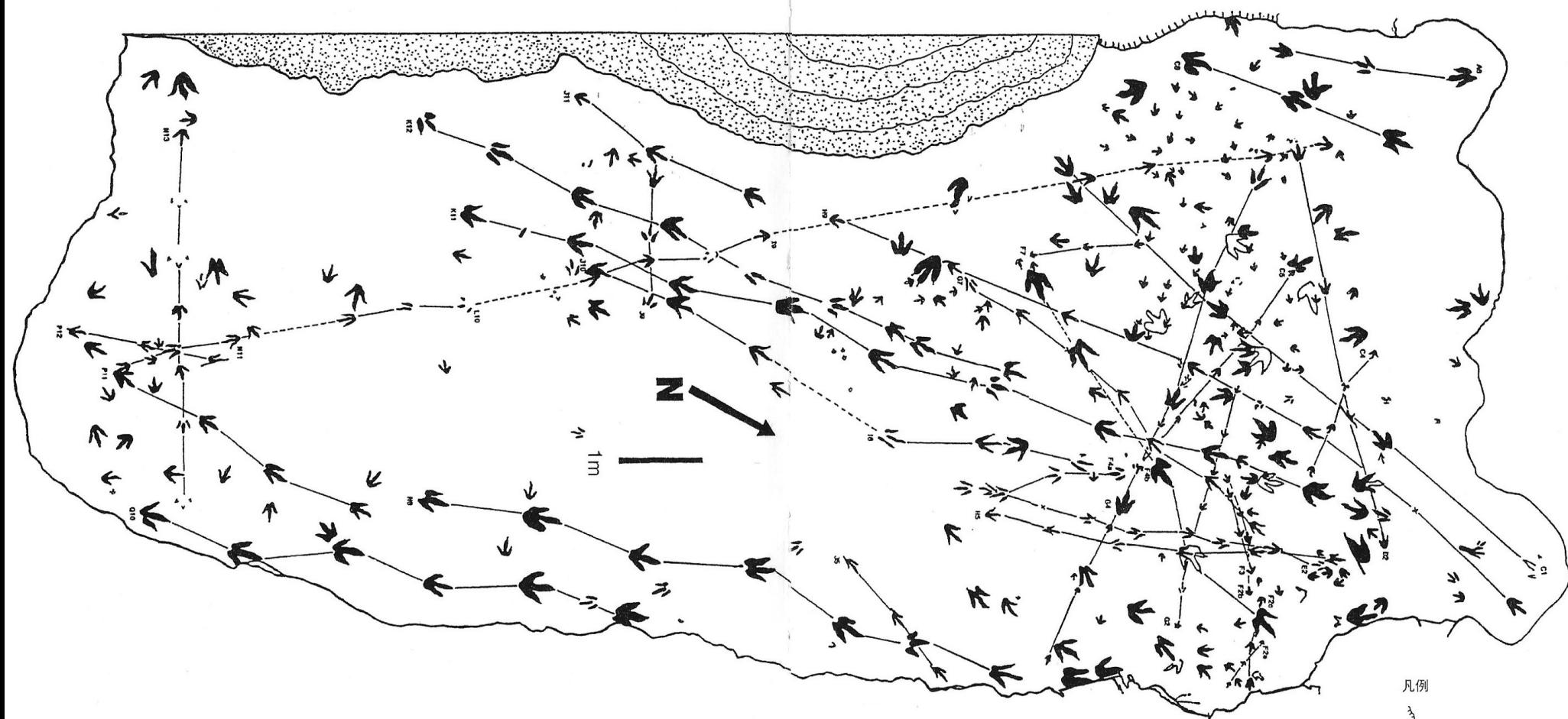


2010年7月15日時点の現況調査図 S=1:400  
Survey diagram July 15th, 2010 S=1:400



森林を構成するさまざまな木々が枝を伸ばして葉を広げる様子を示した樹冠投影図。数字は樹木番号、円のサイズは樹木の太さ、アルファベットは樹木の種類を表し、これらの資料をもとに森林の生態を調査する。

Tree canopy projection, indicating variety of trees making up a forest, with extending branches and spreading-out leaves. Numbers are tree identification numbers, circle size is tree diameter, and letters indicate tree type. These data are used to carry out surveys of forest ecology.



凡例



下り斜面



砂地および砂丘



歩行跡



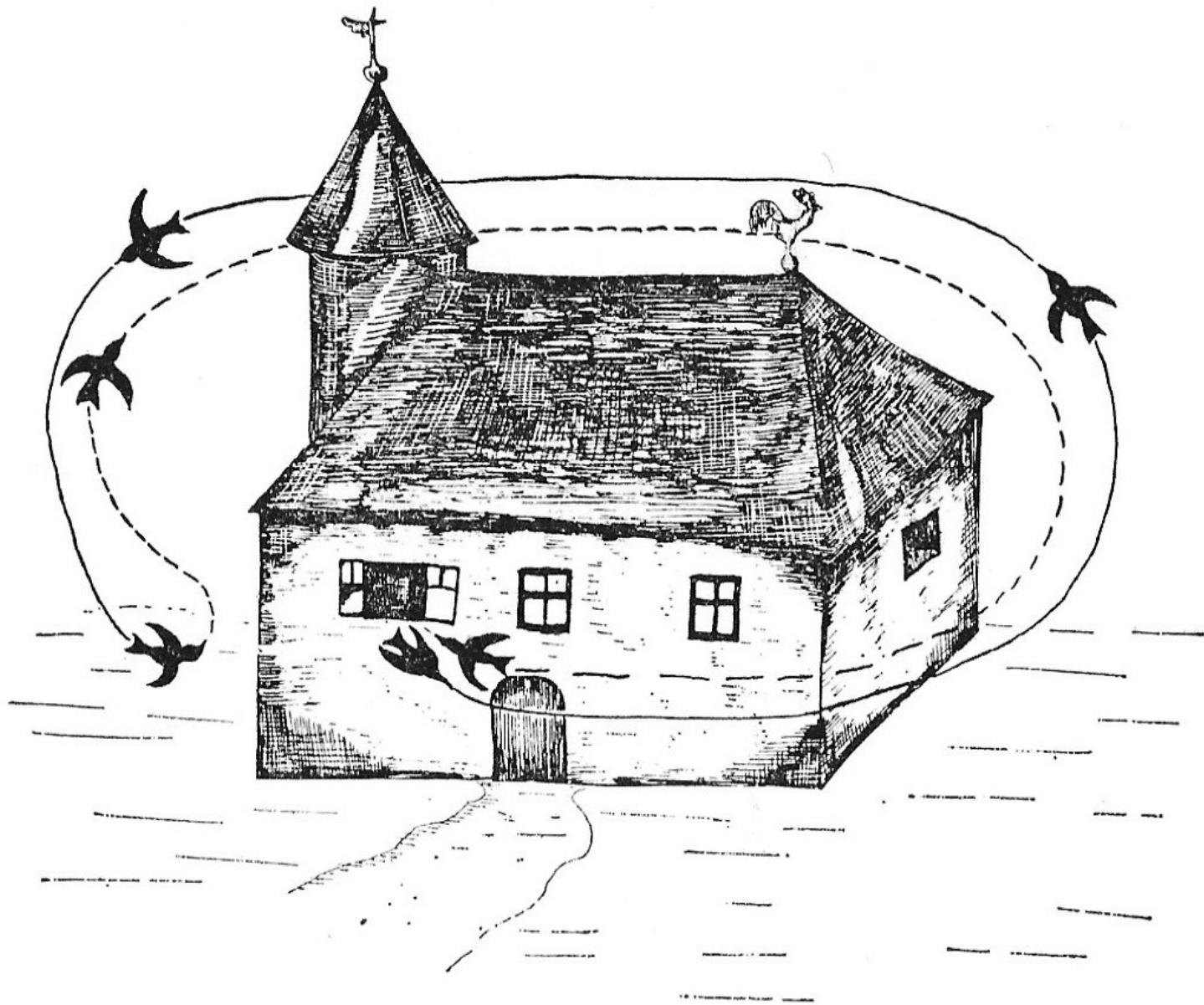
推測した歩行跡

建物のなかに監視カメラを設置して、空間を観察した。建築をどこまでも厳密に恣意的に意図的に計画する。同時に、どこまでも実態が把握できない不確定な状況を計画する。何億年も昔の歩行跡は、その当時の事実を明らかにし、ぼくたちの世界のとらえ方を少し押し広げる。同じように、この観察がこの建築のとらえ方を拡大する。

Short movie compiled from security camera footage. A security camera was installed in the building to observe a space. The idea was to design a building in as precise, arbitrary and intentional manner as possible, and at the same time, create an uncertain state in which the true nature of things is impossible to grasp. Tracks made hundreds of millions of years ago reveal facts about the era in question, and push, ever so slightly, the boundaries of how we see the world. In the same way, this observation expands our view of this building.



アリゾナ州北東部、モーネイブ層にある、ジュラ紀前期の恐竜の足跡がみつかった場所。恐竜の足跡に残された、ベース(歩幅)、ストライド(複歩幅)、歩角は、恐竜の歩行の方法や胴体の幅などの情報源となる(下)。A site in northeastern Arizona where dinosaur footprints from the early Jurassic Era were discovered in the Moenave strata. The pace, stride and direction of the footprints provides information on how these dinosaurs walked, as well as their upper body girth and other aspects (below).

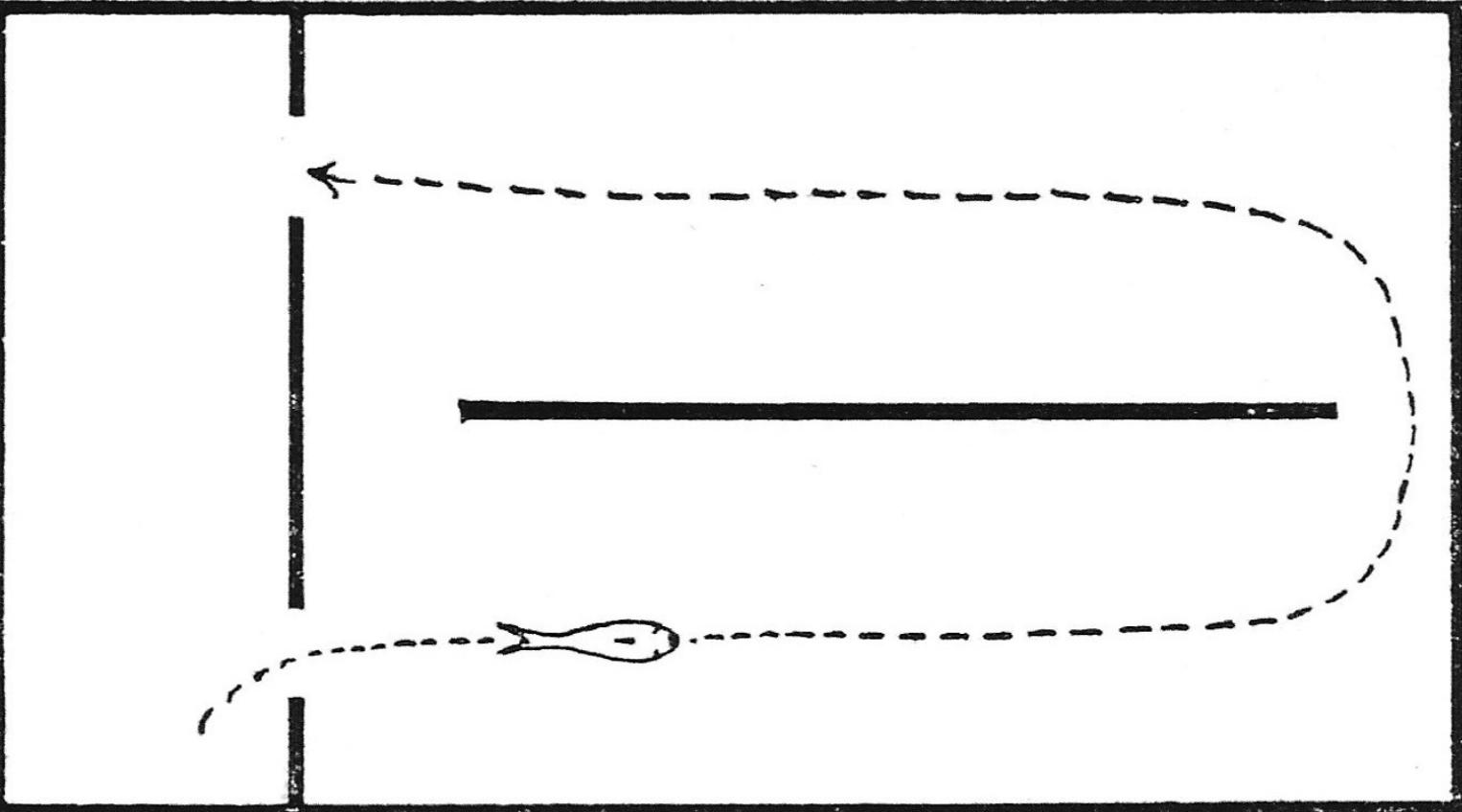


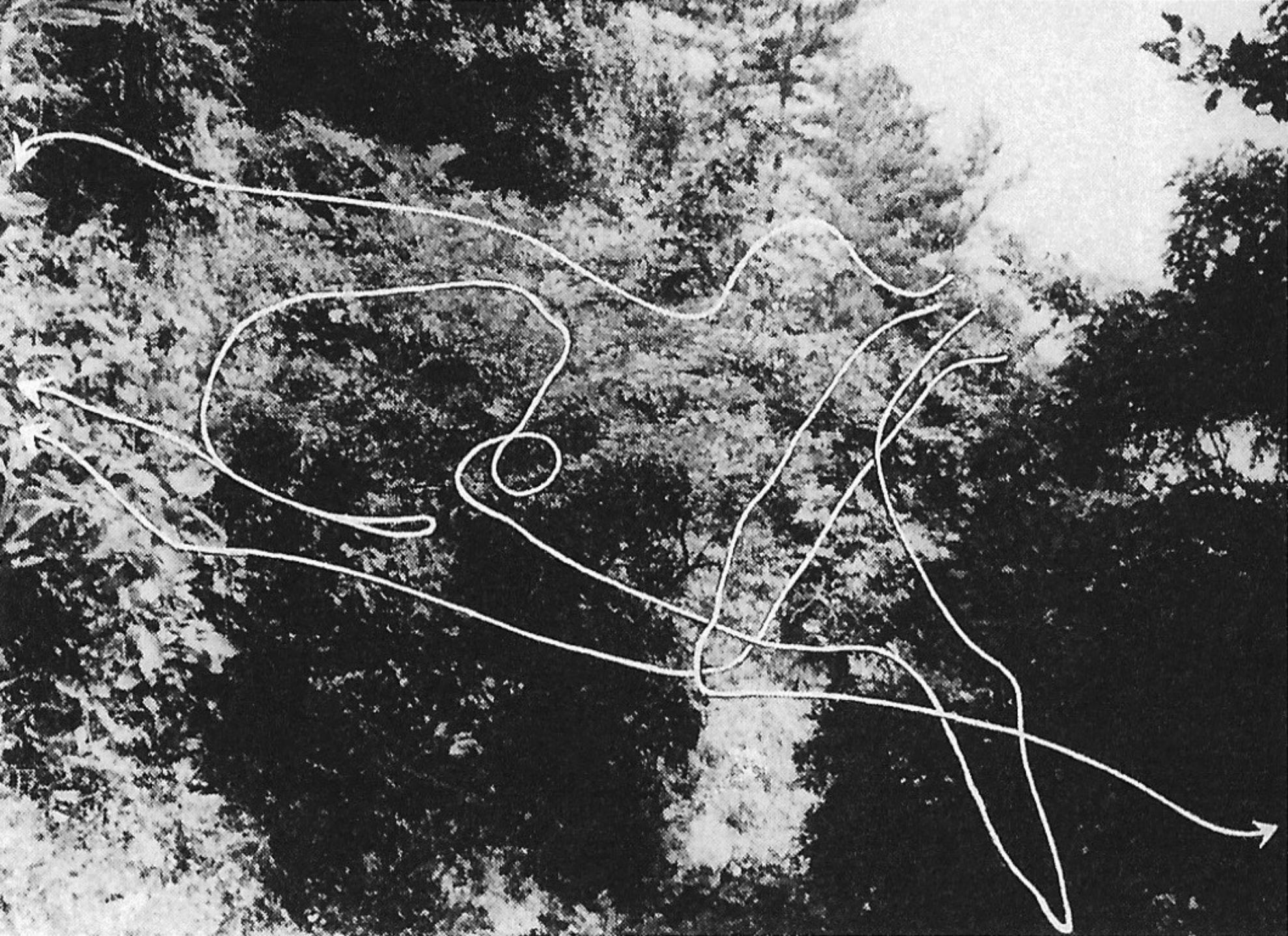
コクマルガラスの周知の道。コクマルガラスはよく知った往路を引き返すことで出発点に戻ってくる性質がある。

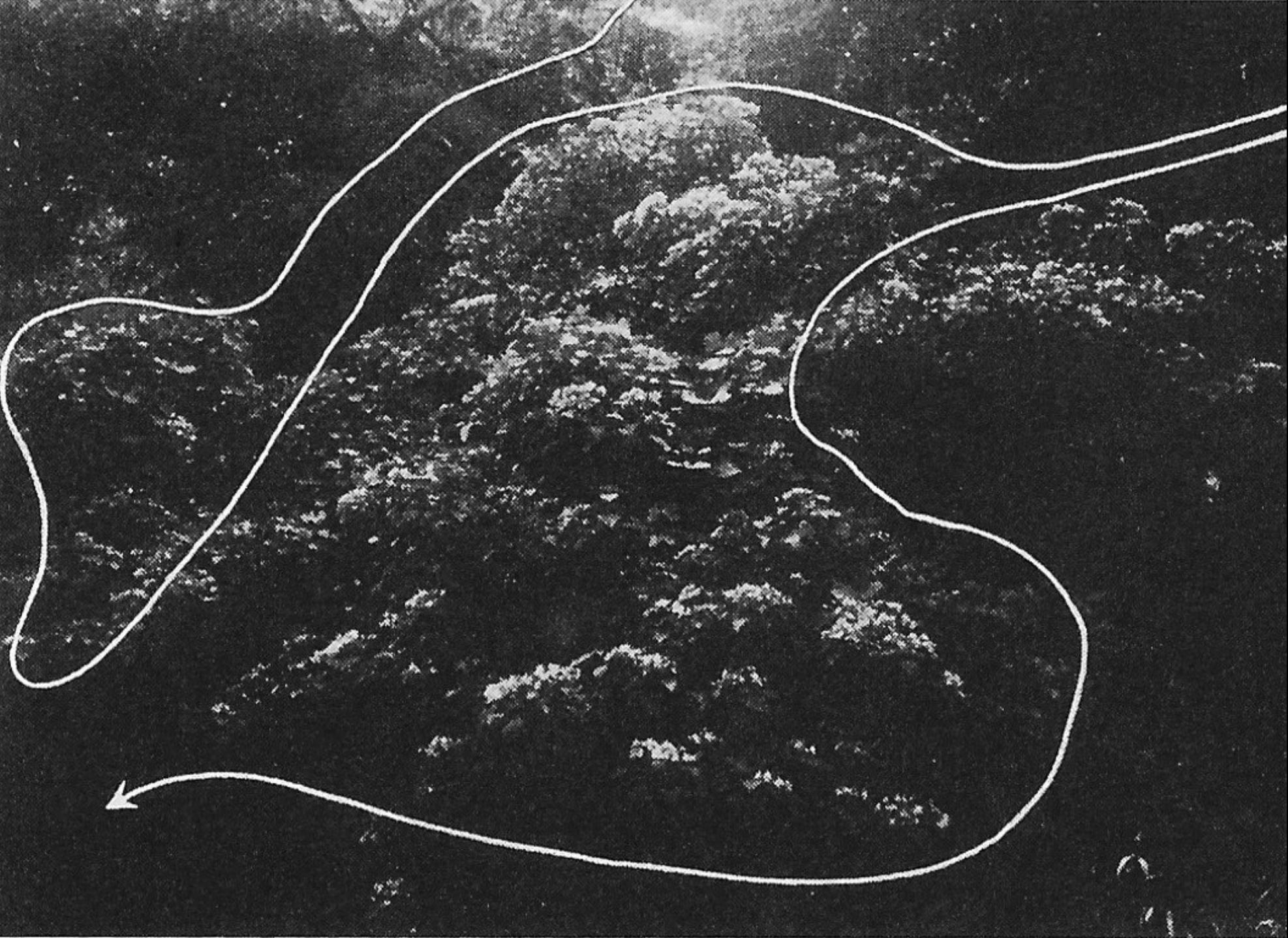
The habitual route of the Daurian jackdaw. It is the Daurian jackdaw's nature to turn back along a well-known route and return to its point of departure.

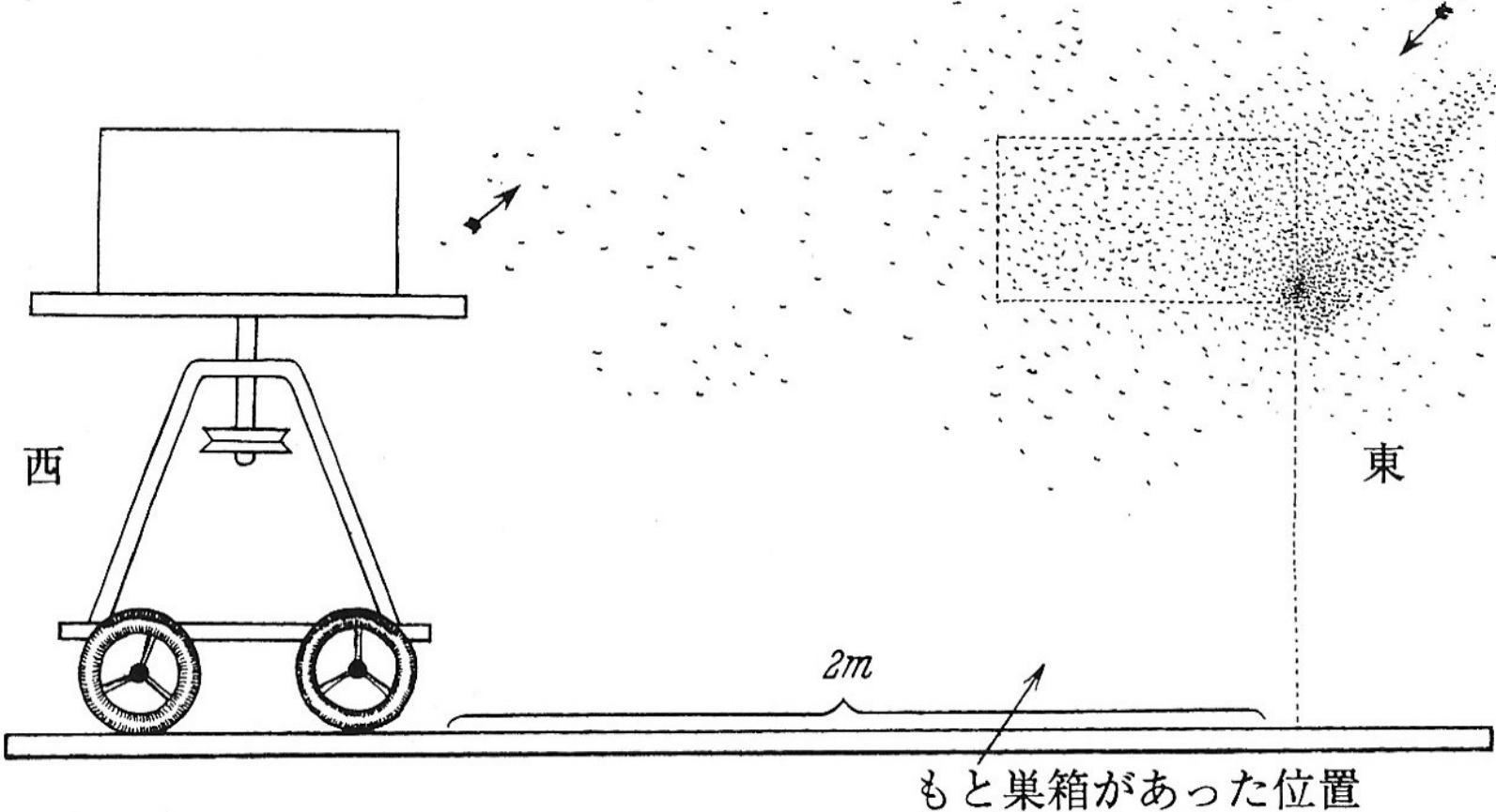
ベタのなじみの道。熱帯魚ベタの水槽に仕切り板をとりつけ、えさで釣つて魚が仕切り板を回るようにしむけると、その後魚はその道をなじみの道として移動するようになる。図のように、矢印の先のあたりにえさを置いても、魚はえさにより近い手前の道を通ることなく、仕切り板を回ってえさに到達する。

The habitual route of the betta. When a divider is installed in the tank of a tropical betta, and the fish is lured around the divider with food, subsequently it will make that route its habitual one. As shown in the illustration, even when food is placed in the area ahead of the arrow, instead of taking the quicker route that is directly in front of it, the fish will reach the food by going around the divider.









ミツバチが出かけている間に巣箱を2m移動させると、ミツバチは以前巣箱のあった場所に戻ってくる。そしてしばらくすると、あたらしい巣箱の位置に気がつく。このことから、ミツバチは視覚的な印象ではなく、触角をコンパスのようにして確実に帰路についていることがわかる。動物は各動物で異なる知覚と作用の結果から行動づけられる。この概念を環世界といいう。

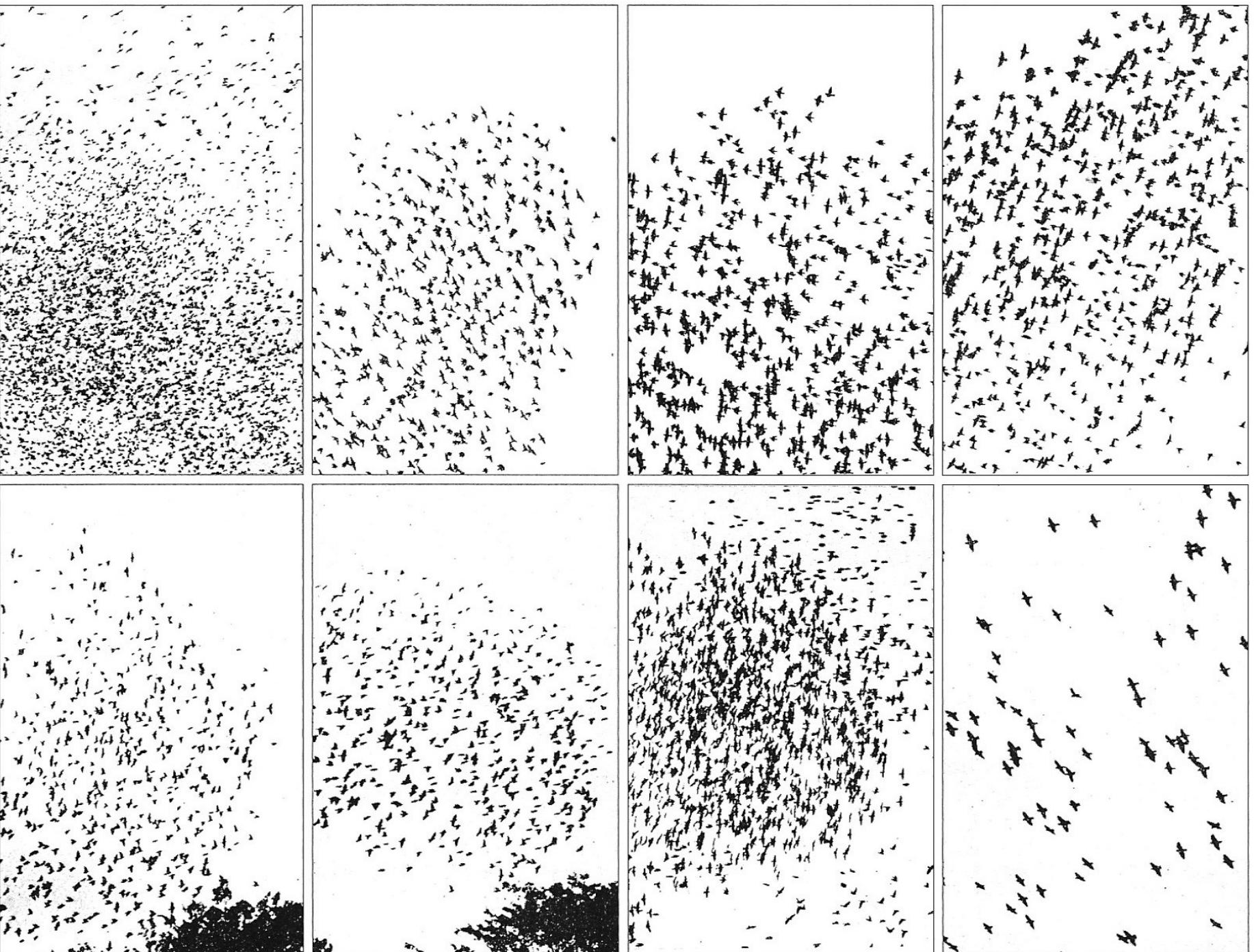
If a hive box is moved 2 meters while the honeybees are out, they will return to the box's original location. Then, after a while, they will notice the new location of the hive box. From this it is evident that honeybees find their way home unerringly without visual landmarks, but by using their antennae as compasses. Animal behavior is decided by results of perception and interaction that differ from one animal to another. This is the concept of *umwelt* ("surrounding world").



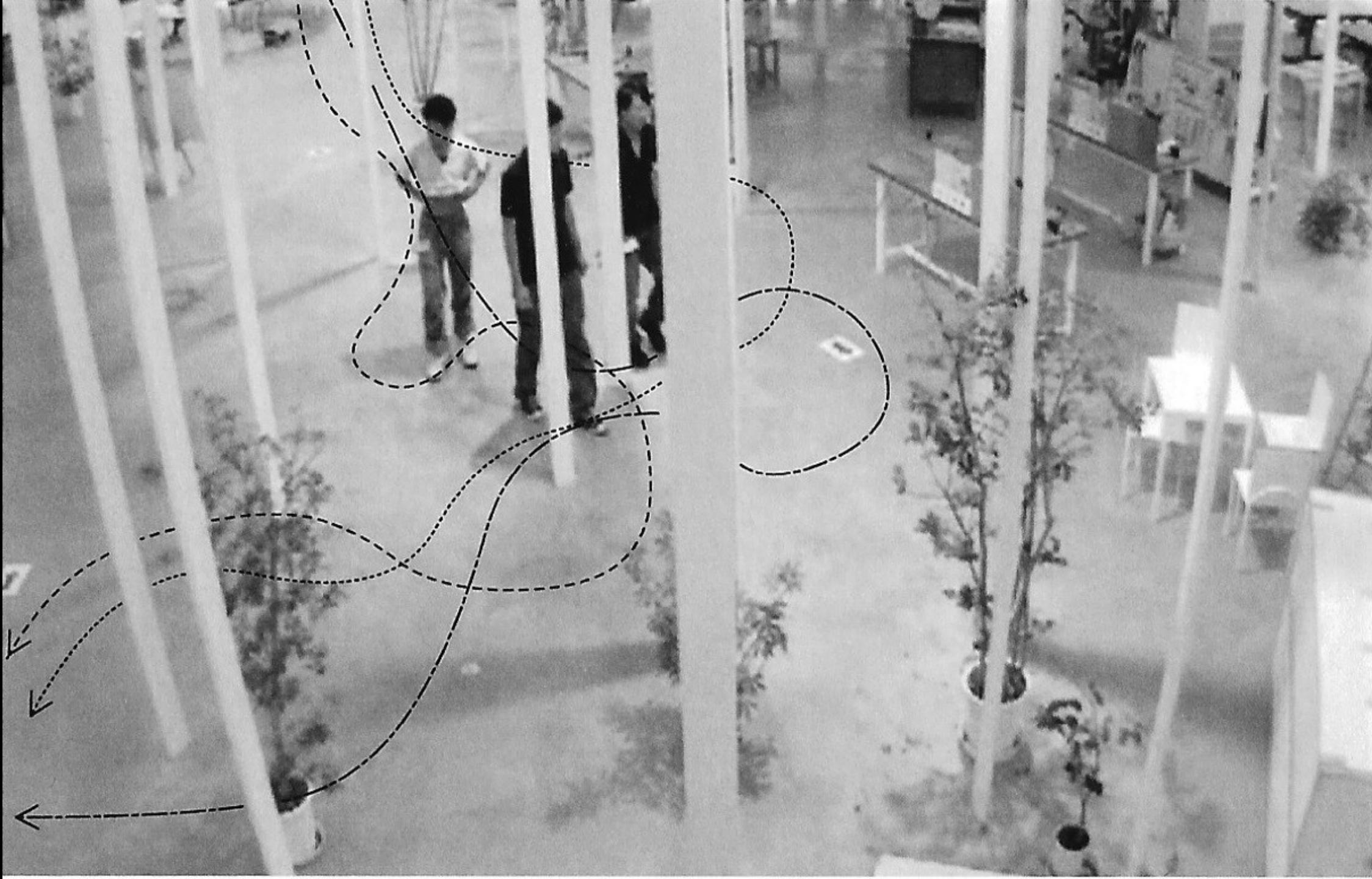








ムクドリ群の展開。ムクドリの群れには特別なリーダーはおらず、前線個体に倣い行動するため、一齊に同方向に進んでいく。  
Development of roosting flock of white-cheeked starlings. As white-cheeked starlings do not have specific flock leaders but imitate the behavior of front-line individuals, they advance in unison in the same direction.





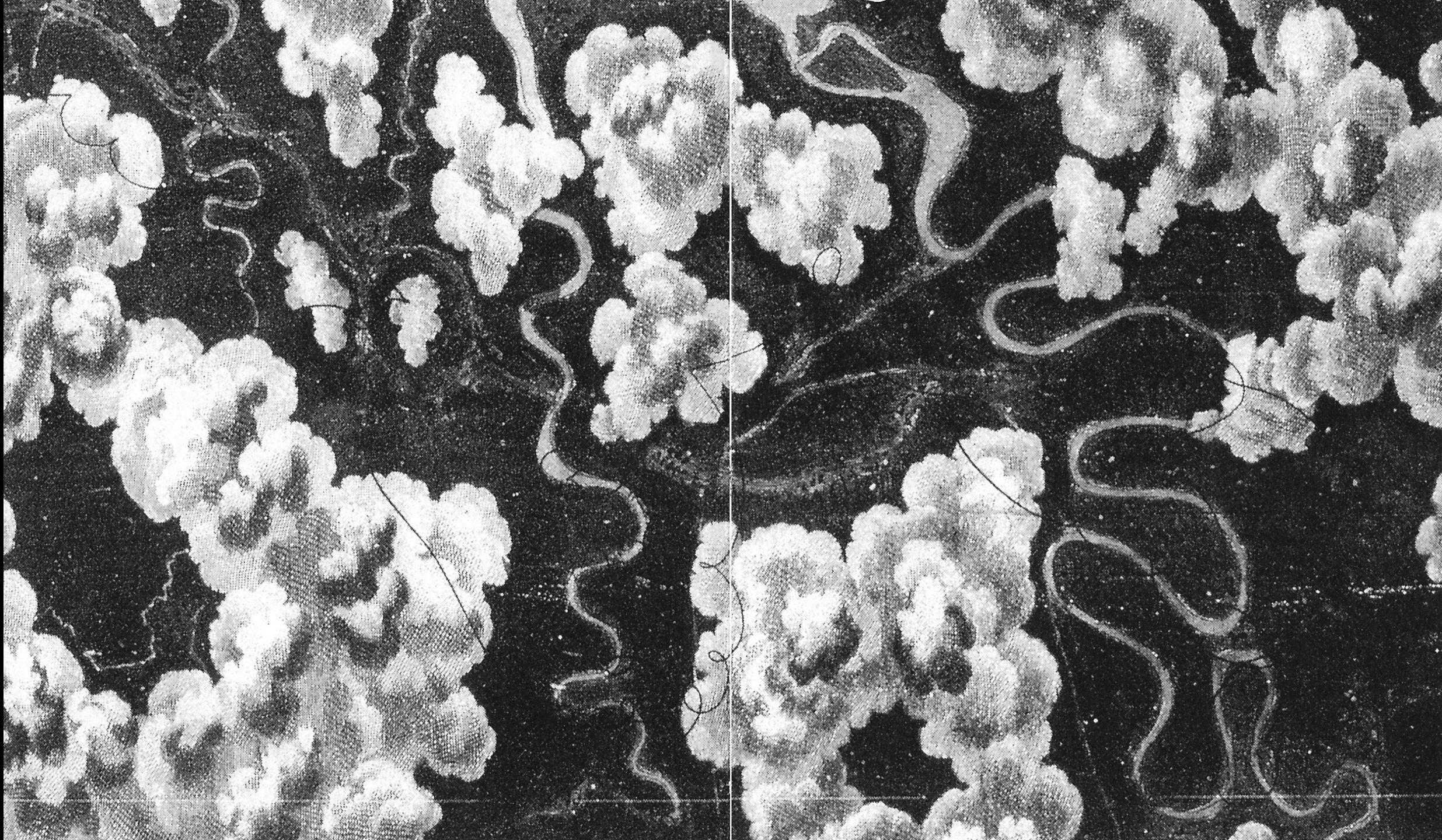






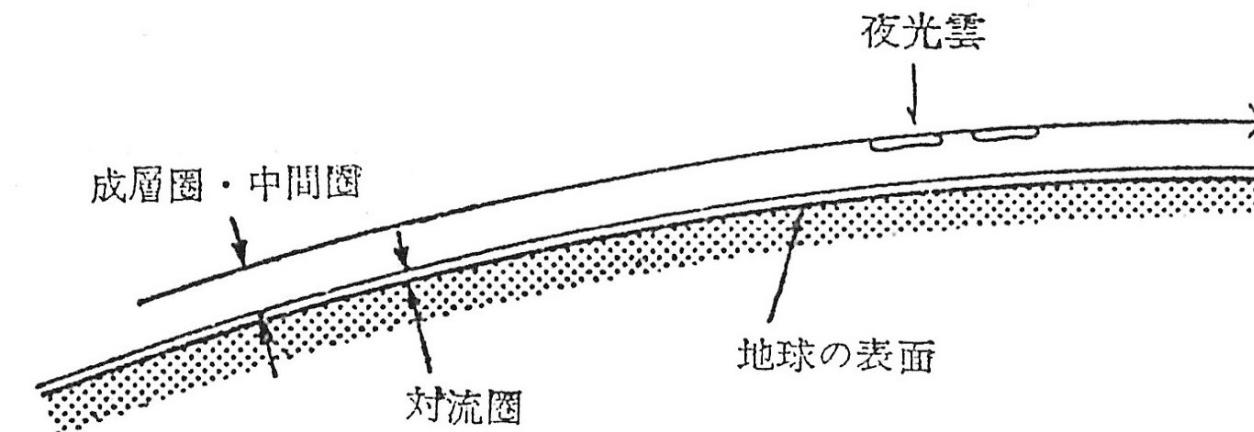




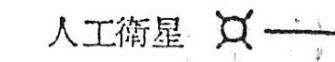


地球の表面と地球をかこんでいる大気の層。縮尺をあわせた場合、半径6400kmの地球に対して、図の半径は32cm。大気の層は図のような厚みになる。

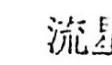
The Earth's surface and the layer of atmosphere surrounding the Earth. When scaled down, in contrast to the 6,400-kilometer-radius Earth, the layer of atmosphere (radius in figure = 32 cm) has the approximate thickness shown in this figure.



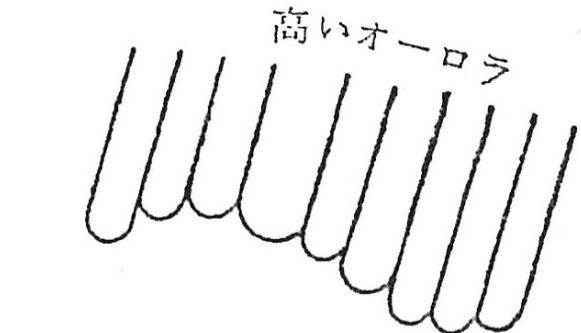
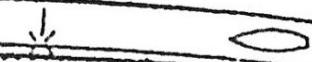
人工衛星



流星



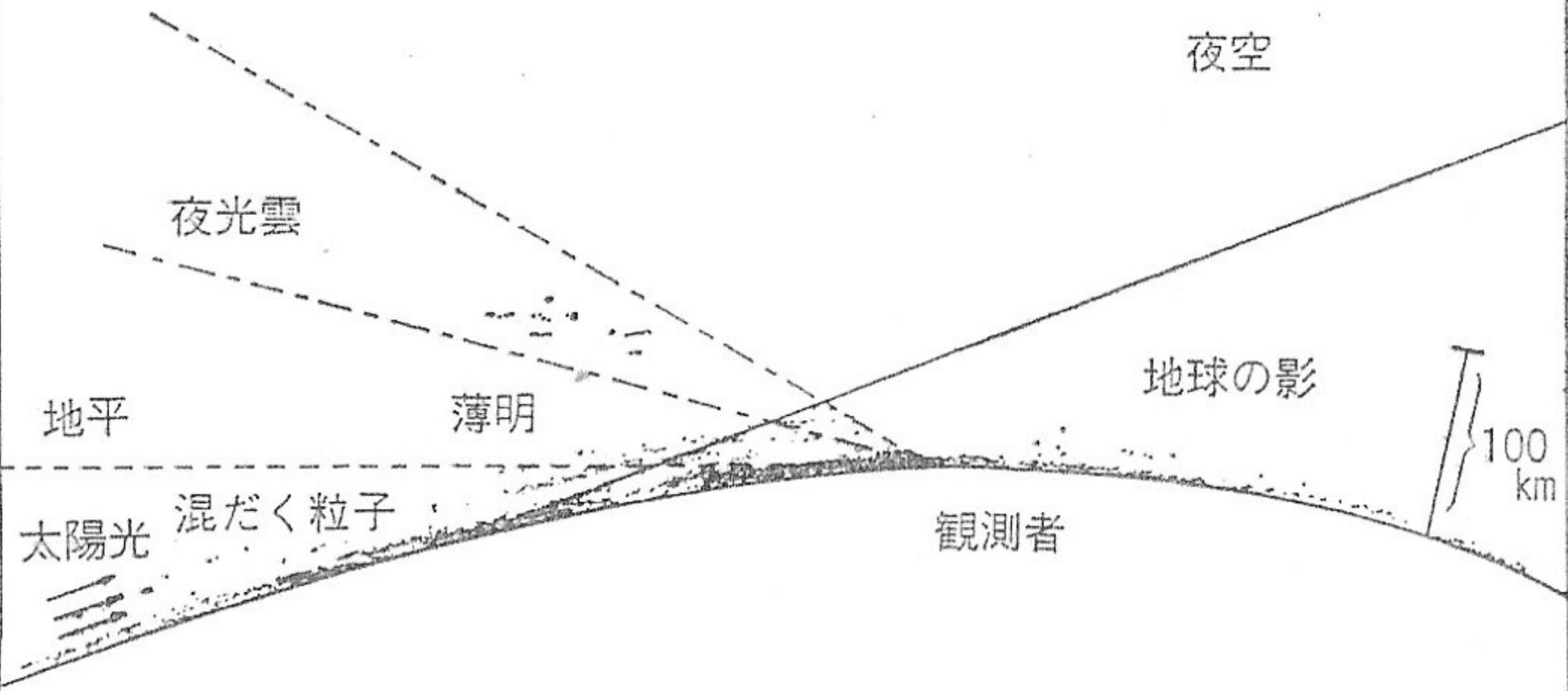
気象ロケット



高いオーロラ

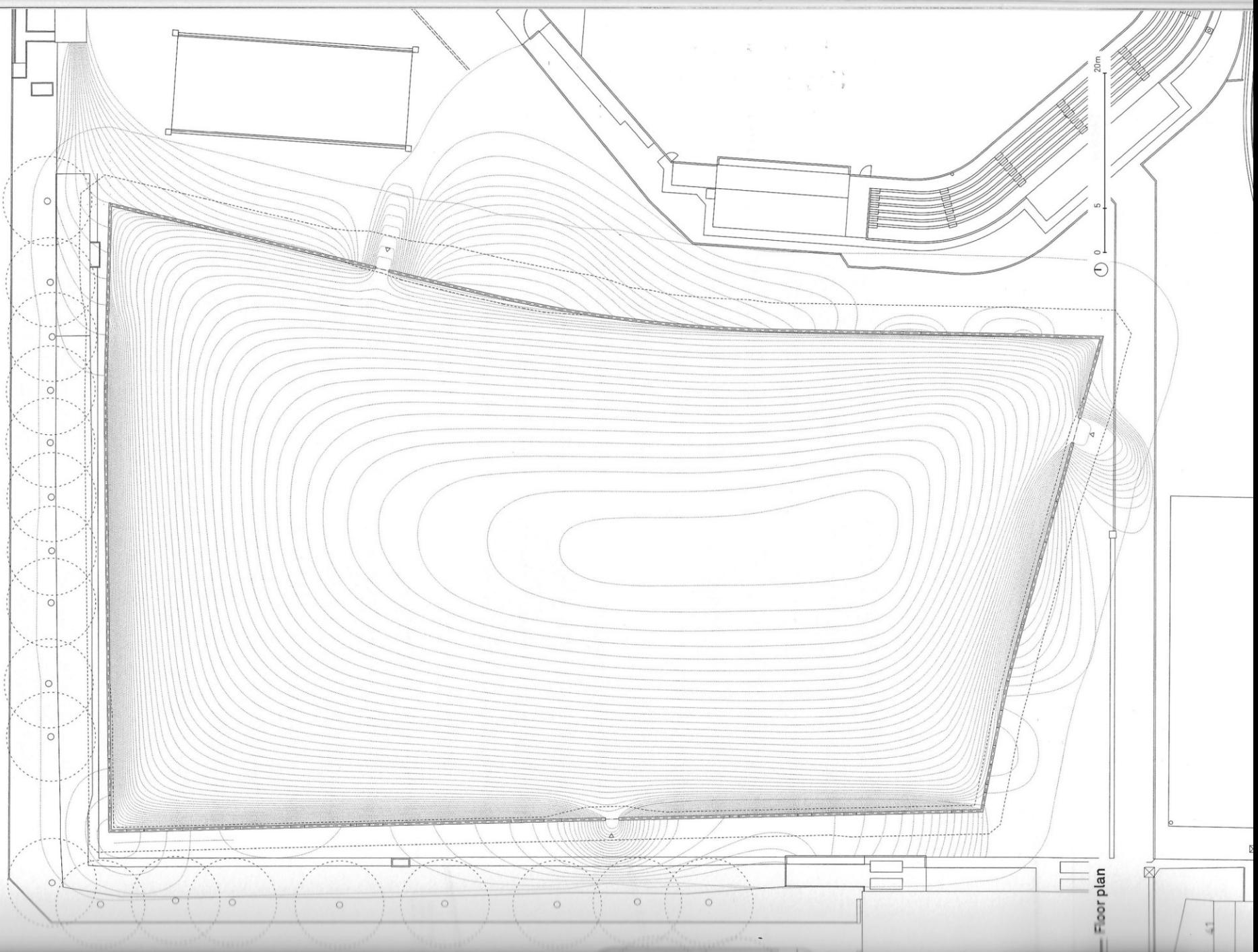


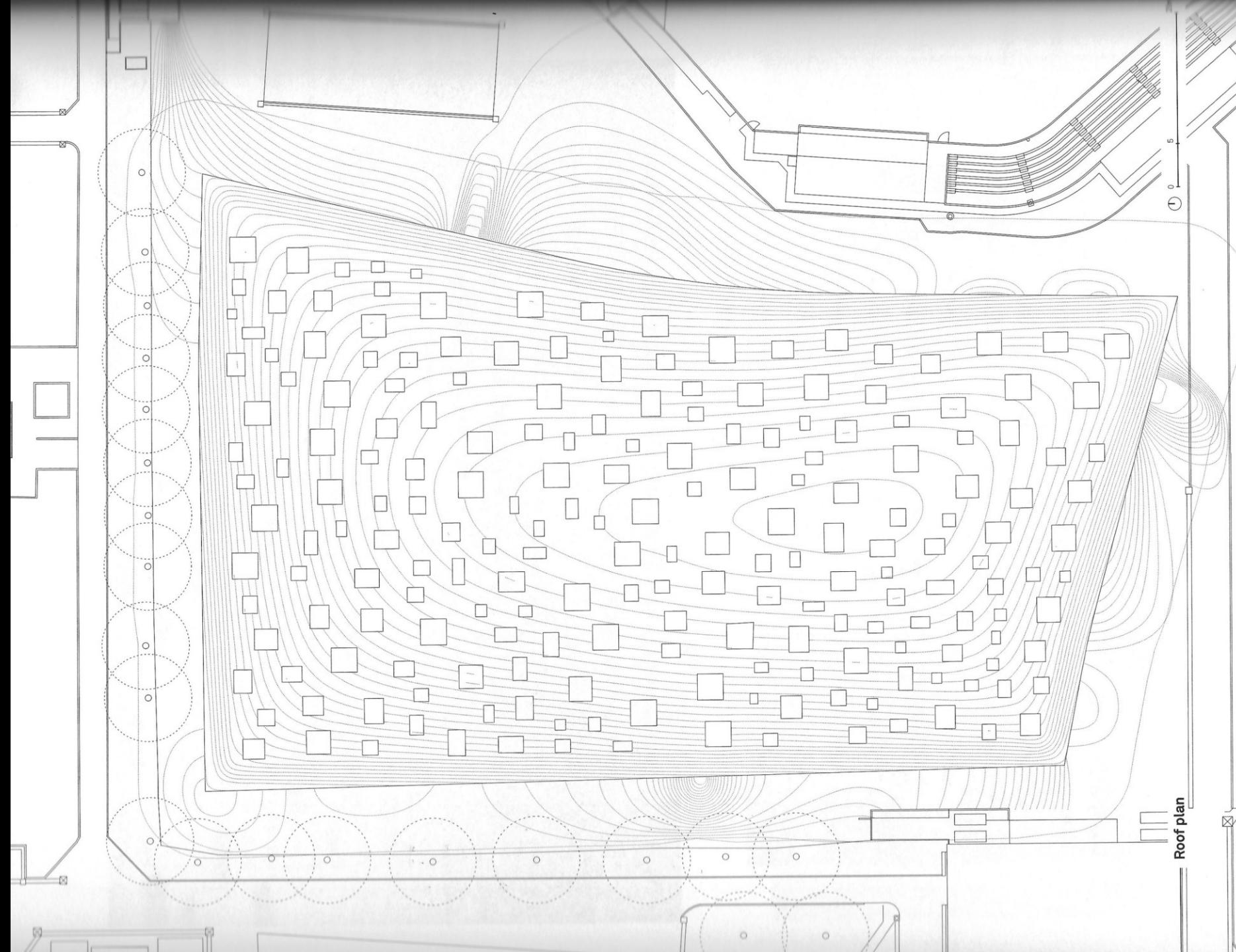
ふつうのオーロラ



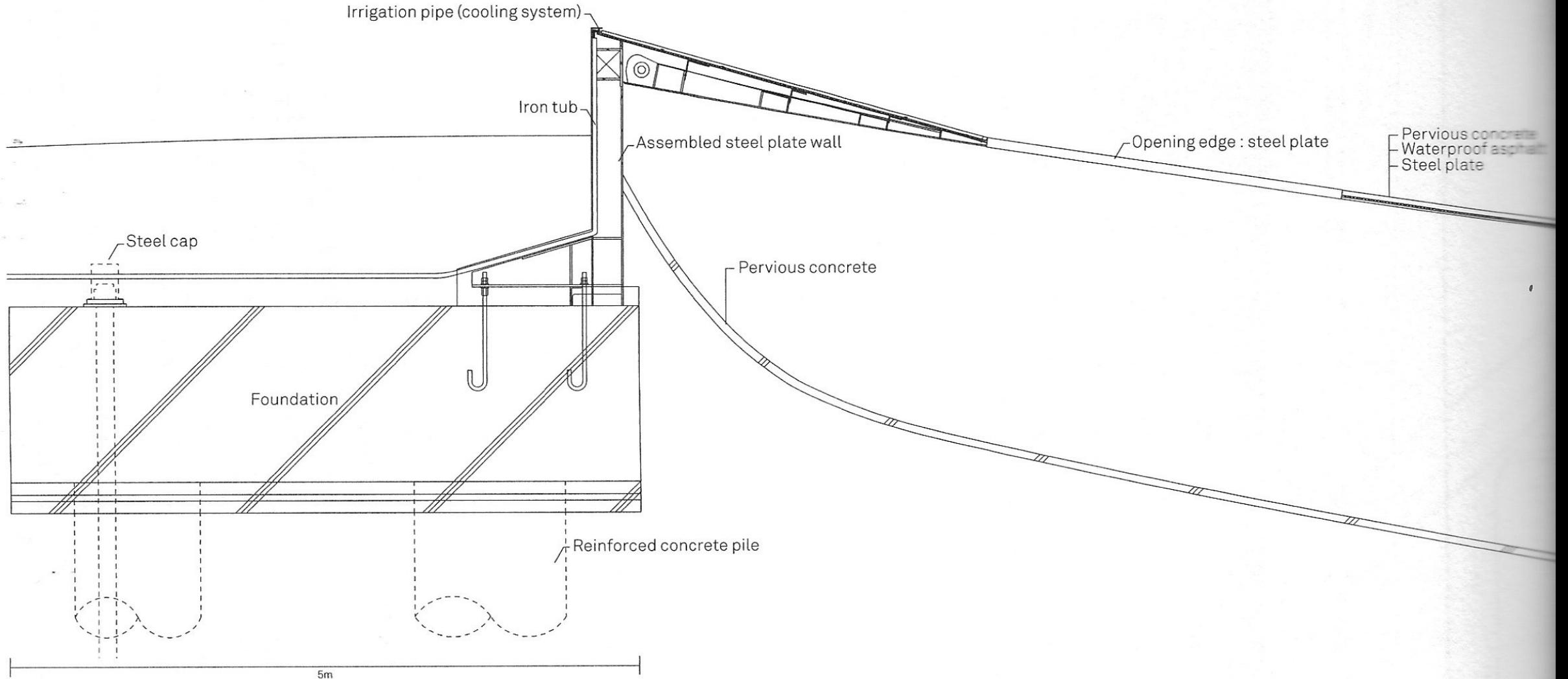












**Section detail**







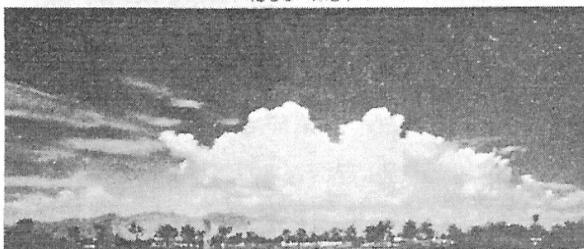




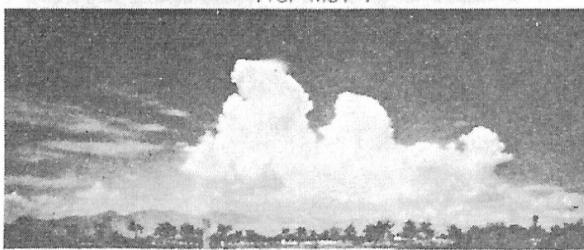




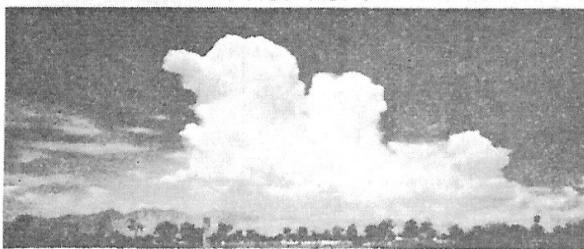
1356 MST †



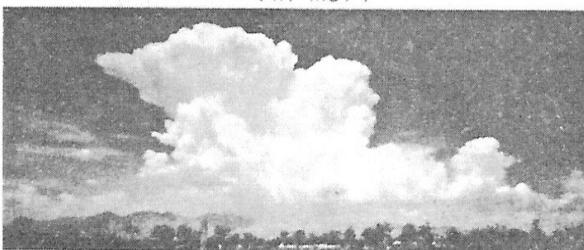
1401 MST †



1406 MST †

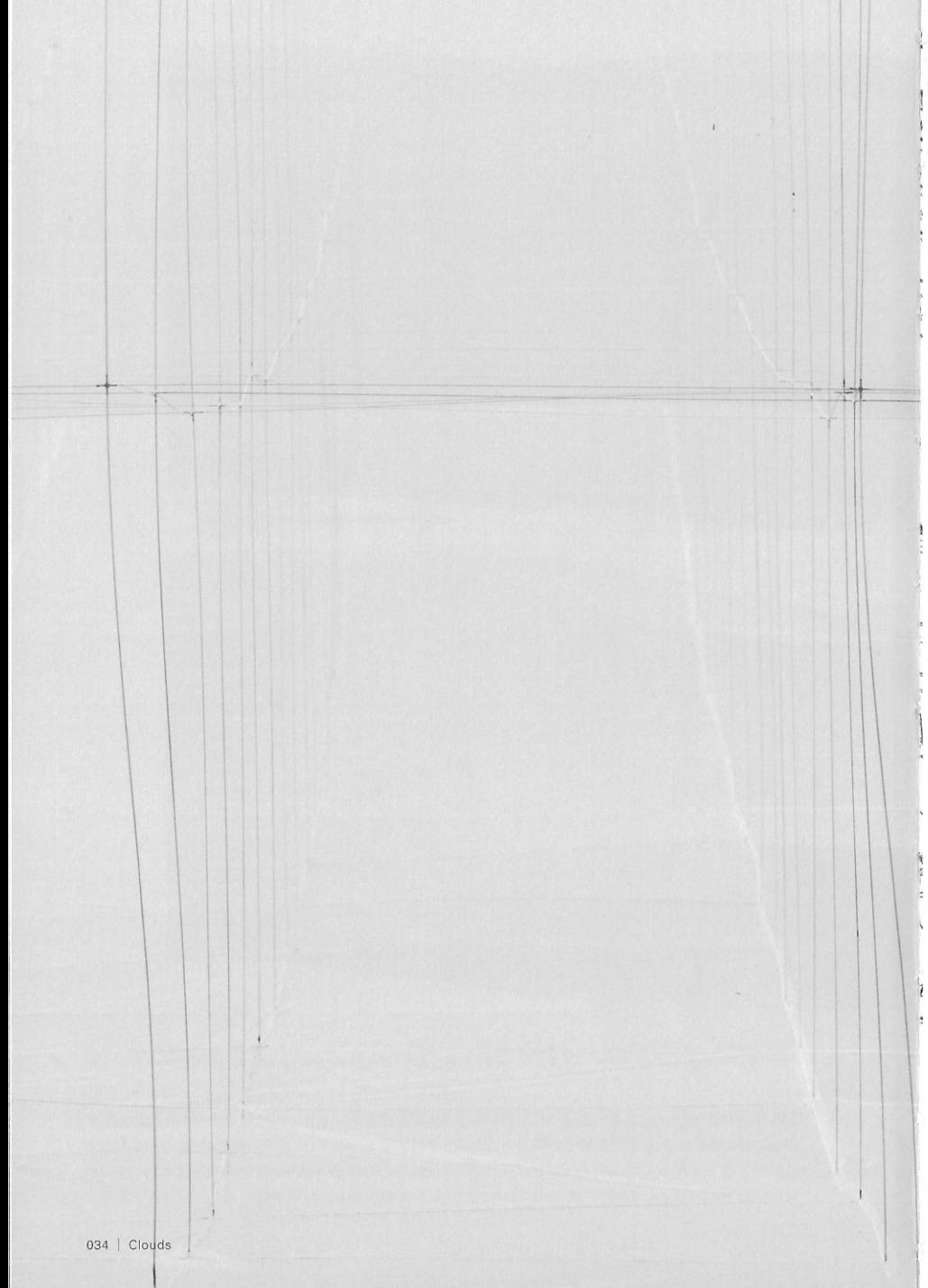


1411 MST †



1416 MST †

積乱雲の発達の様子  
The development of a cumulonimbus



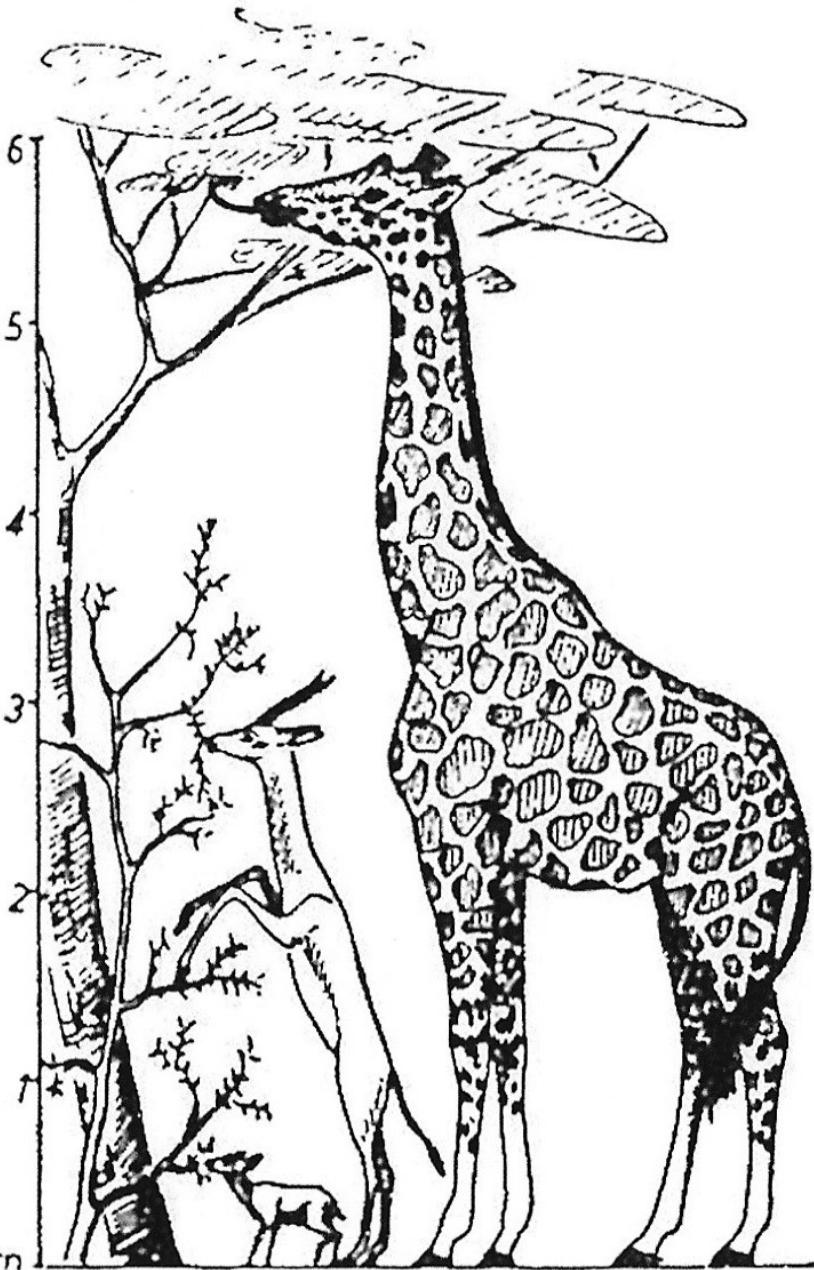
項目	記号	単位	タンポポ	ノゲシ	イヌコリヤナギ	ハコヤナギ (ボプラ)
学名	—	—	<i>Taraxacum platycarpum</i> Dahlst.	<i>Sonchus oleraceus</i> L.	<i>Salix integra</i> Thunb.	<i>Populus sieboldii</i> Miq.
形 状	—	—				
冠毛全体の径	<i>D</i>	mm	11	9	8	8*
毛の直径	<i>d</i>	μm	20	18	7.5	7.5
毛の長さ	<i>l</i>	mm	5.5	7	5	5
毛の数	<i>n</i>	—	120	20	50	100*
種子のみの大きさ	<i>l<sub>m</sub></i>	mm	—	3	0.8	3
降下速度	<i>U</i>	m/s	0.30	0.3	0.1	0.5~1.5*

冠毛のある種子の例とその諸元。飛散した種子は、冠毛という飛行用具によって落下速度が抑えられ、遠くまでその実を運ぶことができる。

Examples of pappus-possessing seeds and relevant data. The drop velocity of scattered seeds is slowed by the parachute-like pappus, enabling dispersal of the seed fruit over long distances.

宙を舞う綿毛のような、繊細な空気の流れと同スケールのとても微細な構造の可能性を考える。

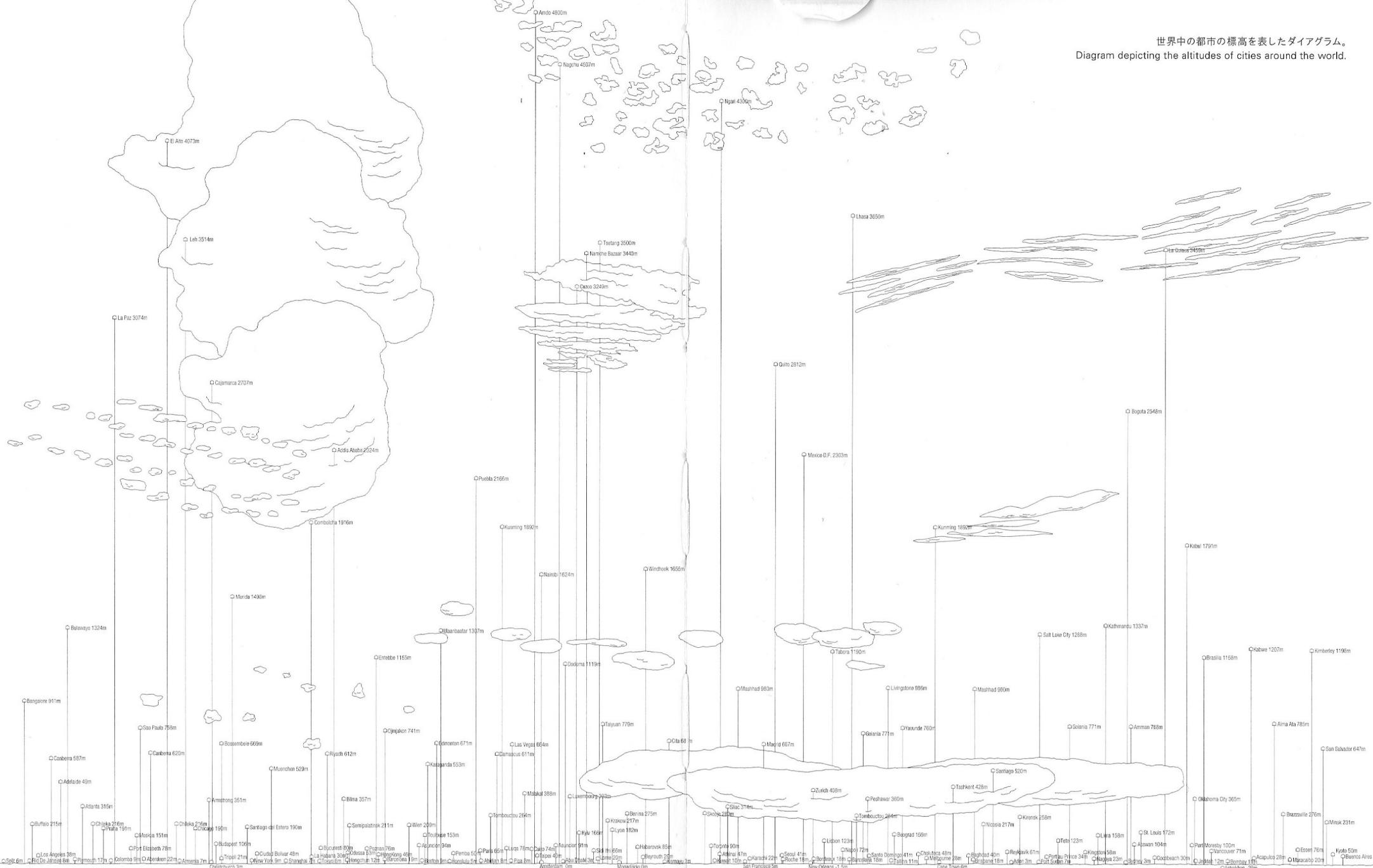
A meditation on the possibilities of a minutely detailed structure resembling dandelion seeds floating in the air, on the same scale as a delicate current of air.

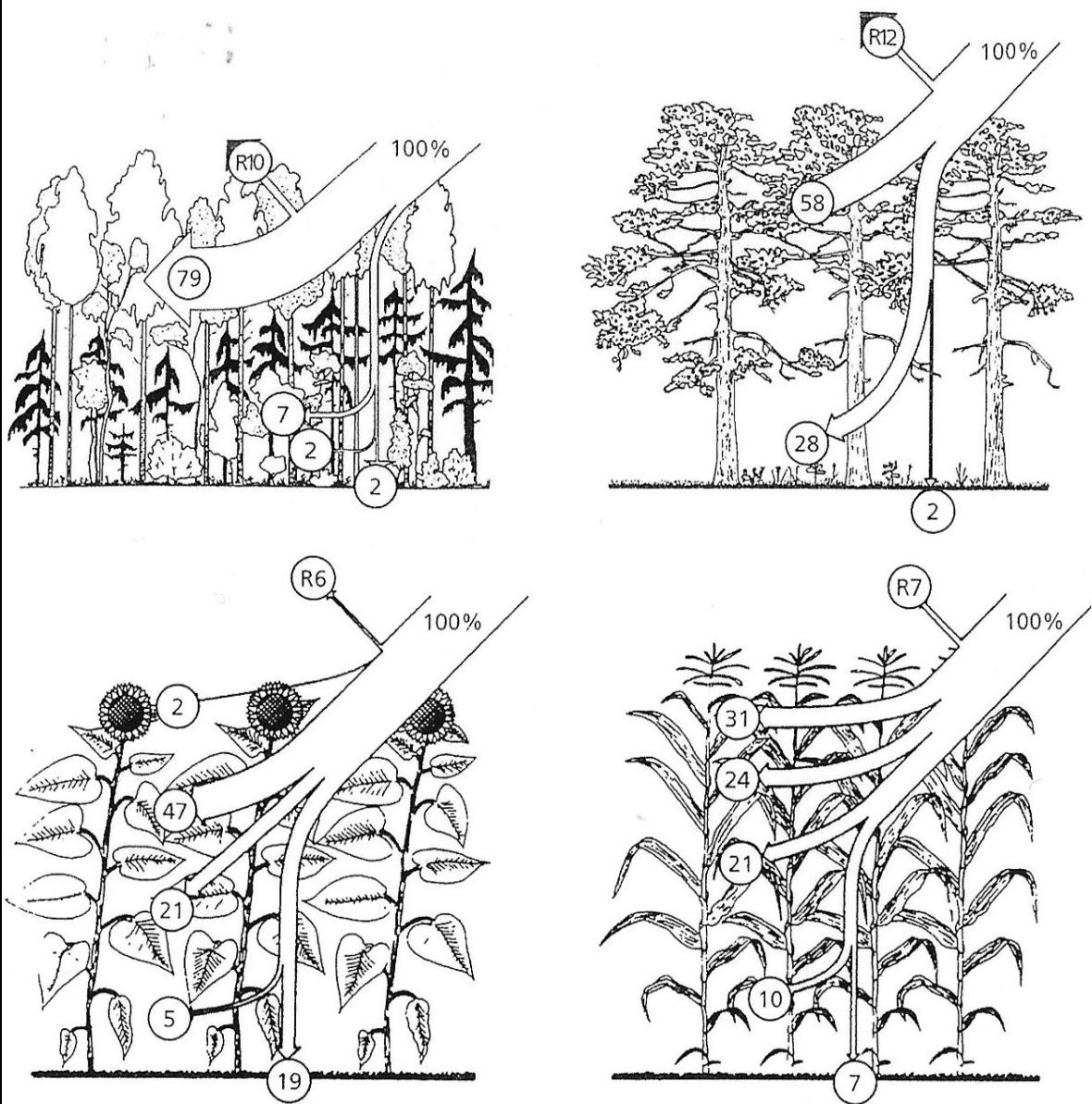


サバンナのほ乳動物は、あらゆるレベルで植生を利用できるのでそれぞれの種が過当競争を起こさずに供給できる。

The mammals of the savanna-grassland together make use of the vegetation at all levels, so that each species can feed without excessive competition.

世界中の都市の標高を表したダイアグラム。  
Diagram depicting the altitudes of cities around the world.





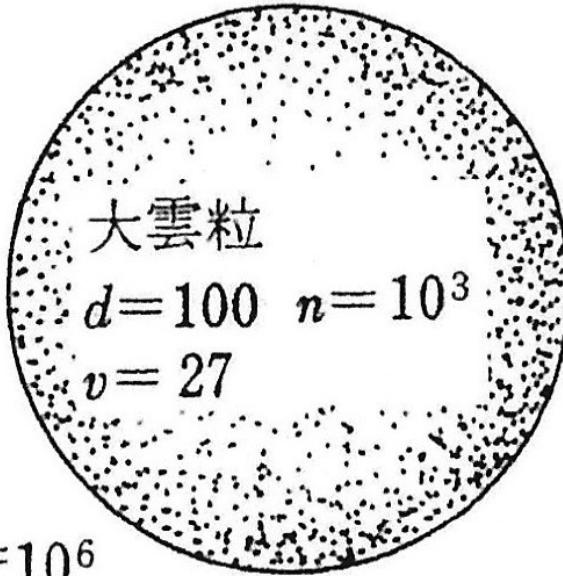
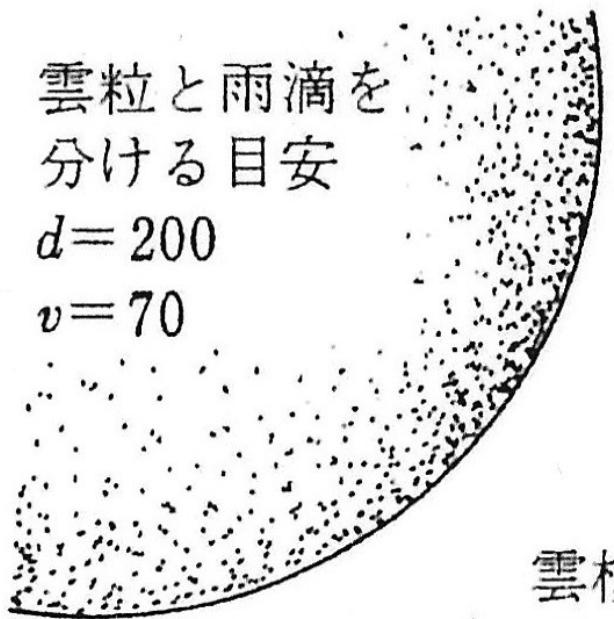
いくつかの植物群落内における放射の減衰。(左上)北方カンパ・トウヒ混合林、(右上)マツ疎林、(左下)ヒマワリ畠、(右下)トウモロコシ畠。Rは群落反射率。平らな葉が密生した群落では、入射放射の大部分は群落の上部1/3で吸収・散乱される。幅の狭い立った葉の群落では光は群落内でより一様に分布する。

Radiative damping occurring in different plant communities. Mixed forest of northern birch and spruce (upper left), sparse stand of pine (upper right), sunflower field (lower left), and corn field (lower right). "R" is the reflectance rate of the community. In communities with dense, flat foliage, most of the incident radiation is absorbed and dispersed by the upper third of the community. In communities with narrow, erect foliage, the light is more evenly distributed throughout the community.

雲粒と雨滴を  
分ける目安

$$d = 200$$

$$v = 70$$



大雲粒

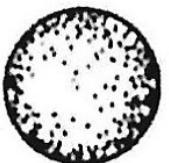
$$d = 100 \ n = 10^3$$

$$v = 27$$

雲核

$$d = 0.2 \ n = 10^6$$

$$v = 0.0001$$



ふつうの雲粒

$$d = 20 \ n = 10^6$$

$$v = 1$$

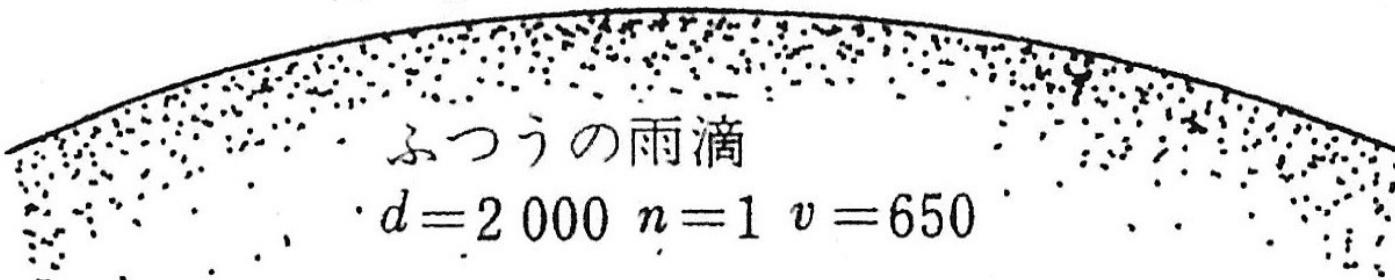
$d = \text{直径} [\mu\text{m}]$

$n = \text{空気 } 1\text{ l 中の数}$

$v = \text{落下速度 [cm/s]}$

ふつうの雨滴

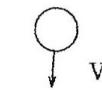
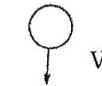
$$d = 2000 \ n = 1 \ v = 650$$

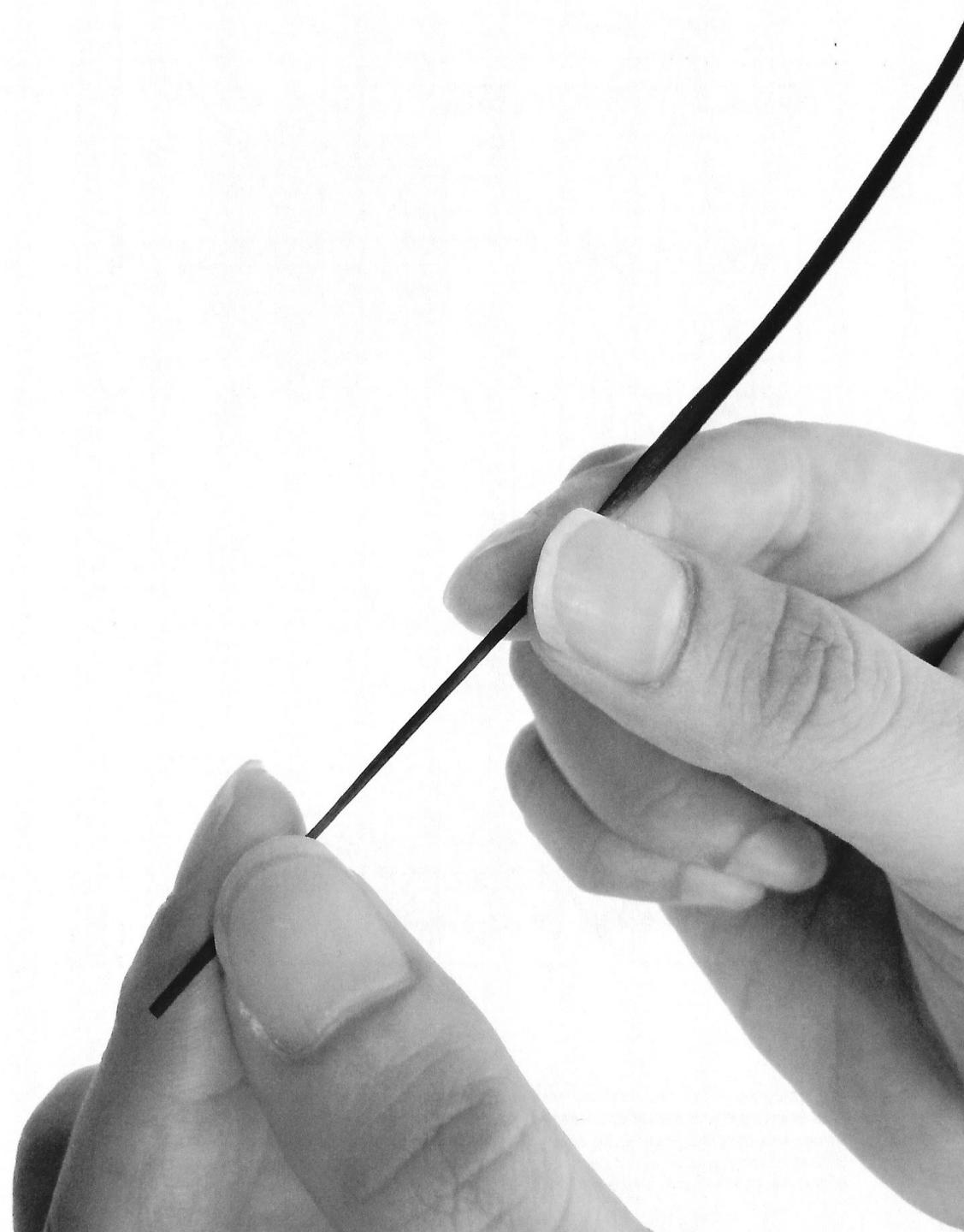


雲粒や雨滴の衝突併合の概念図。図では、サイズの異なる3種類の粒子を示している。

それぞれの落下速度( $V_1 > V_2 > V_3$ )が異なるので、粒子の衝突が起きる。

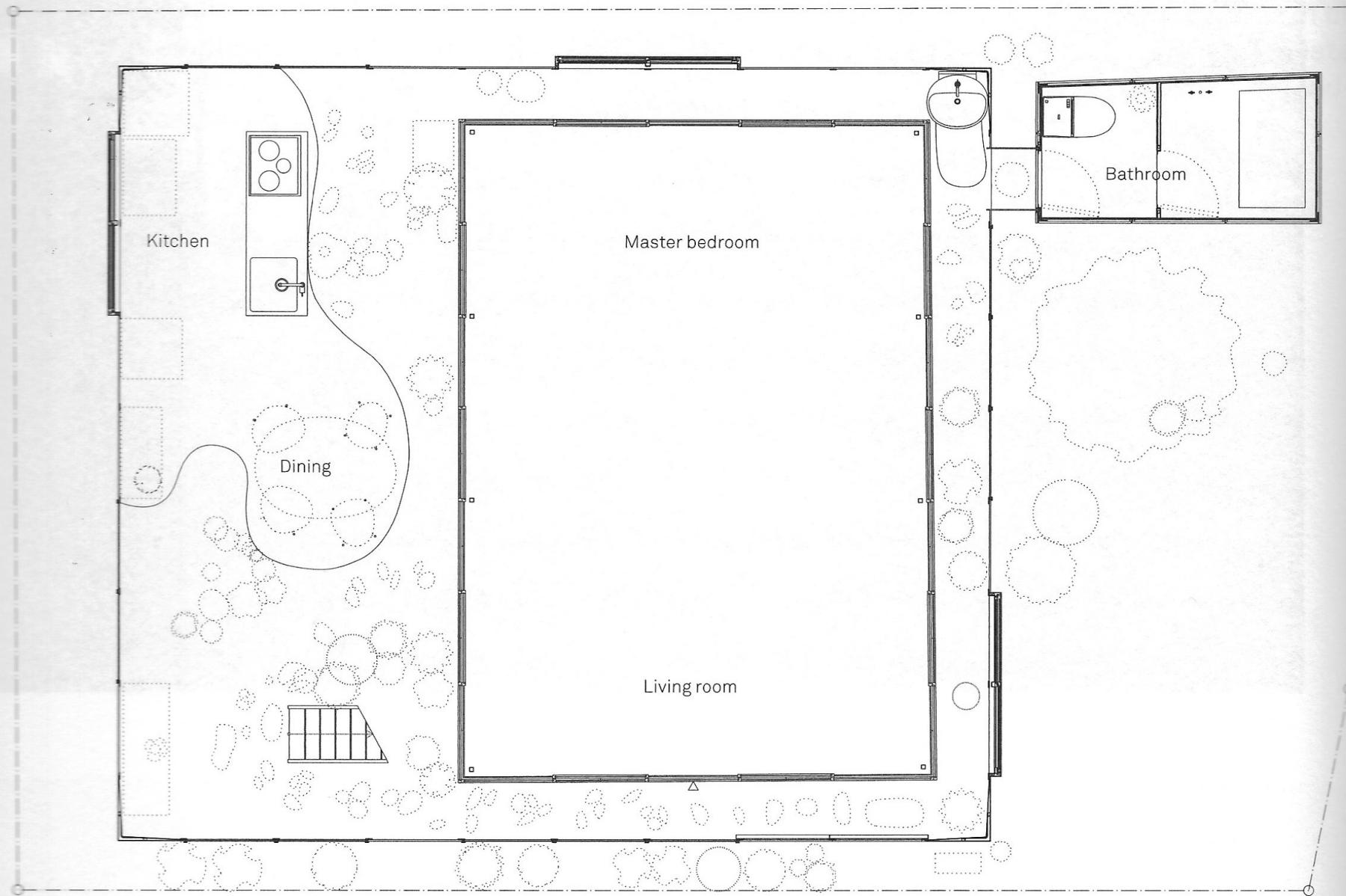
Conceptual diagram of collision-coalescence of cloud droplets and raindrops. Three types of particles of differing size are depicted. Each has a different precipitation velocity ( $V_1 > V_2 > V_3$ ), resulting in collision of particles.



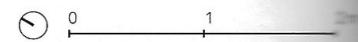








Floor plan

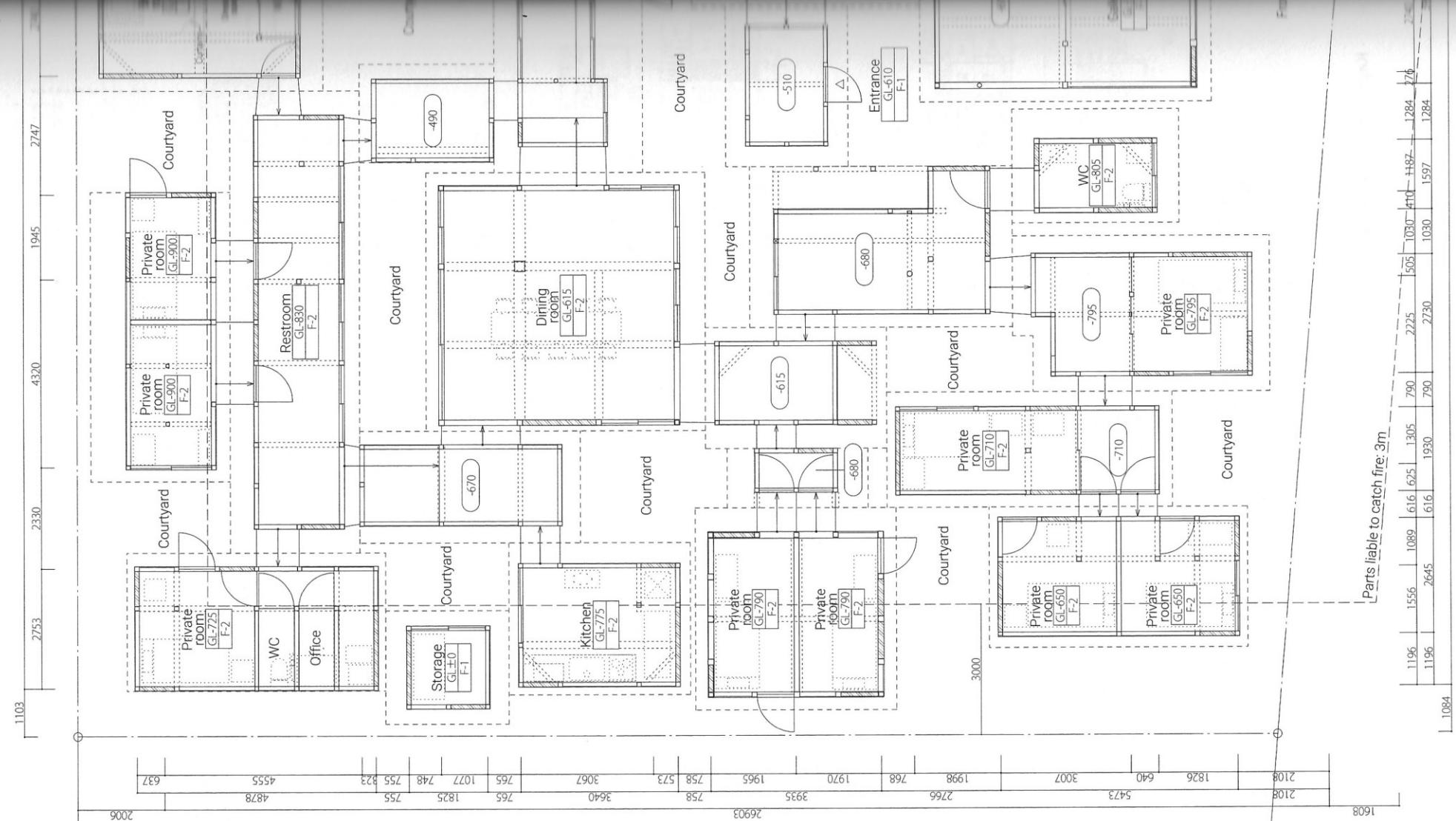










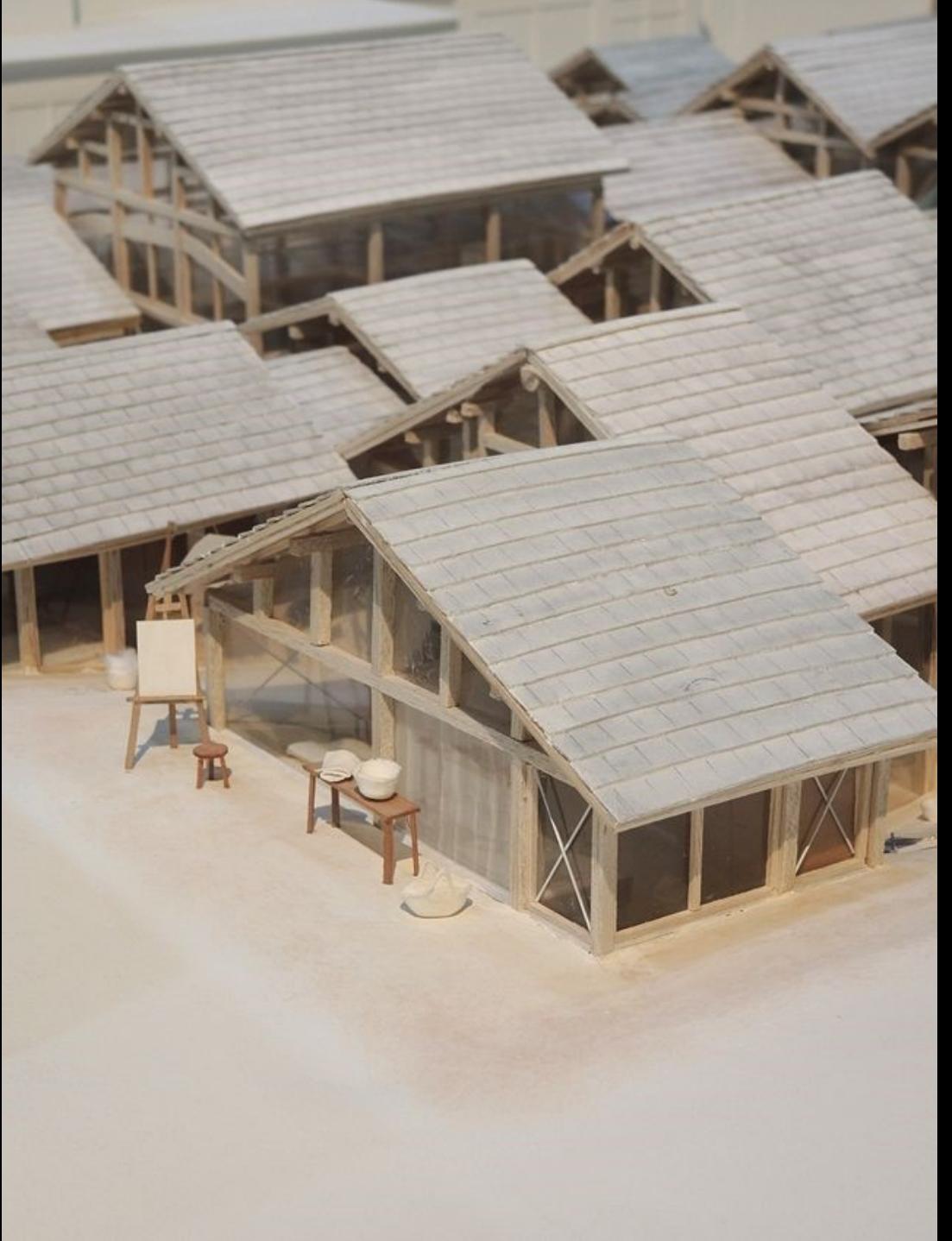


Floor plan

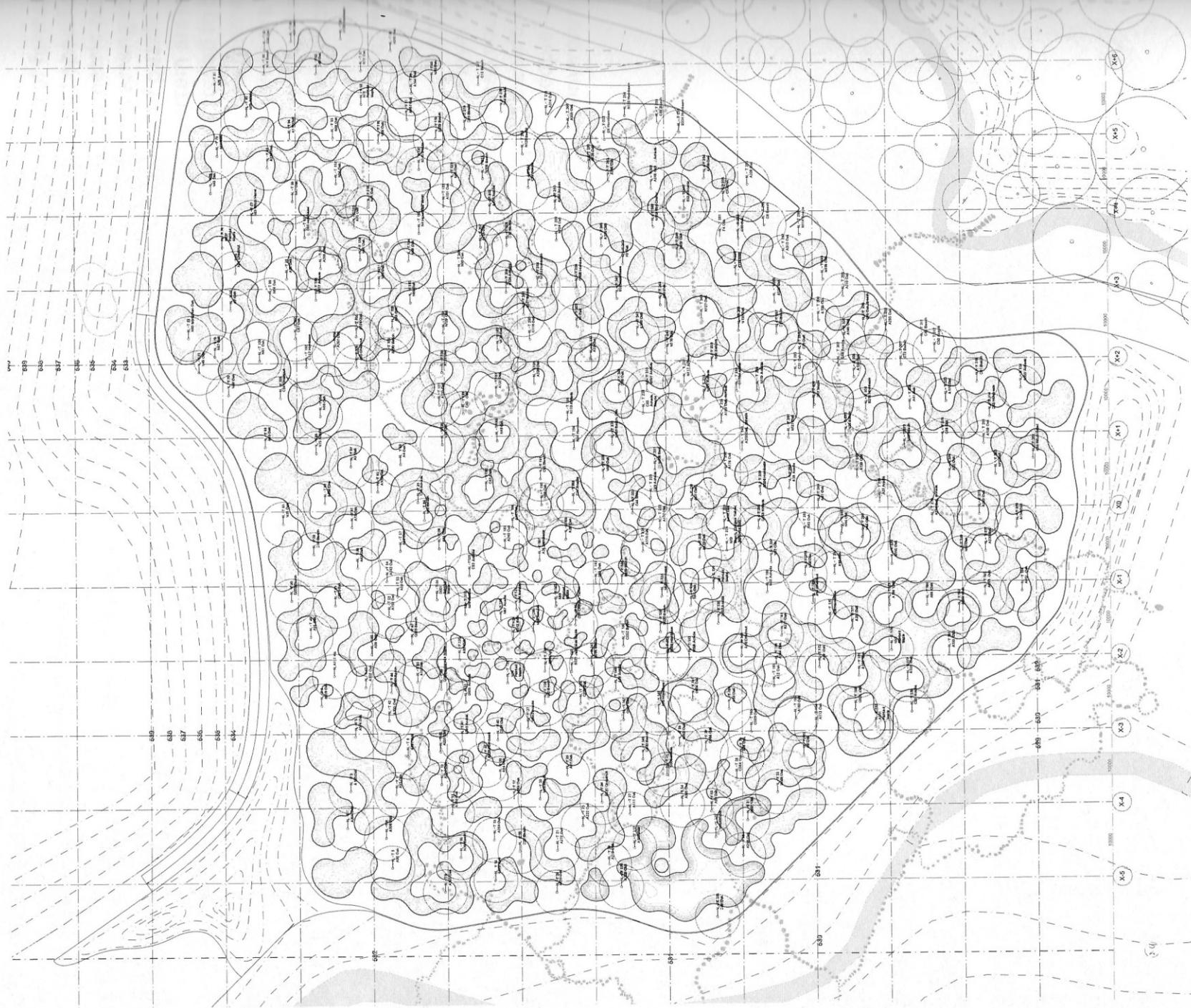
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1196	2645		616		1930	790	2730	1030			1597	1284

1108	2108	1826	5473	3007	2766	3640	3935	758	1965	1998	1970	1077	765	1825	755	253	4555	4878	637
1108	2108	1826	5473	3007	2766	3640	3935	758	1965	1998	1970	1077	765	1825	755	253	4555	4878	637





Ground plan



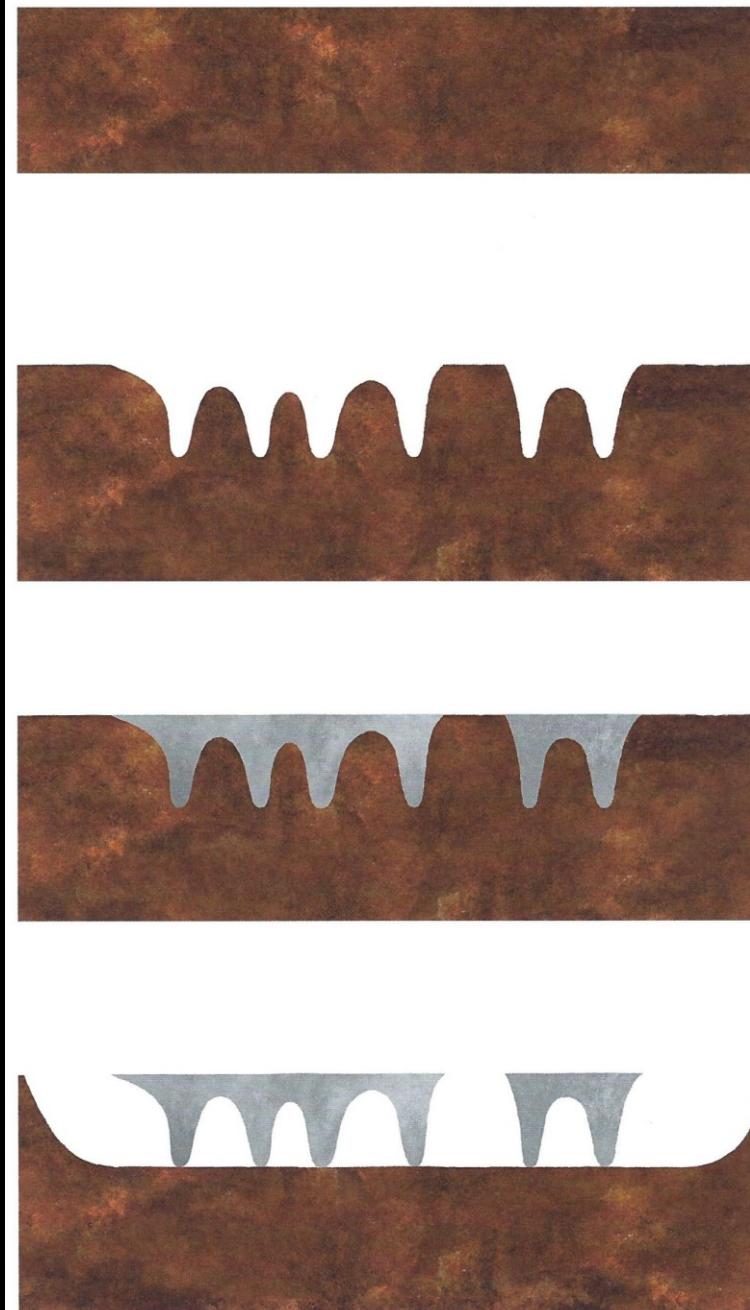










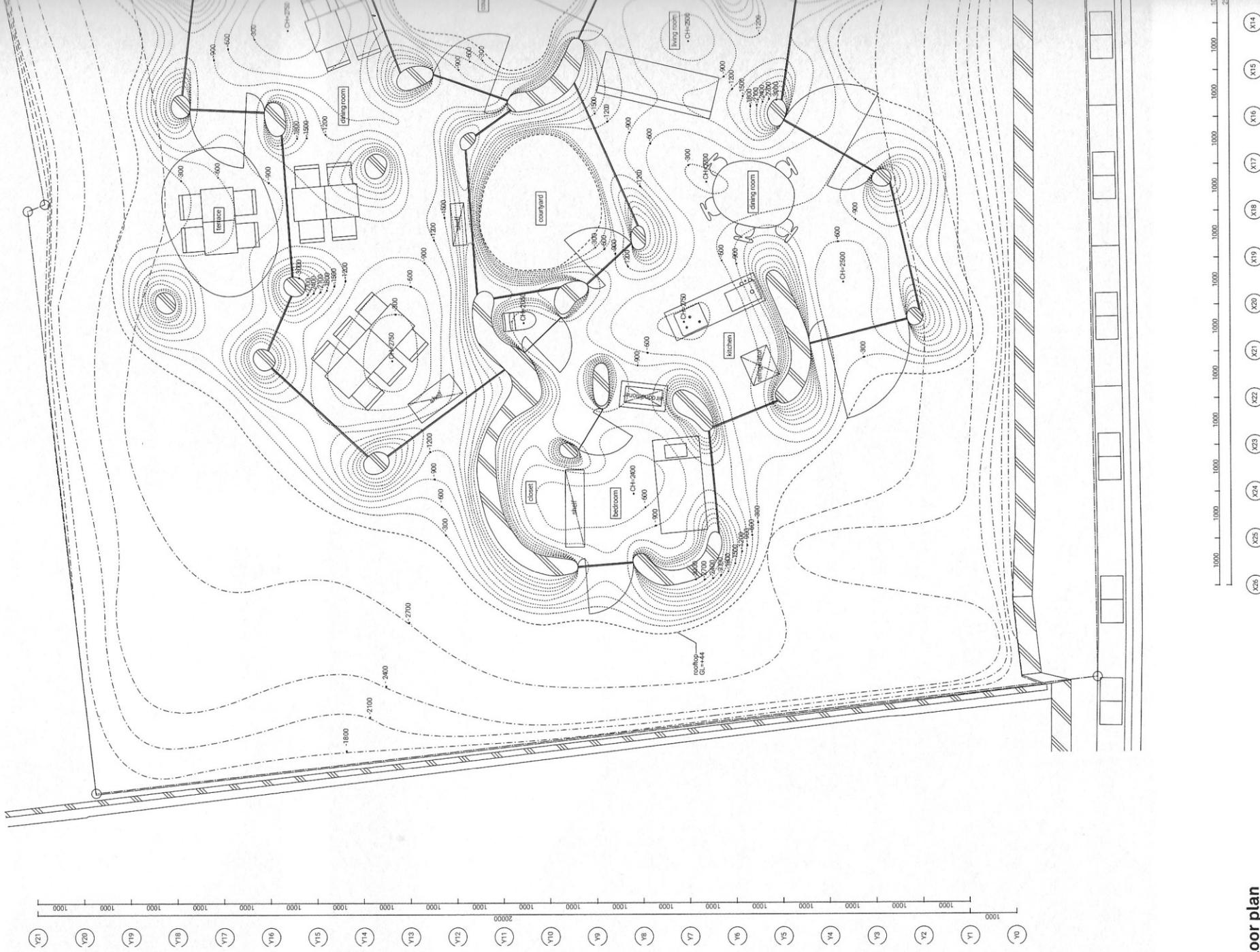


Concept drawings









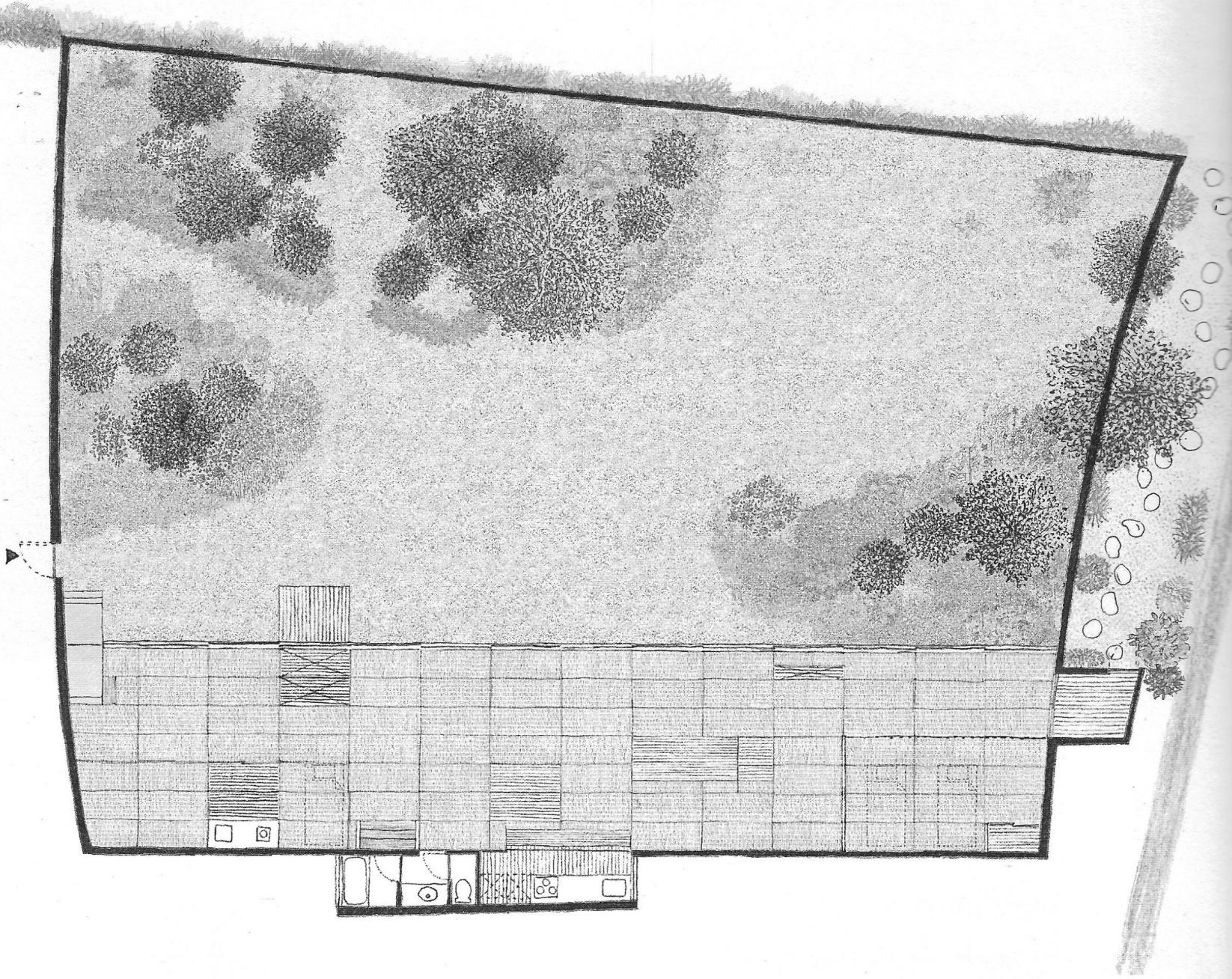
Floor plan









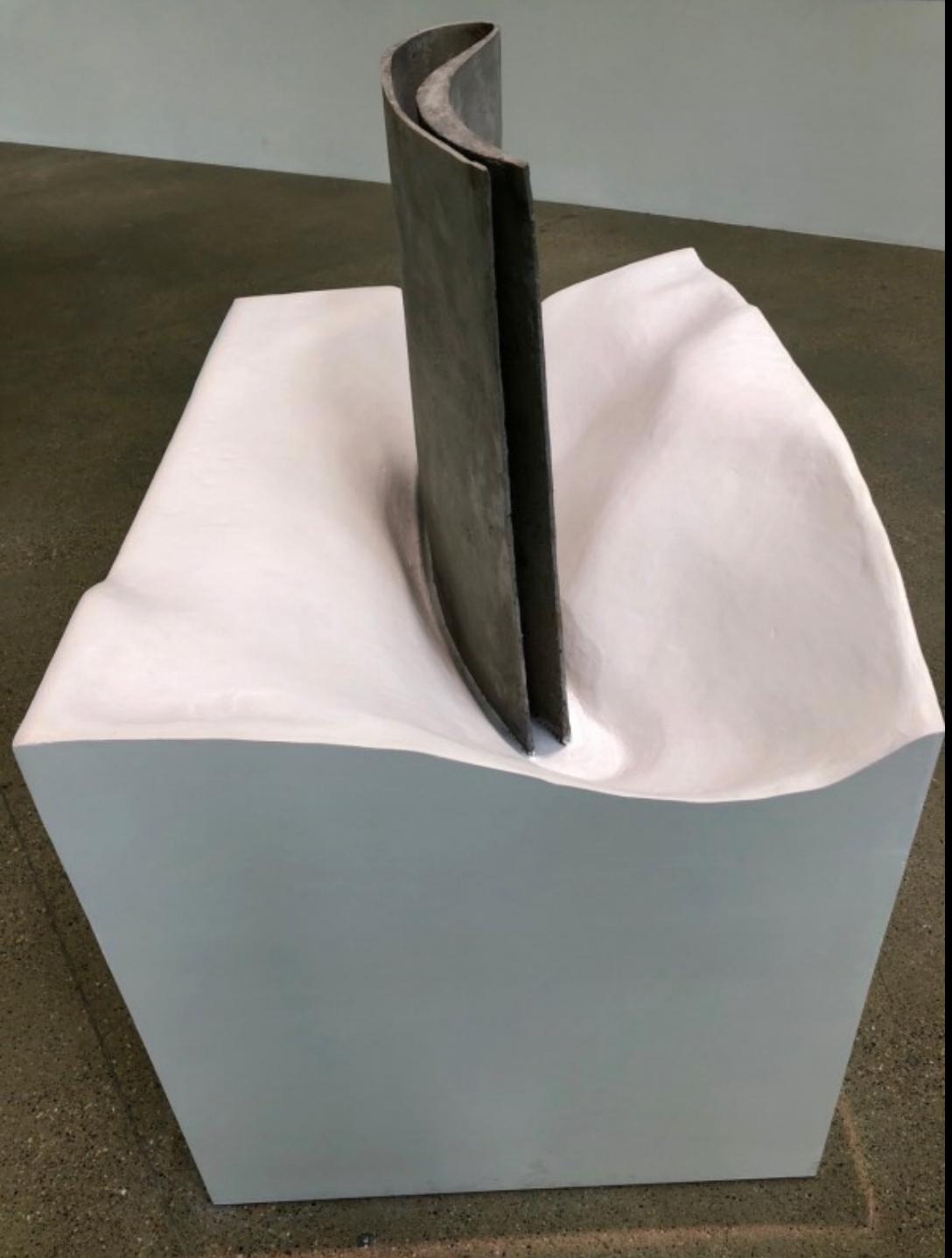


Floor plan

① 0 1

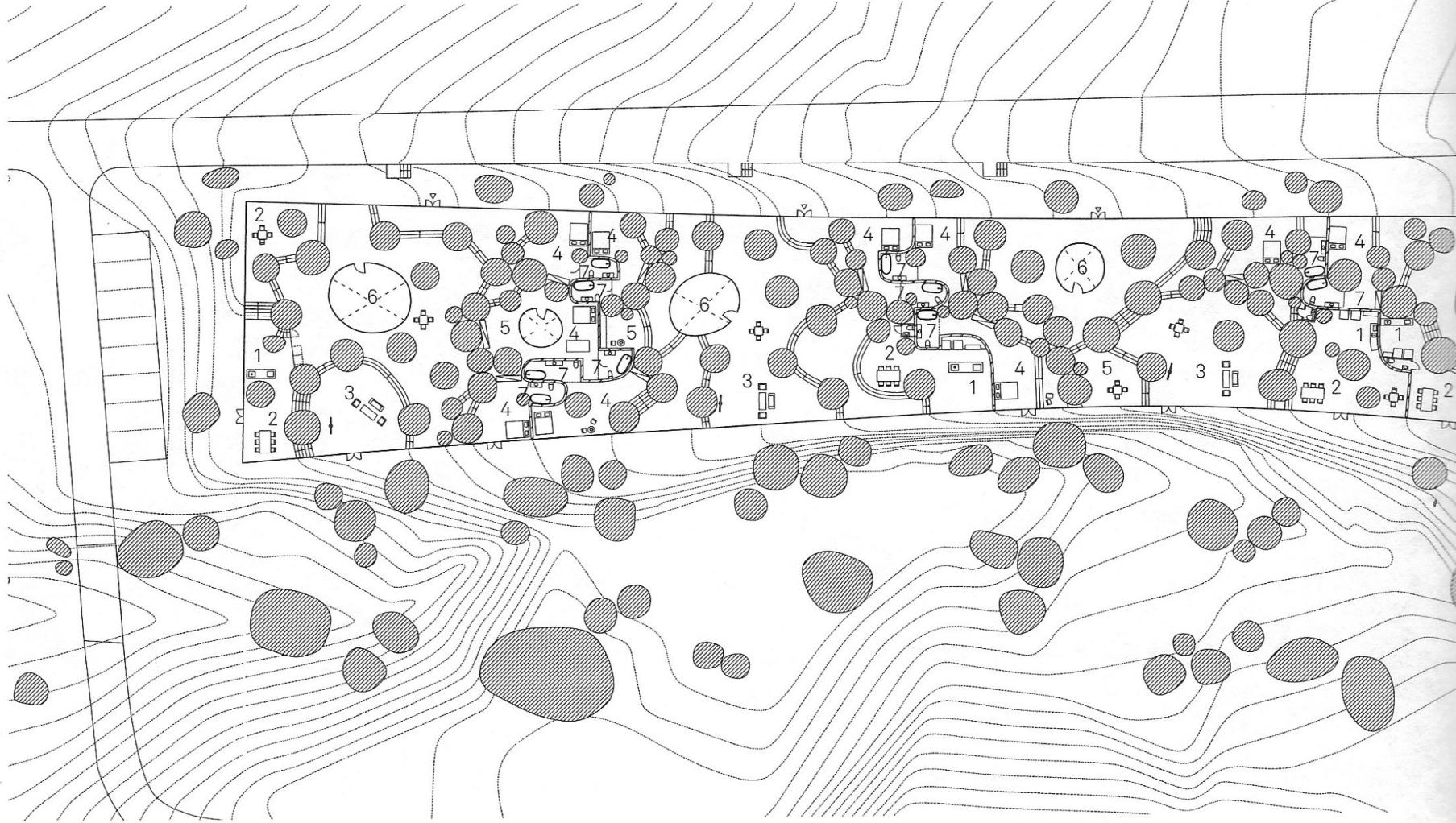








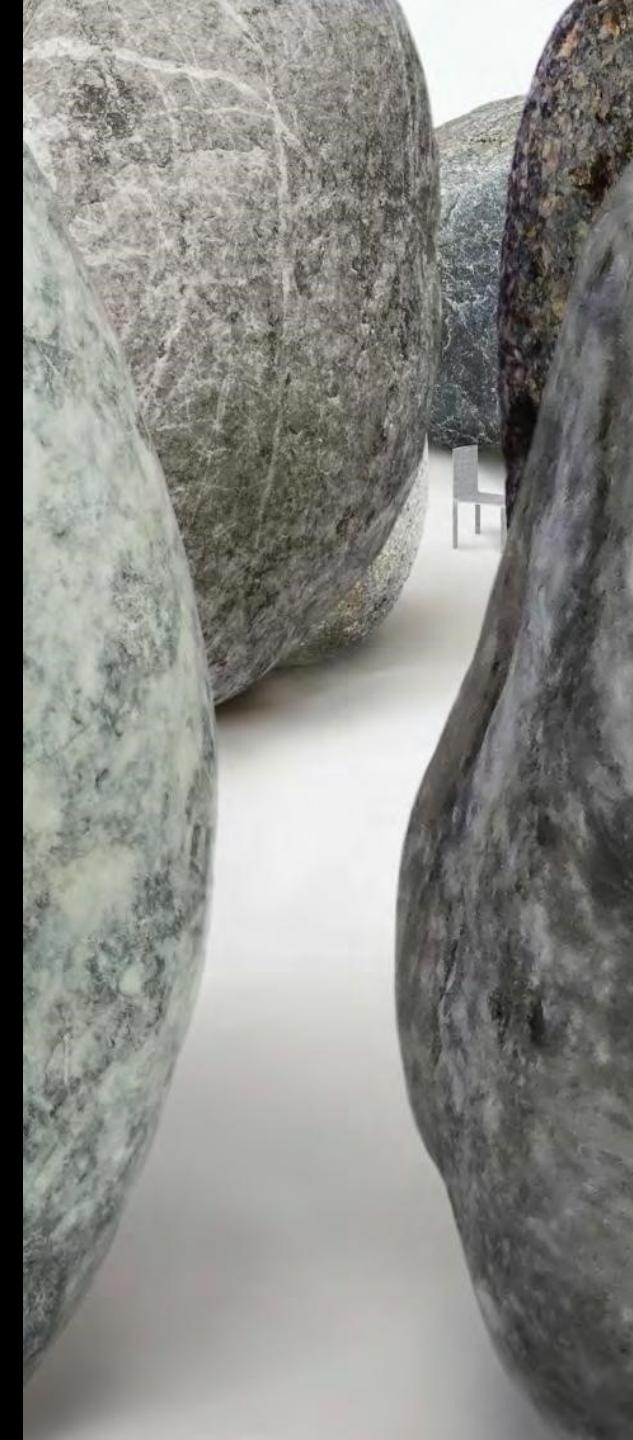
積乱雲から落ちる集中豪雨  
Local downpour from a cumulonimbus

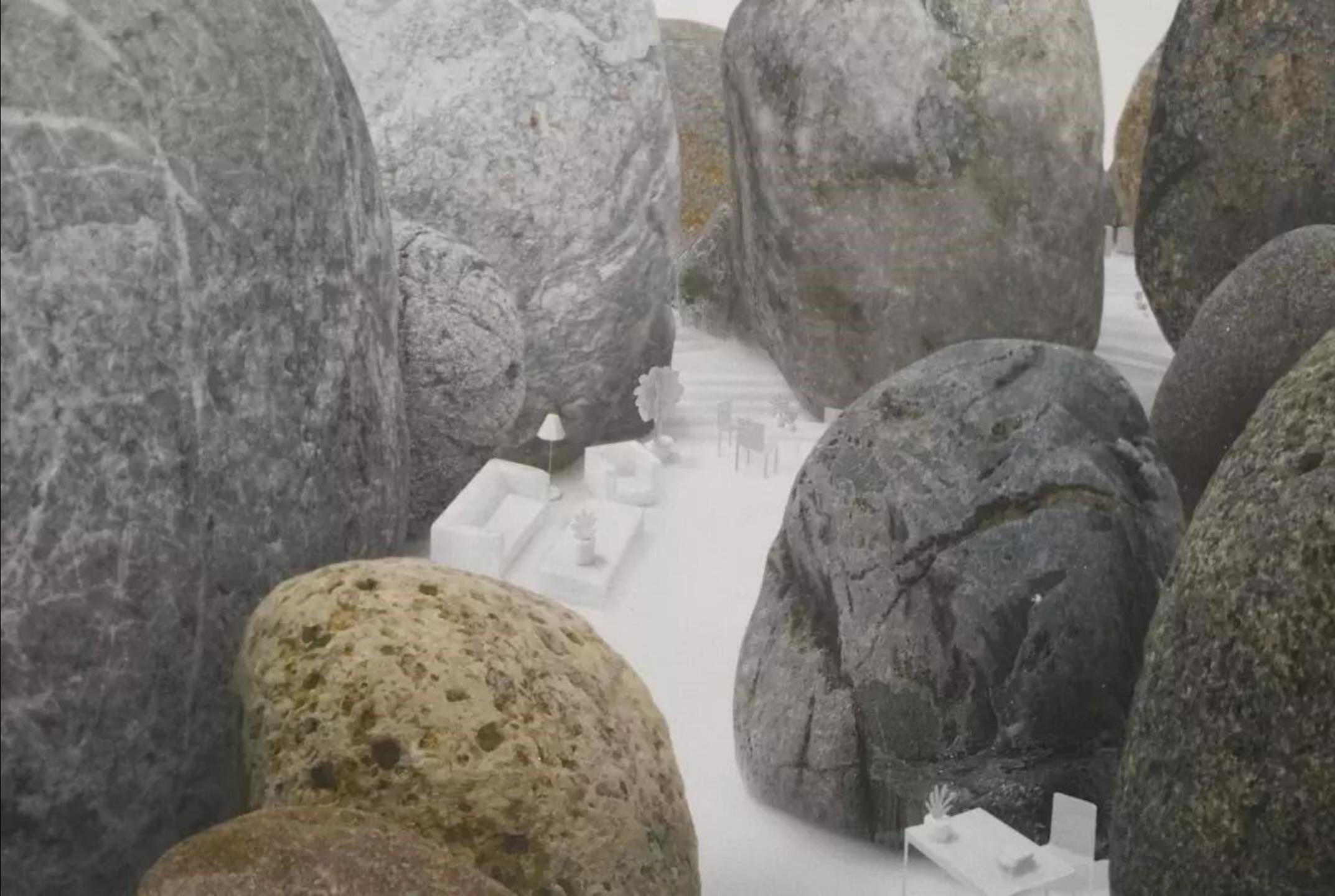


### Floor plan

- 1 Kitchen
- 2 Dining room
- 3 Living room
- 4 Bedroom
- 5 Reading room
- 6 Courtyard
- 7 Bathroom

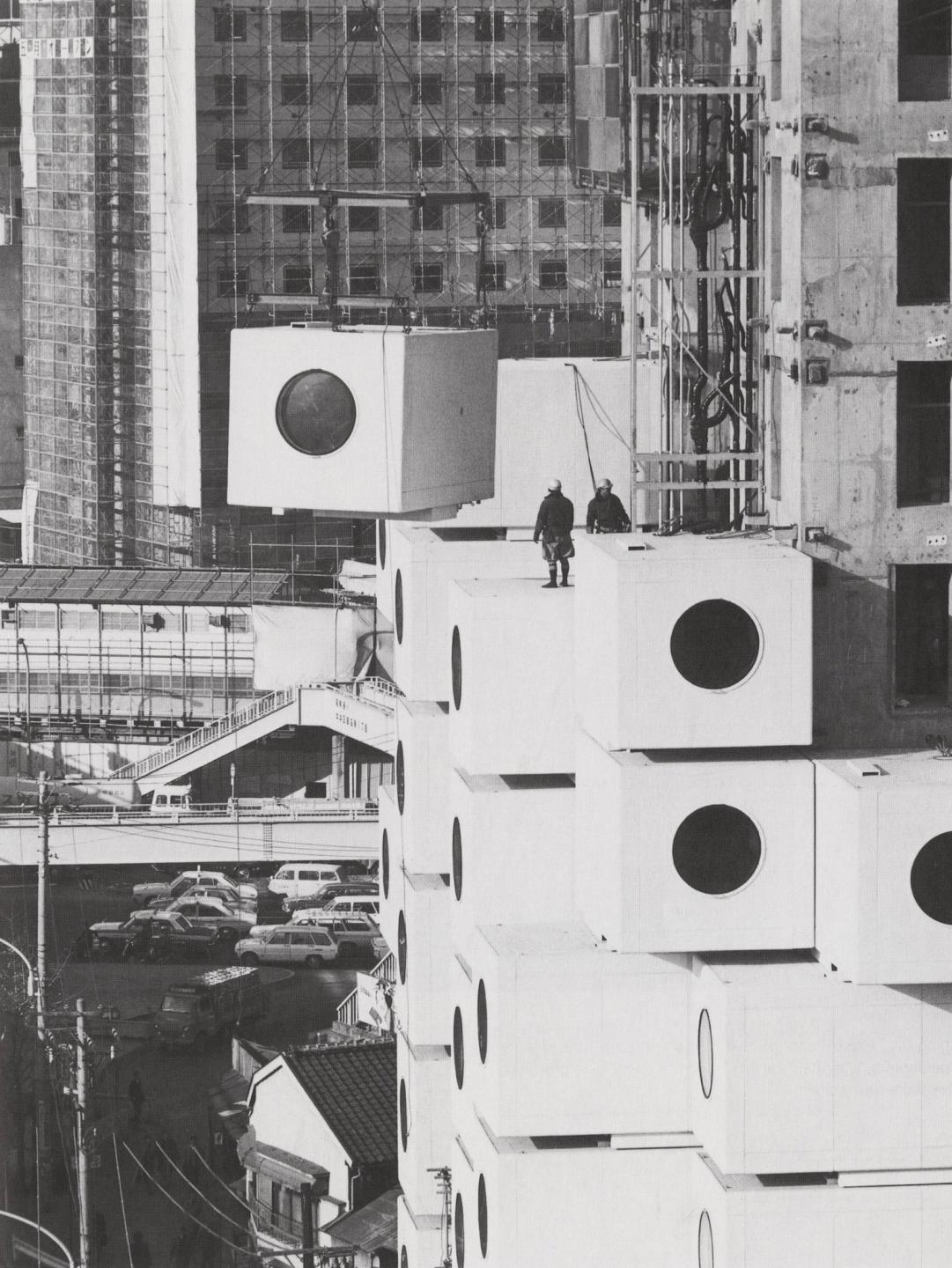
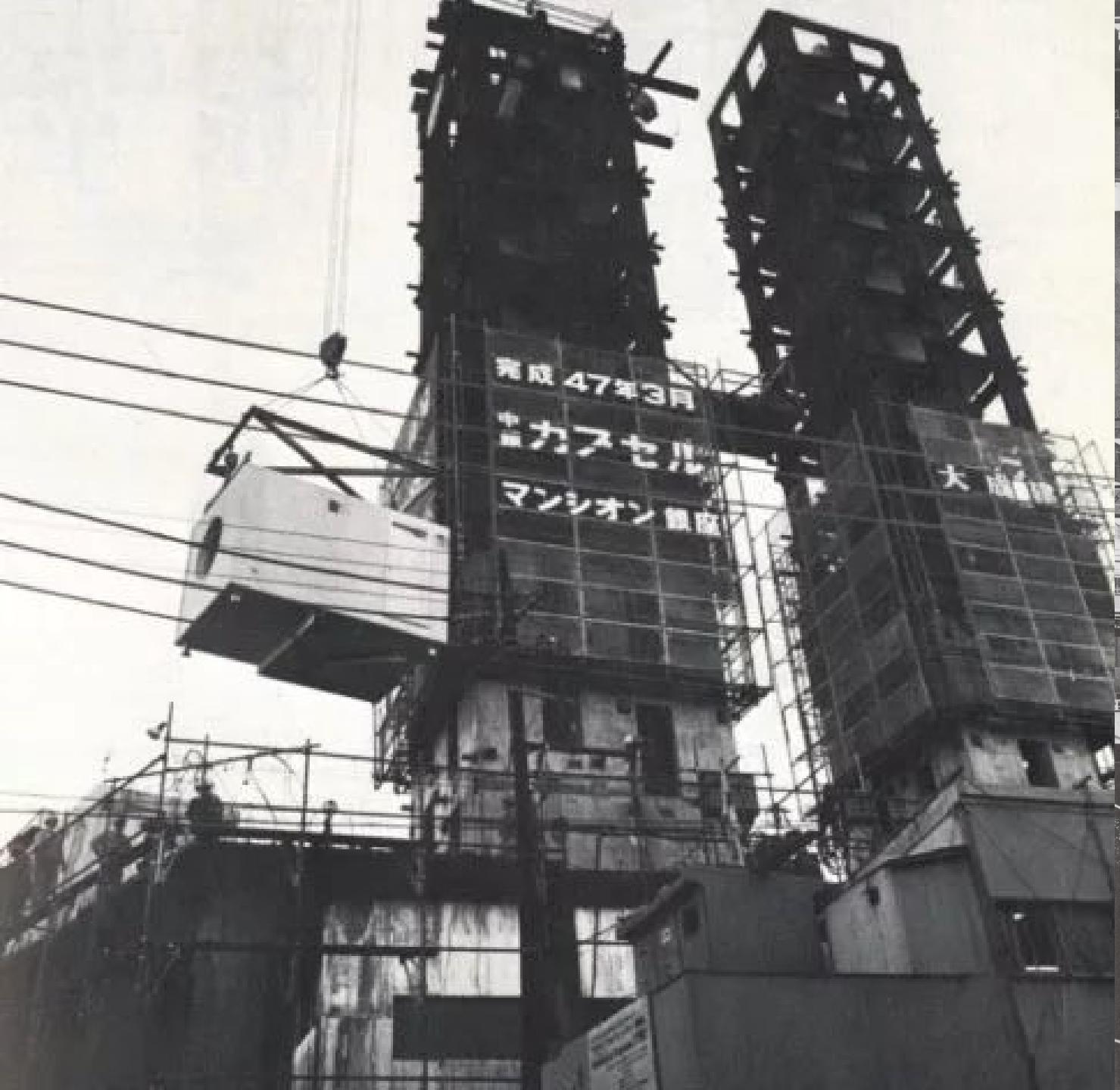


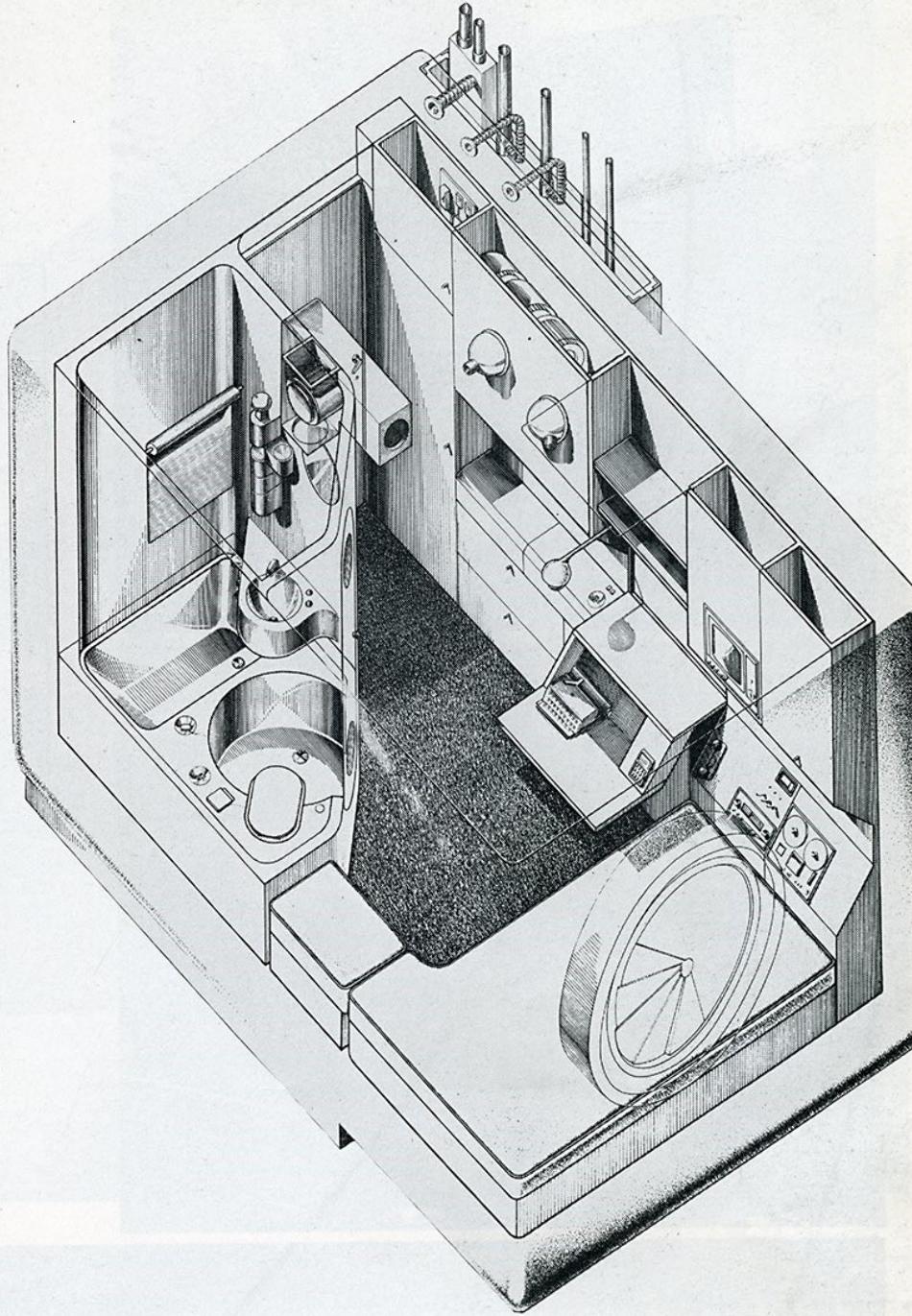
























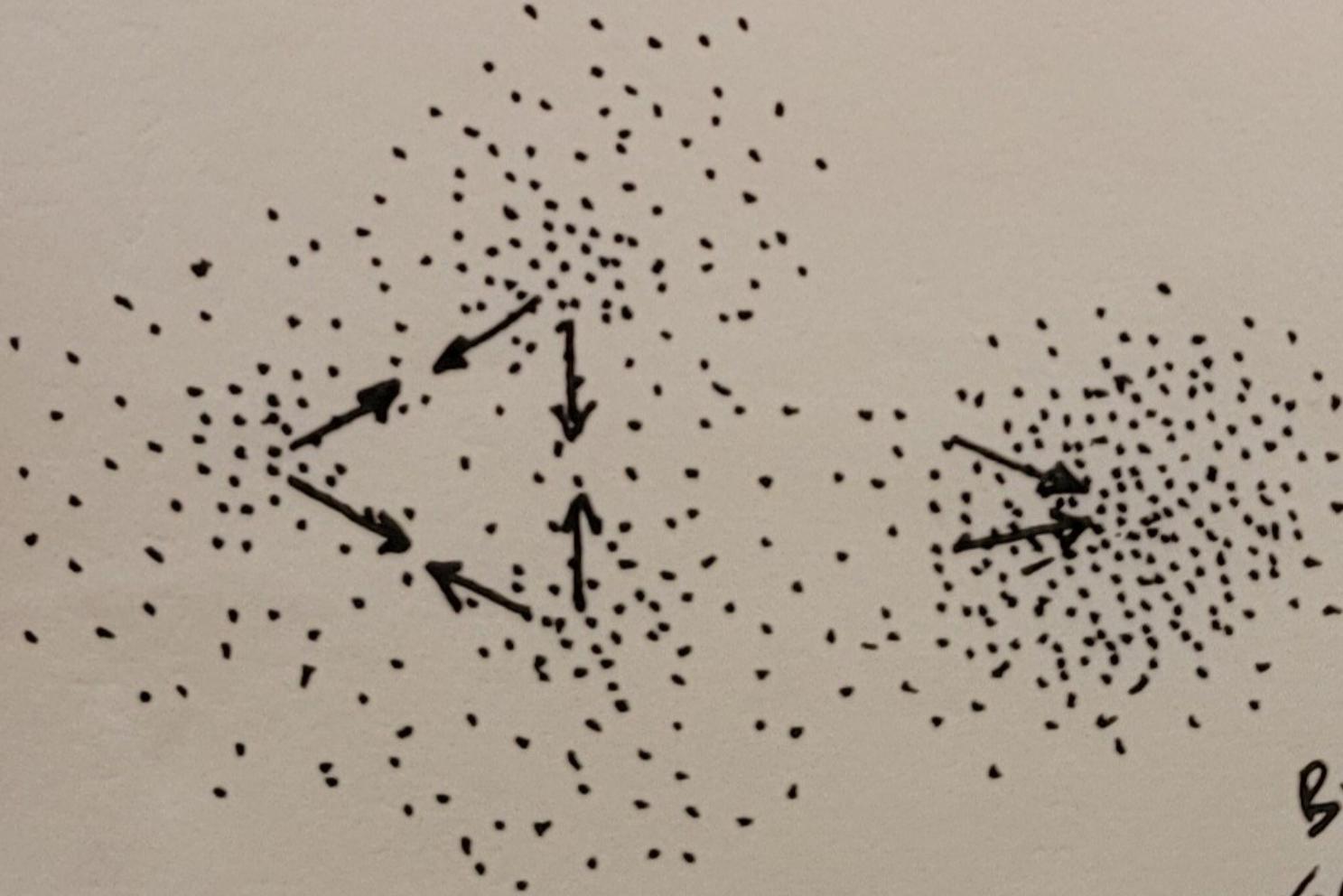












EACH BEING  
WITH OWN  
GRAVITY POD  
VARIED IN  
DENSITY FOR  
ISOLATION OR  
INTERACTION.  
HOME CREATED  
BY COLLECTIVE  
GATHERINGS,  
DISSOLVING AS  
BEHAVIORS SEPARATE.

2022.04.11 0:11-13 Am -