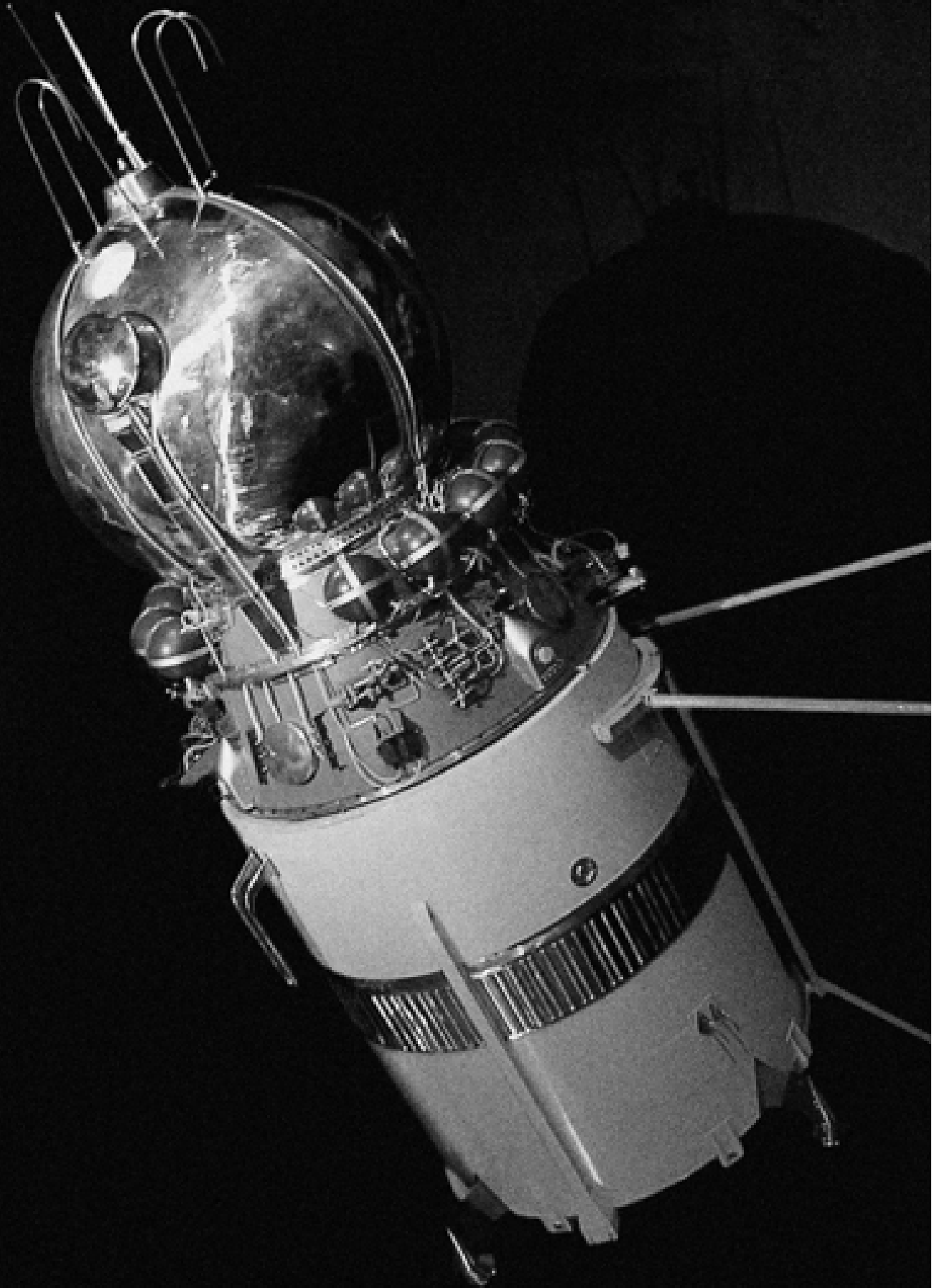


[VOSTOK]

Letícia Ramos



VOSTOK I - aircraft model



ESTAÇÃO VOSTOK / ANTÁRTICA
VOSTOK STATION

[VOSTOK]

Letícia Ramos

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Revisão e tradução - Érico Melo

Colaboração de textos - Josefina Trotta

Colaboração fotográfica - Glauco Firpo

Assistentes de artista - Pedro Gallego

Natalia Vaz

Maura Grimaldi

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www.leticia Ramos.com

leatomica@gmail.com

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BACK TO THE POLAR ICE

We were back in 1939 and, for the first time, Westinghouse was presenting a time capsule at the World Exhibition in New York. The capsule, made from cup alloy, was designed to survive until the year 6965. Length: 90 cm; Diameter: 16 cm; Weight: 363 kg. Inside, one could find things like a stitching thread reel, a doll, a book describing the capsule itself and the engineers involved in its creation, a flask containing seeds of basic edible plants, a microscope, and a microfilm with instructions for a possible visualization of the recorded images in the future.

April 12nd, 1961. He was the first man to orbit the Earth. It took exactly 1h48m. He climbed the stairs towards the elevator, then to the top of the launch vehicle, and now to the ship's scuttle. "Initial door closure... negative sealing signal... second try..." He looks to the right side of the launch control bunker and sees the sealing signal still off. Already tied on his chair, as every single day in the last years he hears the radio order to scuttle repositioning. The 32 screws holding the capsule's isolation door had to be removed and screwed again. Those minutes of expectation seemed eternal. His helmet showed the "СССР (URSS)" red letters, painted by hand in the preparation room by one of the mission engineers.

The slender Yuri was at last orbiting the Earth inside a 2-meter sphere. VOSTOK I expels the capsule from the equipment module, and the pilot is ejected. Yuri shoots the parachute valve off, and above his shoulders he sees an air curtain being formed by his movement in space. It was a realistic dream. He was just 7 km apart from Earth again.

Laying down on that green pasture in the Saratov province, Gagarin was completing the first mission of the Soviet Vostok space program. It was the first time a man left Earth.

1.

CÁPSULAS DO TEMPO

time capsules

Com 90 cm de comprimento, 16 cm de diâmetro e 363 kg, a Westinghouse apresenta pela primeira vez, na Exposição Mundial de Nova Iorque, uma cápsula do tempo.

Estávamos em 1939, e a cápsula de *cup alloy* havia sido concebida para resistir até o ano 6965. Seu interior continha, entre outras coisas, um carretel de linha, uma boneca, um livro que descrevia a própria cápsula e os engenheiros responsáveis por sua criação, um frasco de sementes de alimentos básicos, um microscópio e um microfilme com instruções para uma possível reprodução futura do material gravado.

Era 12 de abril de 1961. Ele era o primeiro homem a orbitar a Terra, em exatos 108 minutos. Subiu as escadas em direção ao elevador, em seguida até a parte superior do veículo de lançamento e agora para a escotilha de sua nave. “Encerramento inicial da porta... sinal de vedação inativo... segunda tentativa...” Olha para a direita do bunker de controle de lançamento e o sinal de vedação segue inativo. Já preso em sua cadeira, como todos os dias nos últimos anos, escuta pelo rádio a ordem para o reposicionamento da escotilha. Seria necessário retirar e recolocar os 32 parafusos que fixam a porta isolante da cápsula. Os minutos de espera que pareceram eternos. No seu capacete, *CCCP (URSS)* pintado à mão com prolixas letras vermelhas feitas às pressas na sala de preparação por um dos engenheiros da missão.

Em uma esfera de dois metros de diâmetro, por fim orbitava a Terra o franzino Yuri. VOSTOK I separa a cápsula do módulo de equipamentos e ejeta o piloto. Yuri dispara a válvula do seu paraquedas e vê, acima dos ombros, uma cortina de ar formada pela velocidade do seu movimento no espaço. Era um sonho realista. Ele já estava novamente só a 7 km da terra. Deitado naquele pasto verde da província de Saratov, Gagarin concluía a primeira missão do programa espacial soviético VOSTOK I. Foi a primeira vez que um homem saiu da Terra.

Amongst the white Antarctic desert at -40C, the Russian scientific team of the VOSTOK base measures the actual area of a subglacial lake which is 4 km under the ice floor, just below the research station. One of the largest lakes in Antarctica, it survived 100-thousand years in isolation from the surface.

Maybe the last unexplored place in Earth is just below your feet - quite weird, isn't it?

Pre-historical creatures dwell in the deep waters of the Lake VOSTOK. The rocky hills are covered by green. The sun. Slowly, the Earth starts to cool down. Polar icecaps and glaciers grow thicker; the ice begins to enfold all the Antarctic continent. Lake VOSTOK submerges like a huge bubble of liquid, isolated water - a time capsule.

February 5th, 2012, VOSTOK Russian base. In the opposite pole of the Earth, we finally get a sample of the subglacial lake water throughout a 4-km drilling channel. Pseudo-scientific media circulate certain hypotheses about the existence of plant and animal life from pre-historical eras, as well as extraterrestrial micro-organisms, in these lakes. But no significant micro-organism is found in the samples.

A visionary Russian explorer decides to undertake an experimental investigation of Lake VOSTOK. During a routine sample collect, the scientist attaches a micro-submarine to the station probe. The micro-submarine travels 4 km down the ice. Its purpose is to navigate across this time-lost lake.

In 2020, due to the countless signal interferences produced by cell phone towers, new directives suspend the monitoring of old researches in the Lake VOSTOK. Replacing the obsolete system would require a special mission to find new observation points and reinstall the monitoring operation. Researchers at the experimental center were shut down. It is only in 2050, after a long defrosting period, that the spheres implanted by the micro-submarine start to spontaneously reveal themselves, scattering all over the ocean. Only when the time capsule made by scientist Sergei Popovisky was open the enigma of spheres could be solved, and the images inside them could be captured.

Em meio ao branco do nada antártico, a uma temperatura abaixo de -40C, a equipe de cientistas russos da base VOSTOK afere a real extensão de um lago submerso situado a 4 km da base de gelo. Justamente abaixo da estação de pesquisa. Um dos lagos de maior extensão na Antártica, que durante cem mil anos permaneceu isolado da superfície da Terra, se localizava abaixo da estação russa VOSTOK.

Não é curioso que talvez o último lugar inexplorado da Terra esteja abaixo dos seu pés?

Seres pré-históricos nadam nas profundezas do lago VOSTOK, a vegetação cobre as colinas rochosas, o sol. A Terra começa a esfriar progressivamente, as calotas e glaciares começam a crescer e o gelo a cobrir todo o continente antártico. O lago VOSTOK submerge como uma imensa bolha de água líquida, isolada, uma cápsula do tempo.

Em 5 de fevereiro de 2012, através de uma perfuração de 4 km do interior da estação russa VOSTOK foi possível finalmente retirar uma amostra do lago subglacial de mesmo nome. Circularam entre os meios pseudocientíficos hipóteses sobre a presença de flora e fauna pré-históricas e também sobre a possível existência de microrganismos extraterrestres. Nenhum microrganismo significativo é encontrado nestas amostras.

O visionário explorador russo, Serguei Poppovisky, decide formular uma investigação experimental no LAGO VOSTOK. Em uma inspeção rotineira de retirada de amostras, o cientista implanta um microsubmarino na sonda instalada na estação. O microsubmarino atravessa os 4 km de gelo. Seu objetivo: navegar por este lago perdido no tempo.

Em 2020, as novas diretrizes do Centro Independente de Estudos de Ciência Experimental São Petersburgo interrompem o monitoramento de antigas pesquisas experimentais sobre lago VOSTOK devido às inúmeras interferências na comunicação causadas pela proliferação de torres de celular na Antártica. A troca do sistema de comunicação em pesquisas obsoletas requeriria uma missão exploratória especial para reinstalar o monitoramento. Em 2050, depois de um longo período de degelo antártico, esferas implantadas por um batiscafo russo emergem espontaneamente e se dispersam aos quatro cantos do oceano. Somente com a abertura da cápsula do tempo criada pelo cientista Serguei Poppovisky se pôde descobrir a origem das esferas e ter acesso às imagens realizadas por elas.





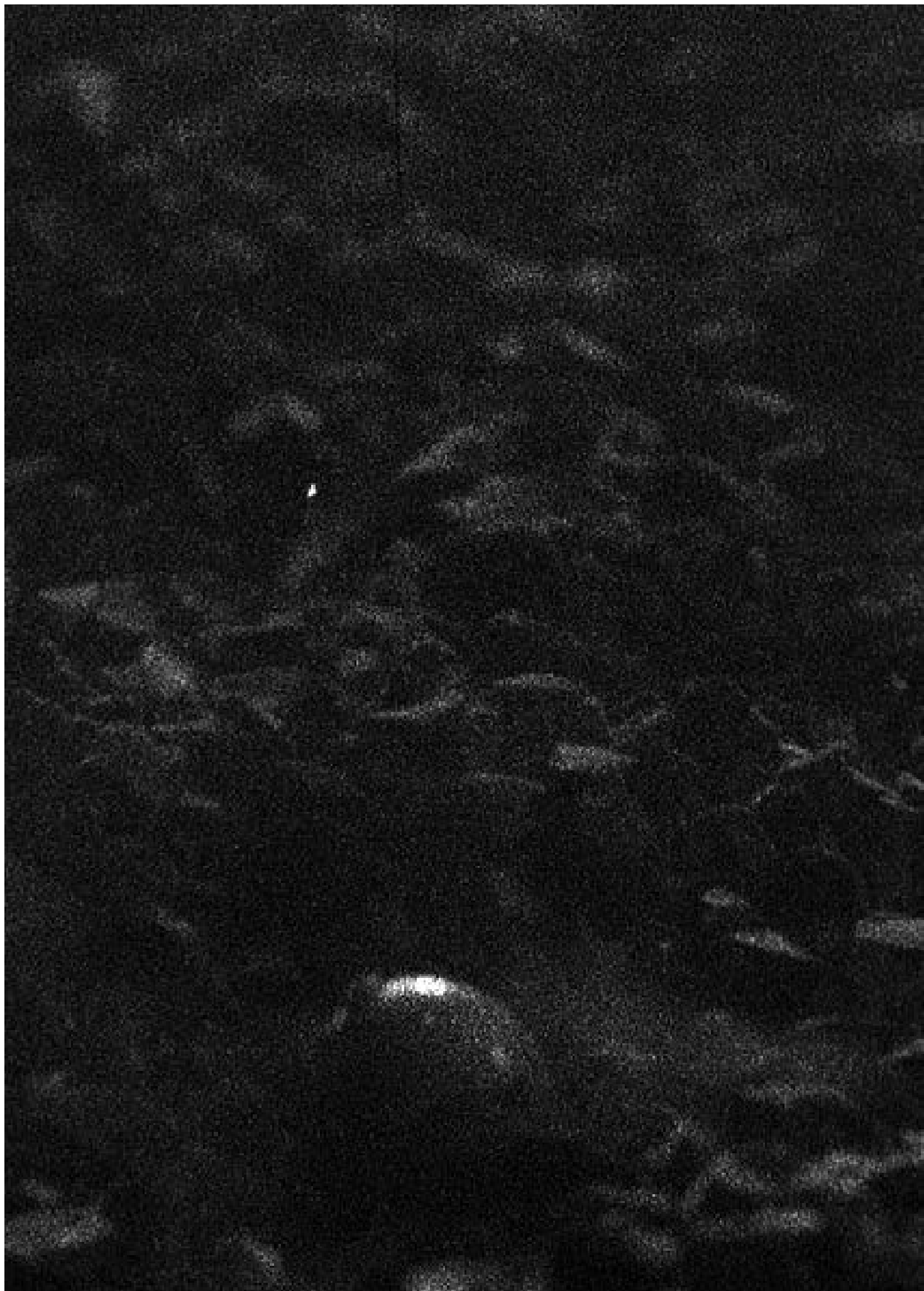


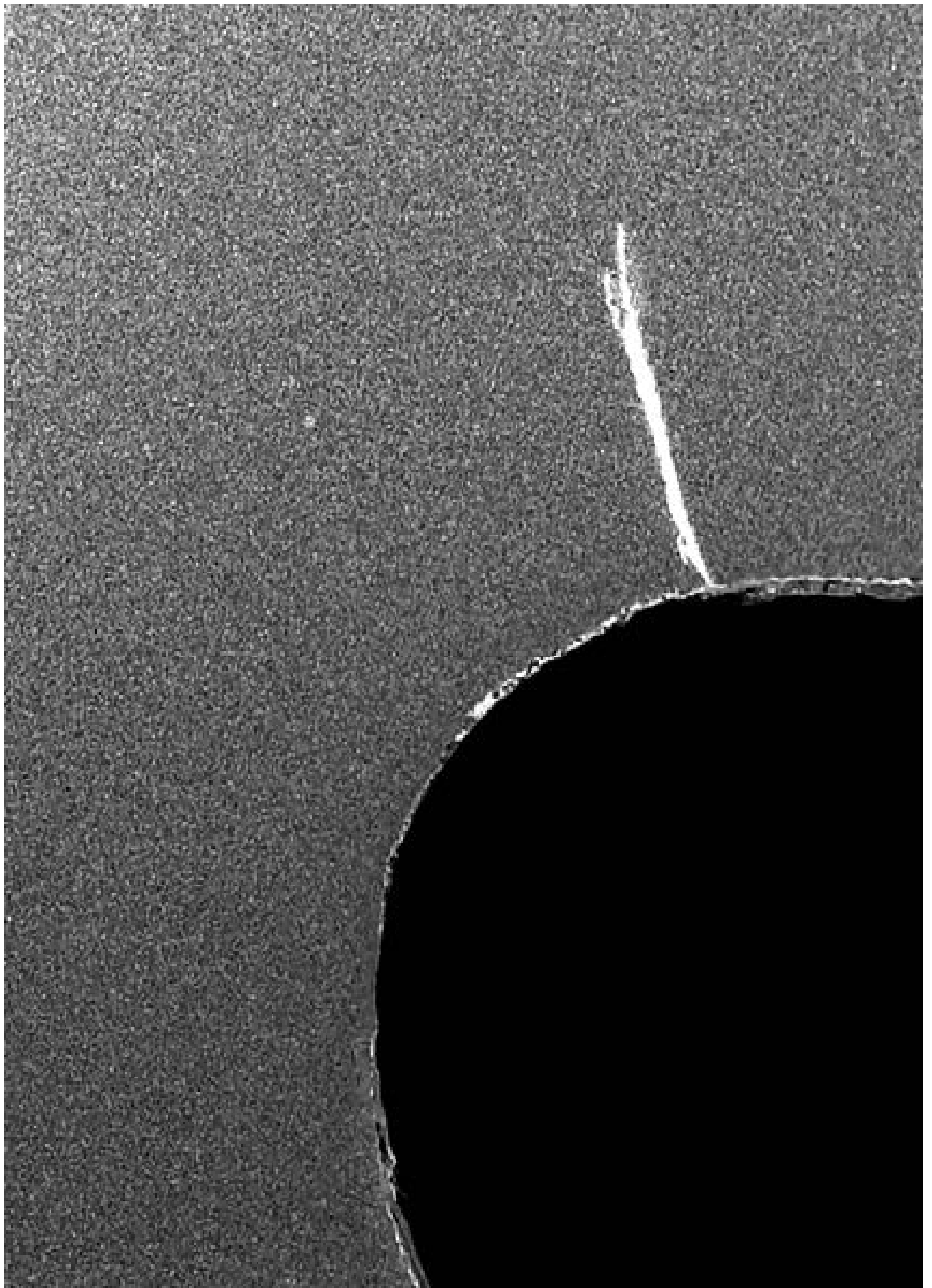


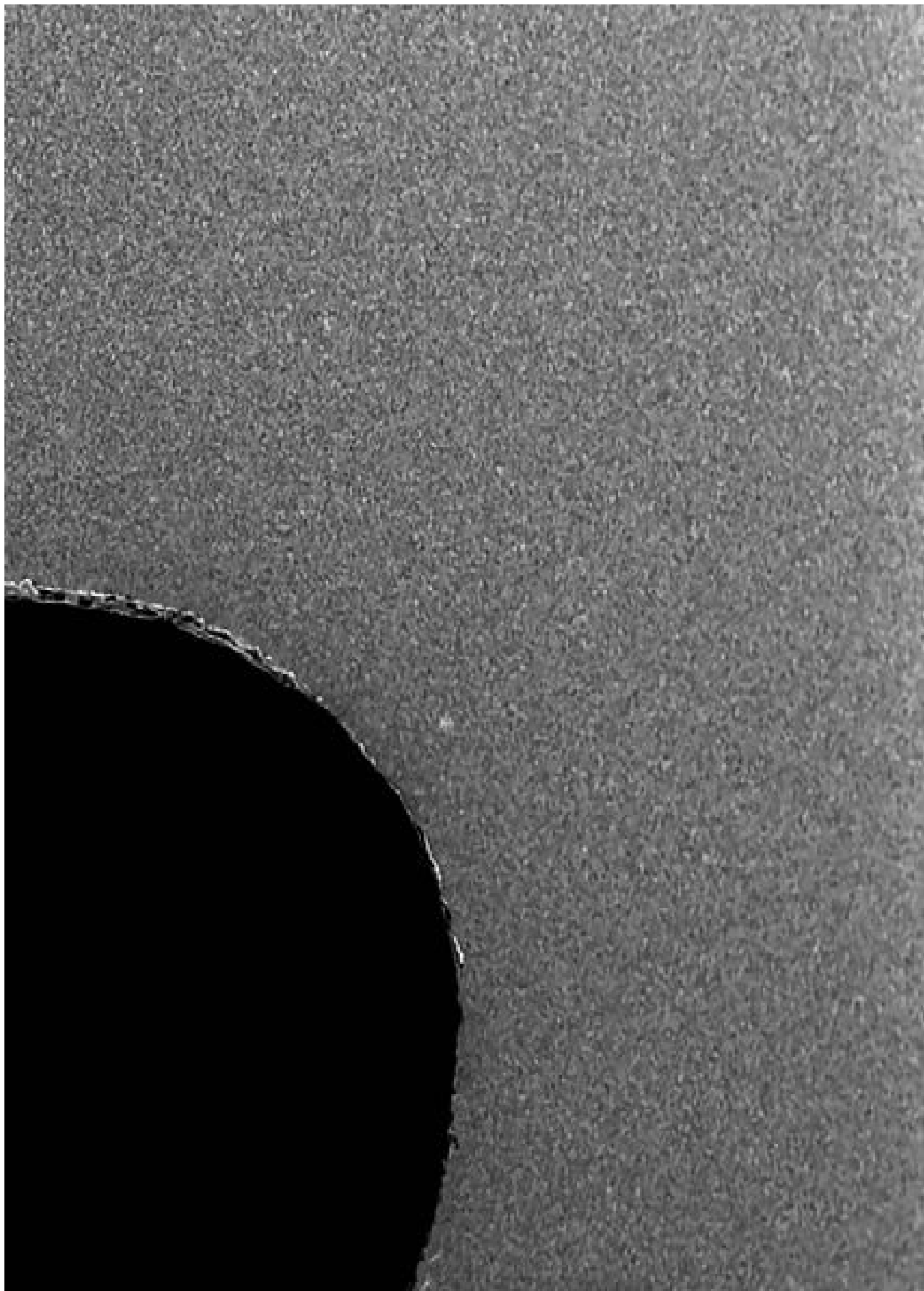


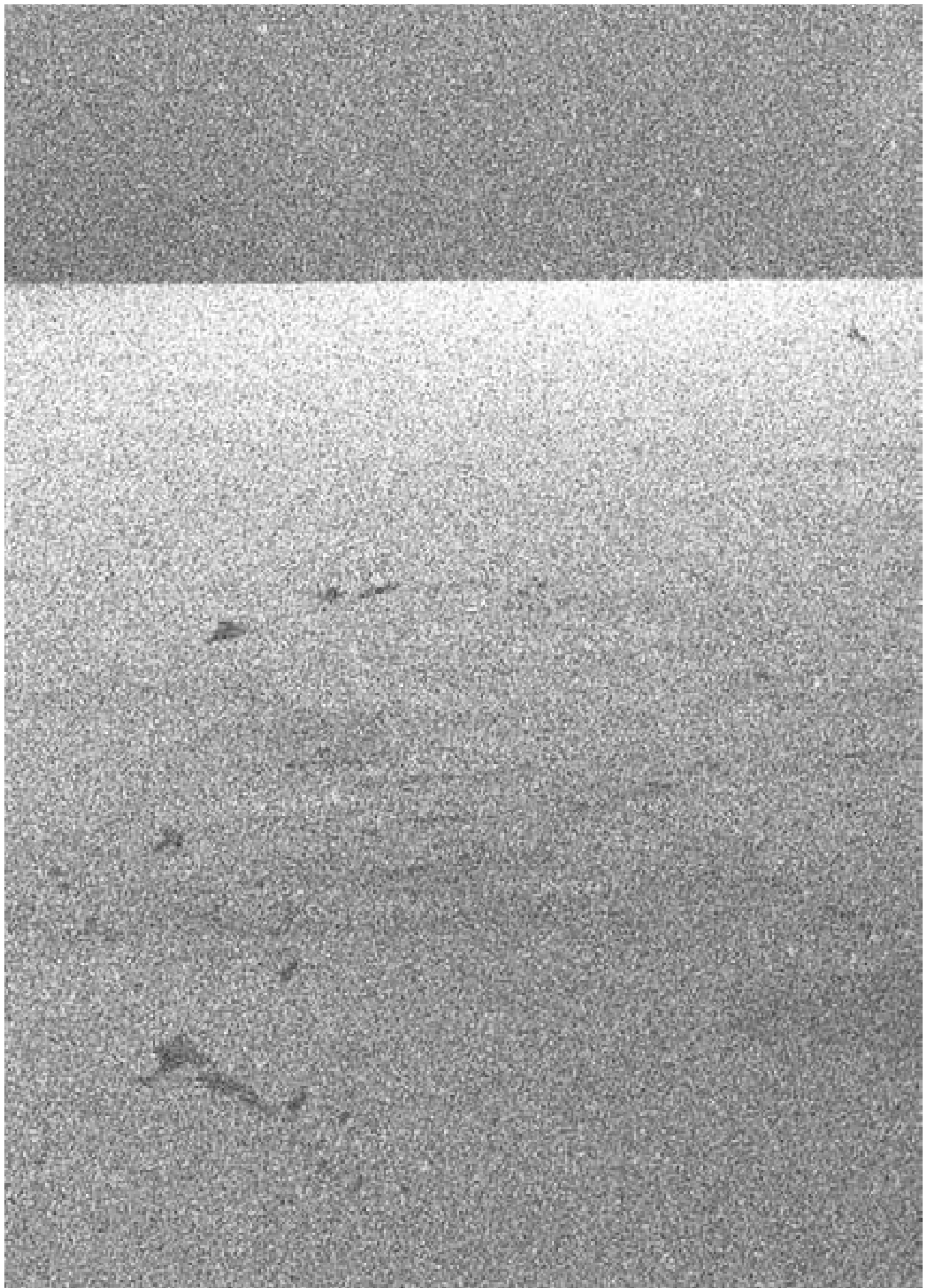


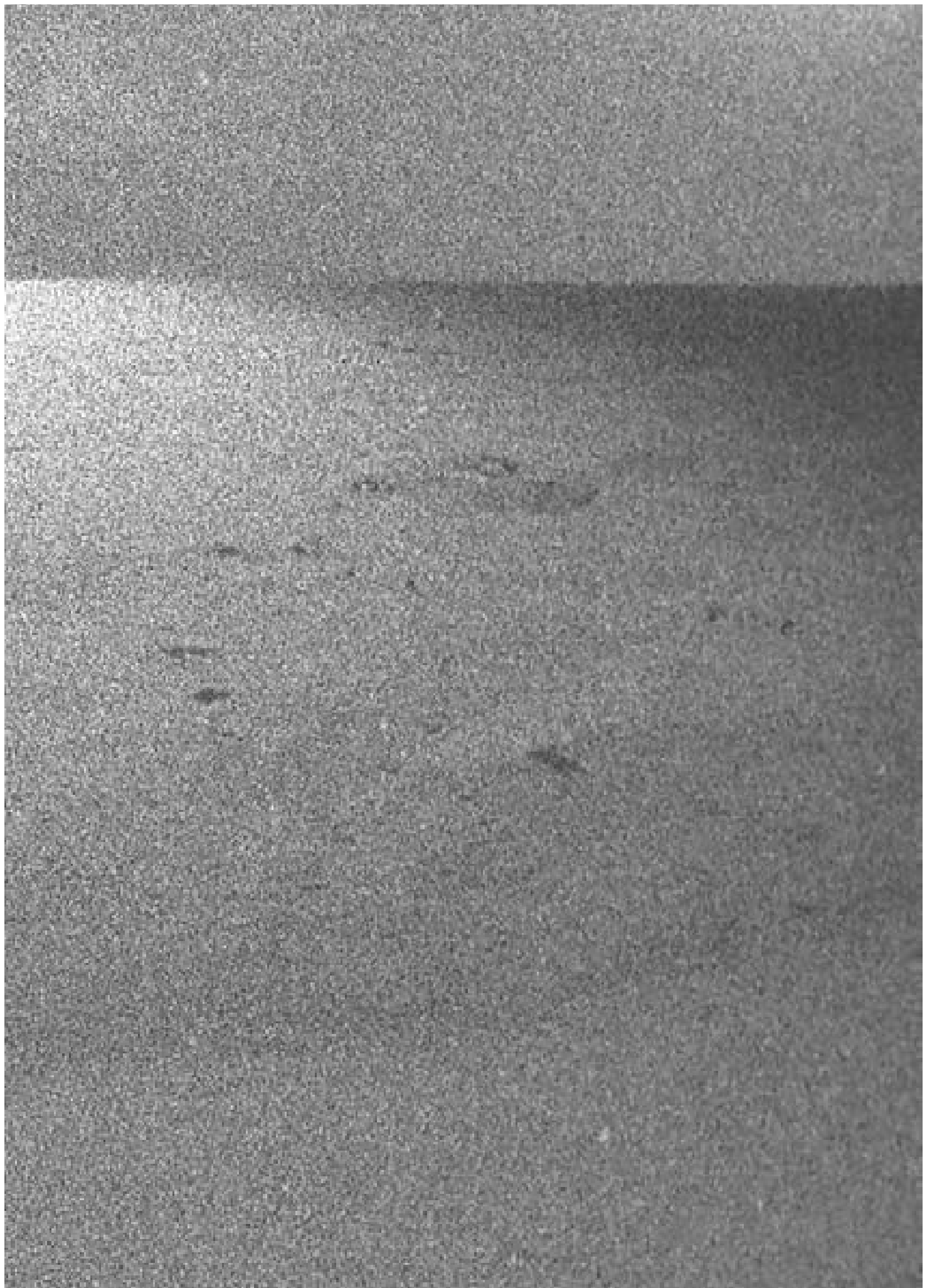




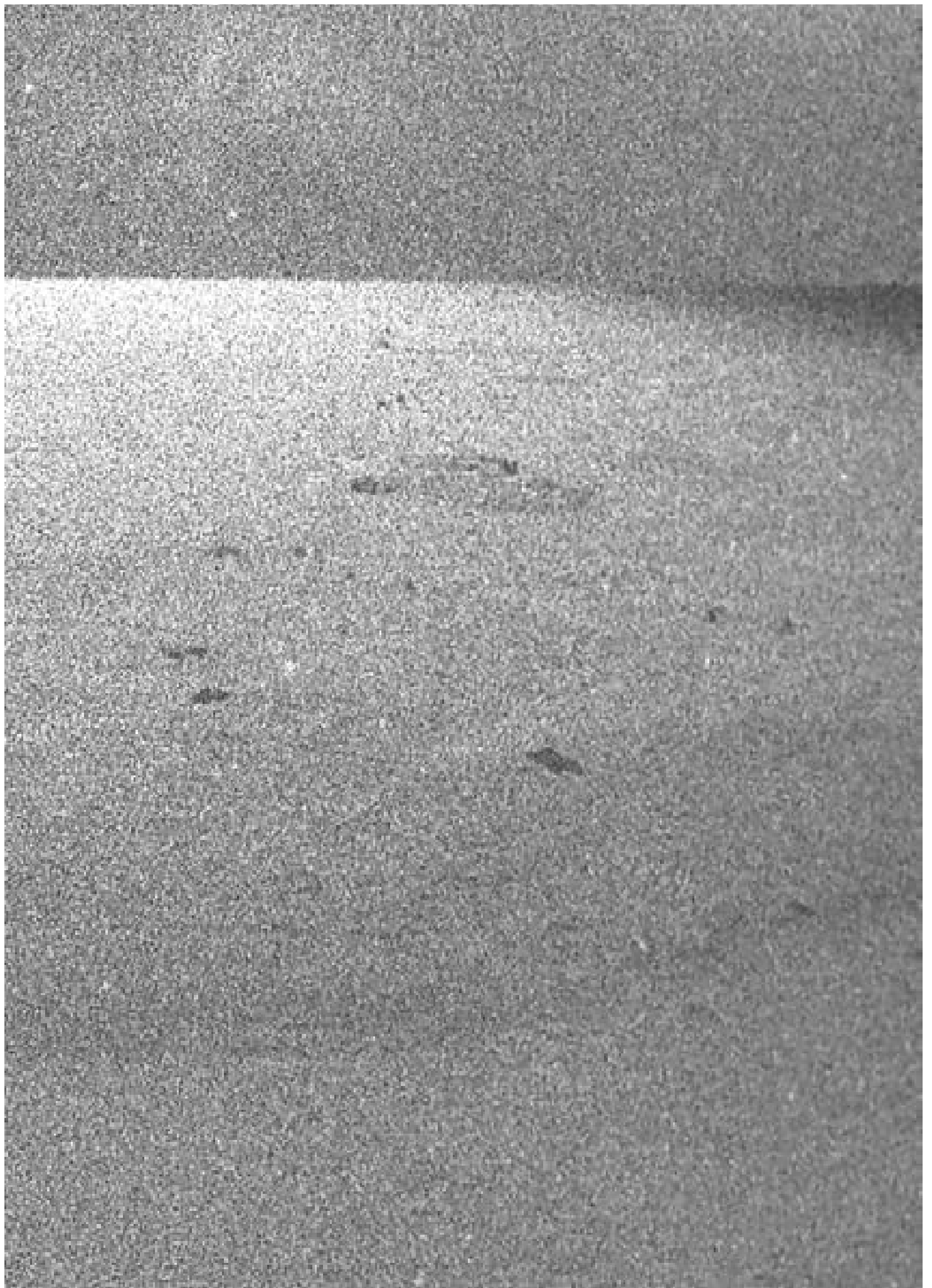


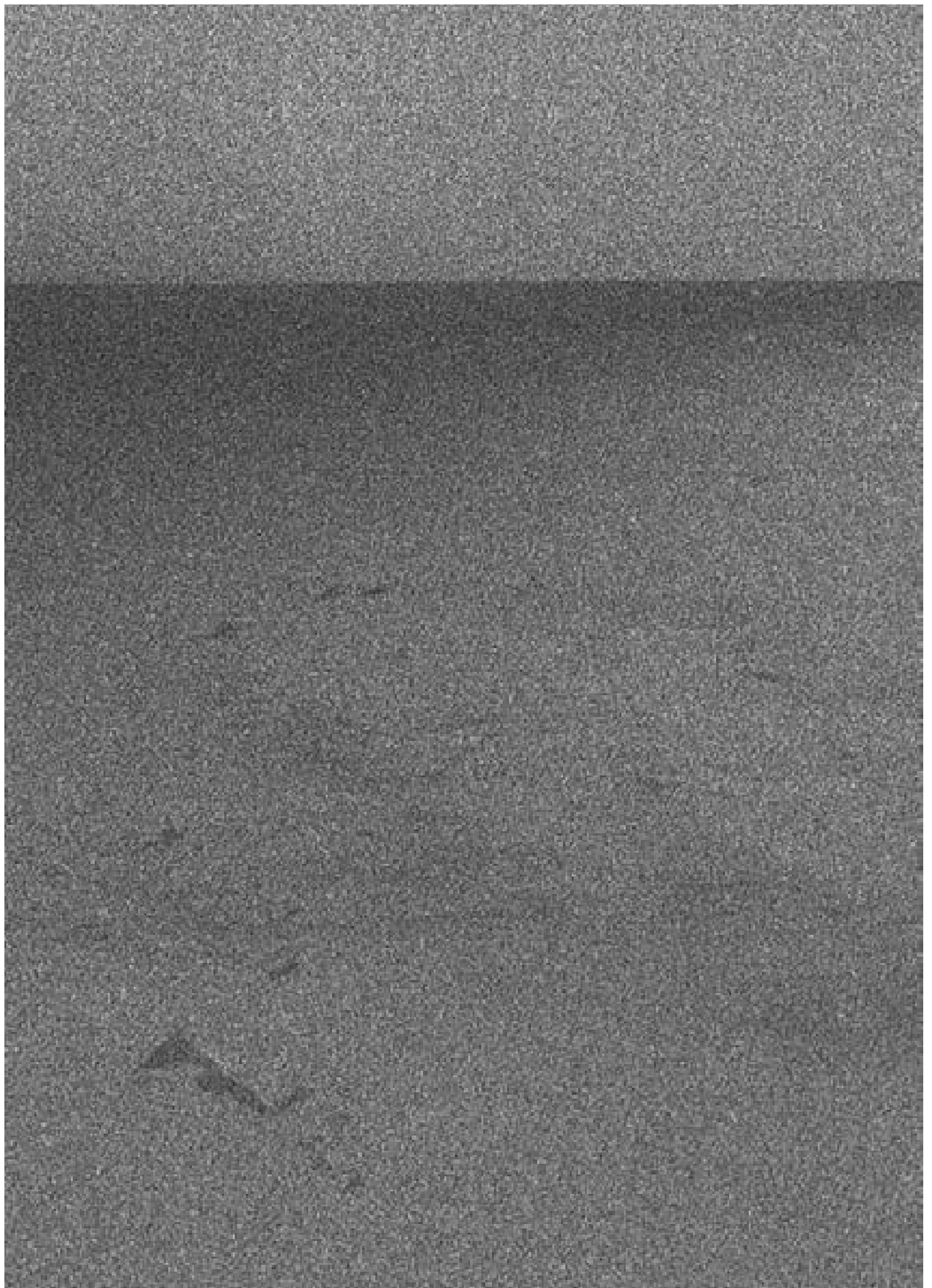














The Curiosity probe lands on the surface of planet Mars and everyone can see on-line the images from its eight photographic cameras. The Red Planet could now be seen in red, a huge icecap in its subsoil.

Anything we could know, any discovery about it would be immeasurably sublime. The virgin landscape, which drove many explorers forward in the 19th Century, kept us curious. In 2013 we think we already have seen everything, reached everywhere; as we had already traced, located and exhausted every detail of Earth's geology. This photographed, traced place was never reached by the body, only by the machinic gaze of the 21st Century.

I have read some testimonies in the diaries of George F. Bass praising the photographic precision of a metric sample from a underwater archeological field. This was meant to keep the sample interpretation feasible afterwards by sensitive, connected eyes, able to perceive chance but unfit to stay underwater for much time. What good is drilling across 4 km of ice to take samples for analysis? What the landscape would look like, where should we take samples from, what is the color, the light, would micro-organisms sparkle?

We thought it was wise to put different metallic spheres in different spots of the lake. The sphere is also influenced by the sea streams and is going to wander in the oceanic deeps for many years as it is tracked by the independent experimental research center in Saint Petersburg.

If this capsule is open it is probably because we are in 3000 and the spheres are still adrift. The records of this extraordinary journey - its wonderful landscapes, the submarine, the infinite shadows - will then emerge.

May the future welcome my time capsule as a lost story.

2.

E NASCE UM CONTINENTE

a continent is born

A nave Curiosity pousa no solo de Marte. O planeta vermelho agora poderia ser visto vermelho. Temos a sensação de que tudo já foi descoberto. Já chegamos a qualquer lugar, já rastreamos, já localizamos, já exaurimos e sabemos cada detalhe da geologia terrestre. Mesmo assim, muitos destes lugares fotografados e rastreados ainda não foram alcançados pelo corpo, apenas pelo olhar maquínico dos nossos tempos. É por isso que qualquer coisa que fosse revelada na nossa viagem a Vostok seria infinitamente sublime. A paisagem virgem que sempre impulsiona os exploradores nos mantinha mais curiosos.

É necessário grande precisão e controle ao retirar uma amostra fotográfica de um campo de arqueologia submarina. O que adiantaria perfurar 4 km de gelo e só retirar amostras para análise? Como seria a paisagem, qual a cor, qual a luz, os microrganismos cintilariam em VOSTOK? Quando temos um novo experimento temos uma folha em branco.

Enquanto todos falavam sobre o lago VOSTOK, especulavam sobre suas formas de vida pré-histórica em seus microscópios, nós enviamos um microssubmarino para lá.

Acoplado à sonda de inspeção, o batiscafo entrou no lago submerso VOSTOK e implantou três esferas metálicas. Cada uma delas munida de uma câmera de disparo automático. Essas esferas irão rodar no fundo do oceano por anos a fio, e serão secretamente monitoradas pelo Centro Independente de Estudos de Ciência Experimental São Petesburgo.

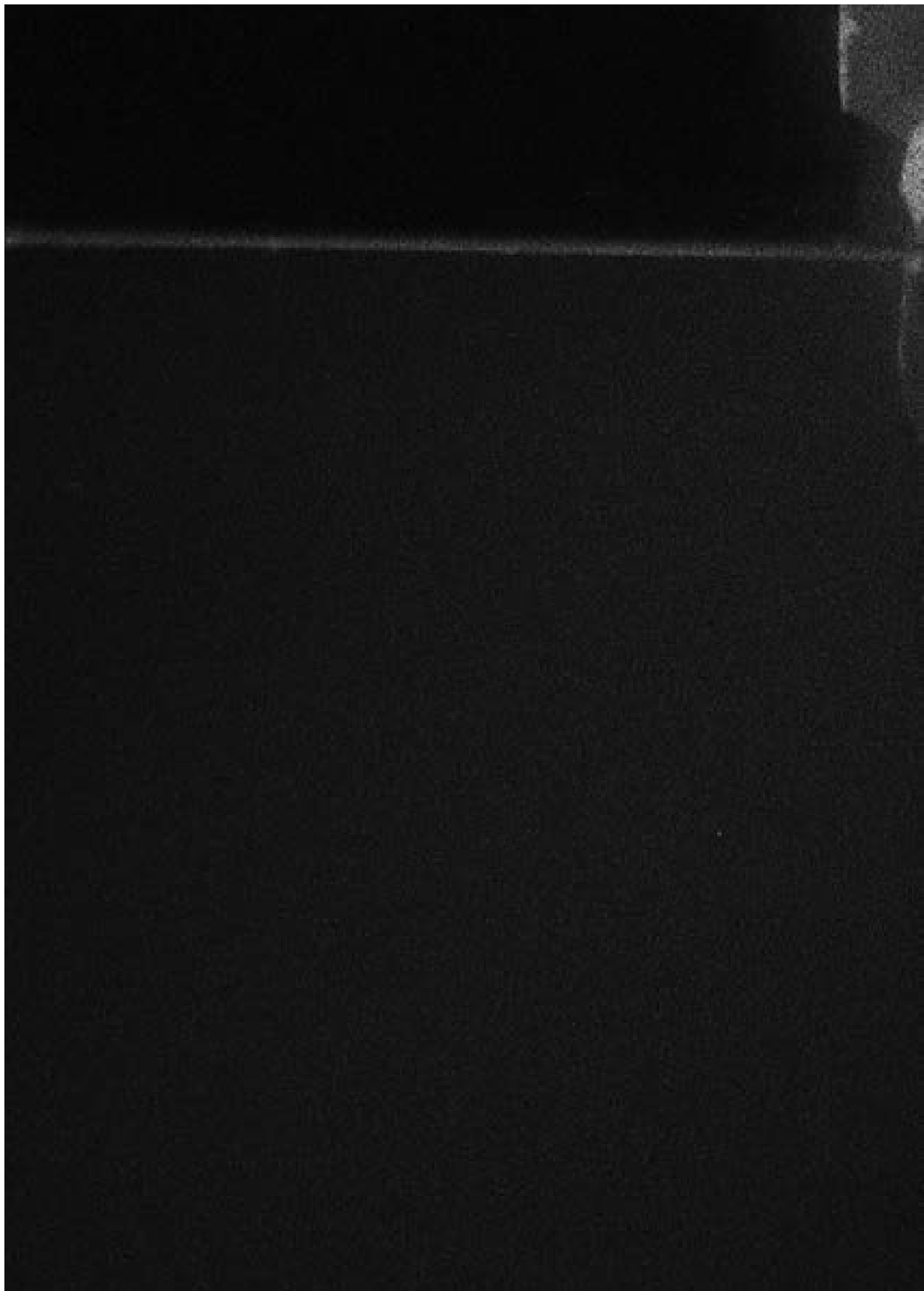
Se esta carta está sendo lida é porque a minha cápsula do tempo foi aberta e provavelmente estamos no ano 3000. As esferas ainda estarão à deriva, e quem sabe, serão finalmente resgatadas. Virão à tona os registros desta viagem insólita, das paisagens fantásticas, do nosso microssubmarino e do negro infinito das águas de VOSTOK.

Que o futuro receba esta cápsula do tempo como uma história perdida.

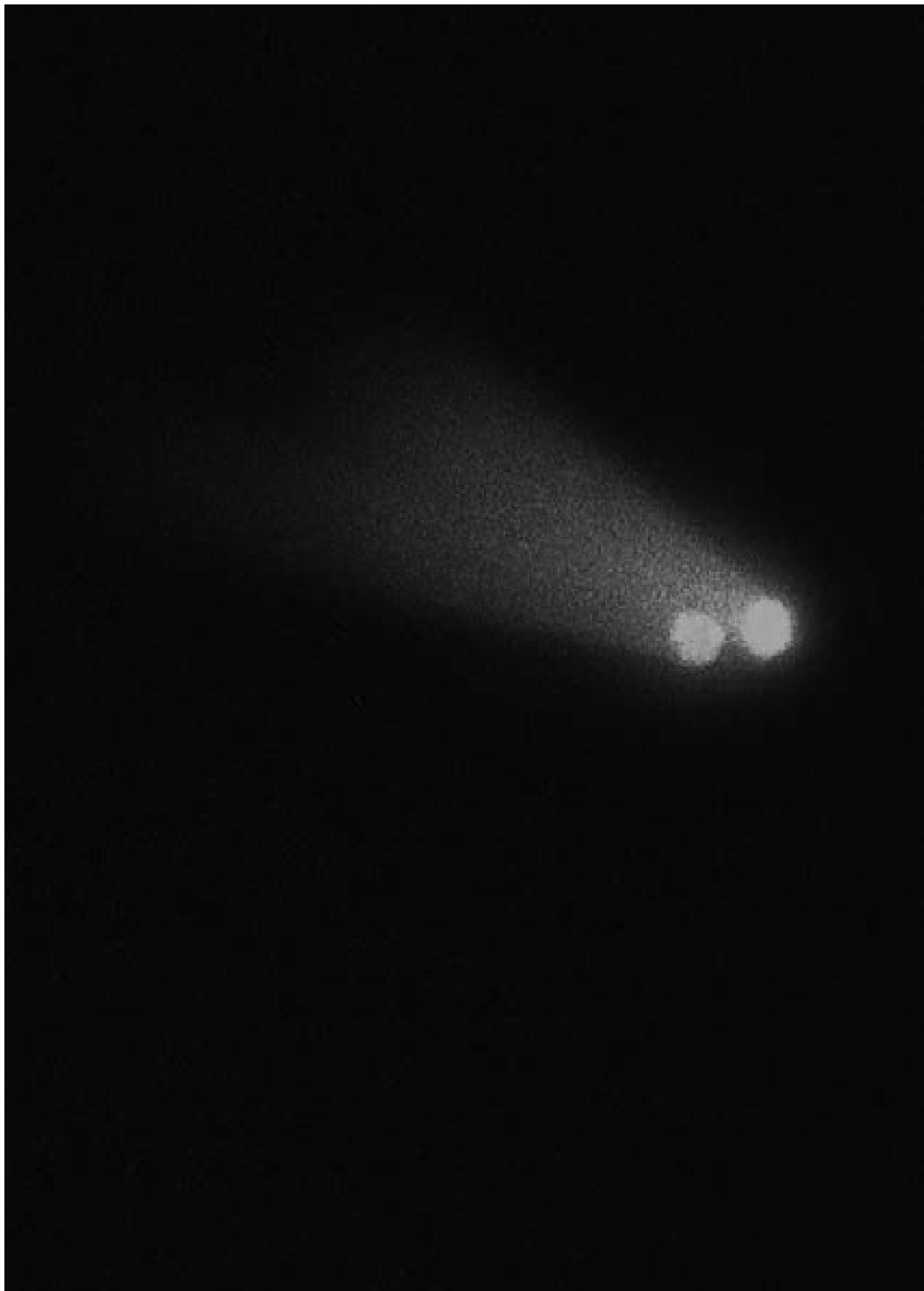
S. Poppovisky











the 1990s, the number of people who have been employed in the construction industry has increased in the UK, and this has led to a corresponding increase in the number of people who have been injured or become ill as a result of their work.

The aim of this paper is to provide a review of the current state of knowledge on the health and safety of construction workers, and to identify the areas where further research is needed. The paper is organized as follows. Section 2 describes the current state of knowledge on the health and safety of construction workers. Section 3 identifies the areas where further research is needed. Section 4 concludes the paper.

2. Current state of knowledge

The current state of knowledge on the health and safety of construction workers is reviewed in this section. The review is organized into three main areas: physical health, mental health, and safety. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.1. Physical health The current state of knowledge on the physical health of construction workers is reviewed in this section. The review is organized into three main areas: musculoskeletal health, respiratory health, and cardiovascular health. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.1.1. Musculoskeletal health The current state of knowledge on the musculoskeletal health of construction workers is reviewed in this section. The review is organized into three main areas: neck and shoulder pain, low back pain, and hand/wrist pain. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.1.2. Respiratory health The current state of knowledge on the respiratory health of construction workers is reviewed in this section. The review is organized into three main areas: asthma, chronic obstructive pulmonary disease (COPD), and silicosis. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.1.3. Cardiovascular health The current state of knowledge on the cardiovascular health of construction workers is reviewed in this section. The review is organized into three main areas: hypertension, coronary artery disease (CAD), and stroke. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.2. Mental health The current state of knowledge on the mental health of construction workers is reviewed in this section. The review is organized into three main areas: depression, anxiety, and post-traumatic stress disorder (PTSD). Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

2.3. Safety The current state of knowledge on the safety of construction workers is reviewed in this section. The review is organized into three main areas: falls, struck by objects, and electrocution. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

3. Areas for further research

The areas where further research is needed are identified in this section. The review is organized into three main areas: physical health, mental health, and safety. Each area is reviewed in turn, and the areas where further research is needed are discussed in detail.

3.1. Physical health The areas where further research is needed on the physical health of construction workers are reviewed in this section. The review is organized into three main areas: musculoskeletal health, respiratory health, and cardiovascular health. Each area is reviewed in turn, and the areas where further research is needed are discussed in detail.

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3.2. Mental health The areas where further research is needed on the mental health of construction workers are reviewed in this section. The review is organized into three main areas: depression, anxiety, and PTSD. Each area is reviewed in turn, and the areas where further research is needed are discussed in detail.

3.3. Safety The areas where further research is needed on the safety of construction workers are reviewed in this section. The review is organized into three main areas: falls, struck by objects, and electrocution. Each area is reviewed in turn, and the areas where further research is needed are discussed in detail.

4. Conclusion

The current state of knowledge on the health and safety of construction workers is reviewed in this paper. The review is organized into three main areas: physical health, mental health, and safety. Each area is reviewed in turn, and the current state of knowledge is discussed in detail.

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the 1990s, the number of people with a mental health problem has increased in the UK (Mental Health Act 1983, 1990).

There is a growing awareness of the need to improve the lives of people with mental health problems. The Department of Health (1999) has set out a vision of a new mental health system, which will be based on the following principles:

- (i) people with mental health problems should be treated as individuals, with their own needs and wishes;
- (ii) people with mental health problems should be given the opportunity to participate in decisions about their care and treatment;
- (iii) people with mental health problems should be given the opportunity to live in their own homes and communities.

These principles are reflected in the new Mental Health Act (Mental Health Act 2003) and the new Mental Health Review Tribunal (Mental Health Act 2003).

The new Mental Health Act (Mental Health Act 2003) is a landmark piece of legislation, which will bring about a fundamental change in the way in which people with mental health problems are treated. The new Act will give people with mental health problems the right to participate in decisions about their care and treatment, and will give them the right to live in their own homes and communities.

The new Act will also give people with mental health problems the right to be treated in their own homes and communities, rather than in hospital.

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“O lago Vostok é um tipo análogo de ambiente extraterreno como os que podem existir em lugares como Europa, o satélite de Júpiter.”

“Lake Vostok is a kind of analogue of extra-terrestrial environments which can exist on planets like Europa, a satellite of Jupiter.”

3.

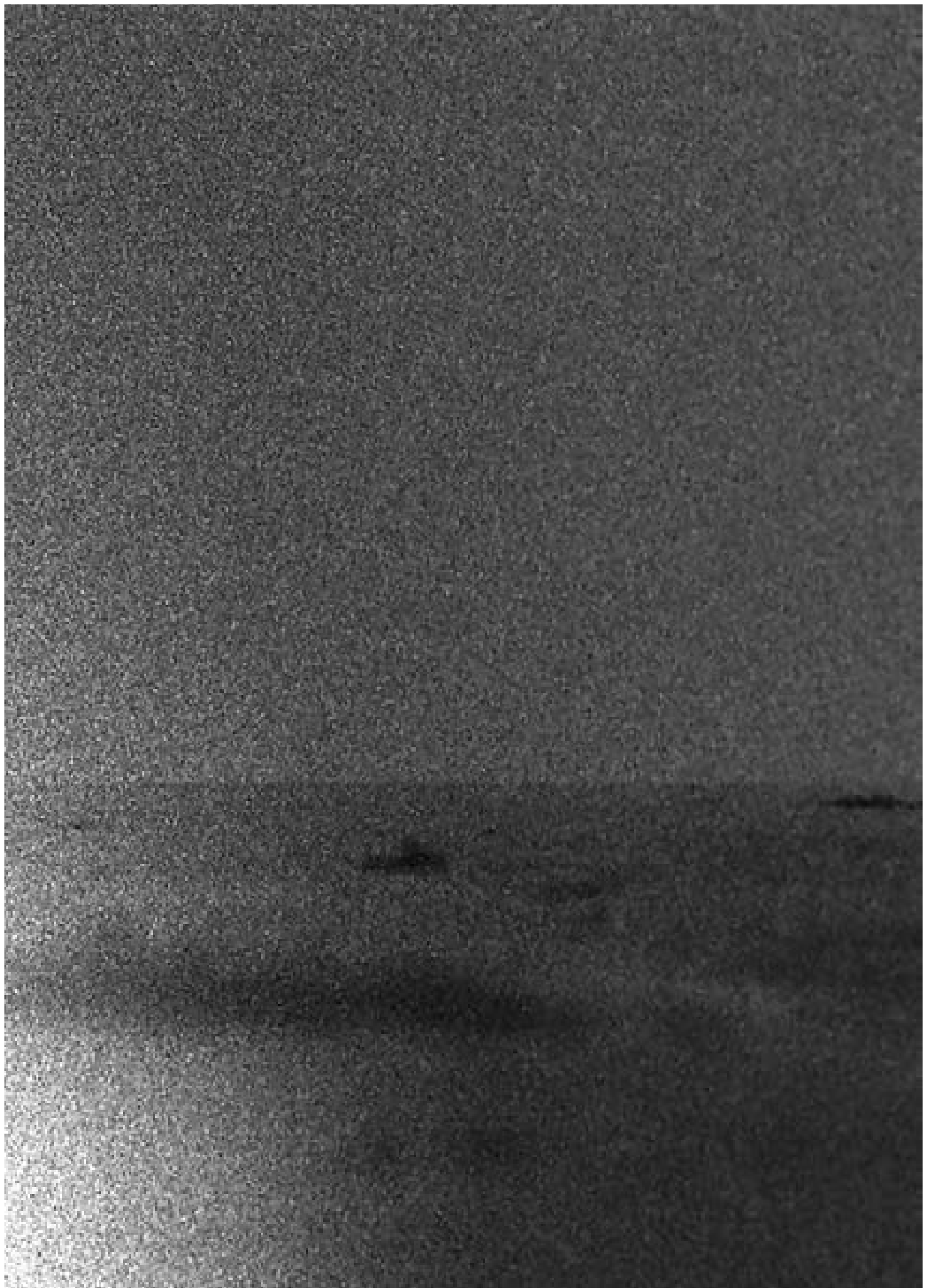
VOSTOK

[Восток-Leste-Oriente]

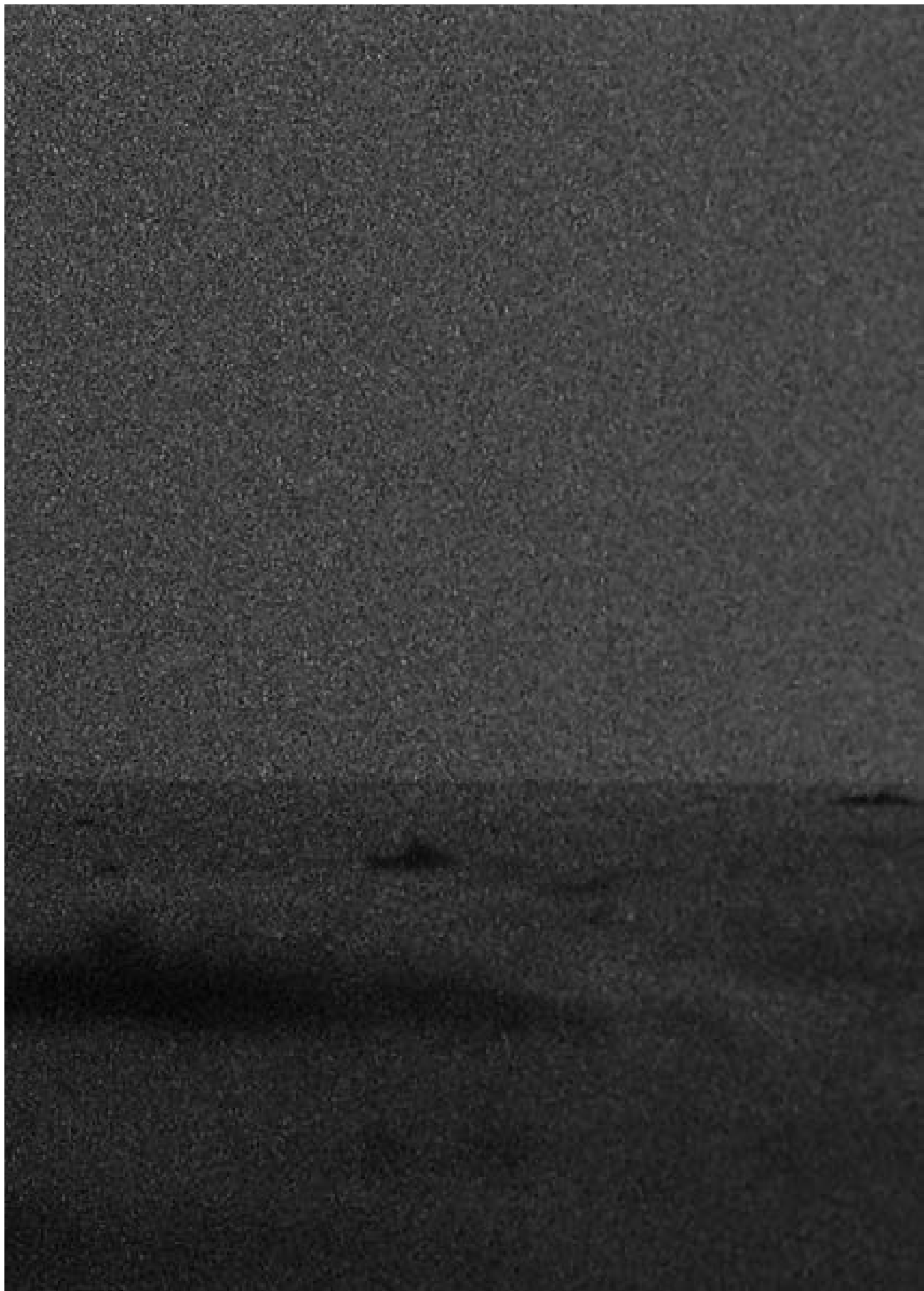












“É claro que primeiro devemos definir o que significa: novas formas de vida. Estamos falando de micróbios, não de grandes organismos.

Tudo o que sabemos do nosso planeta é sobre a vida. Tentamos encontrar vestígios de vida em toda parte, em Marte, em Júpiter. Mas, até o momento, só o que conhecemos são formas de vida terrestres.

Existe uma lei bastante restrita: onde há água, há vida. Se o lago Vostok não contiver vida, isso também seria um espécie de nova descoberta.”

“Of course we must first of all define what this means, new forms of life. We are talking about microbes, not big organisms.

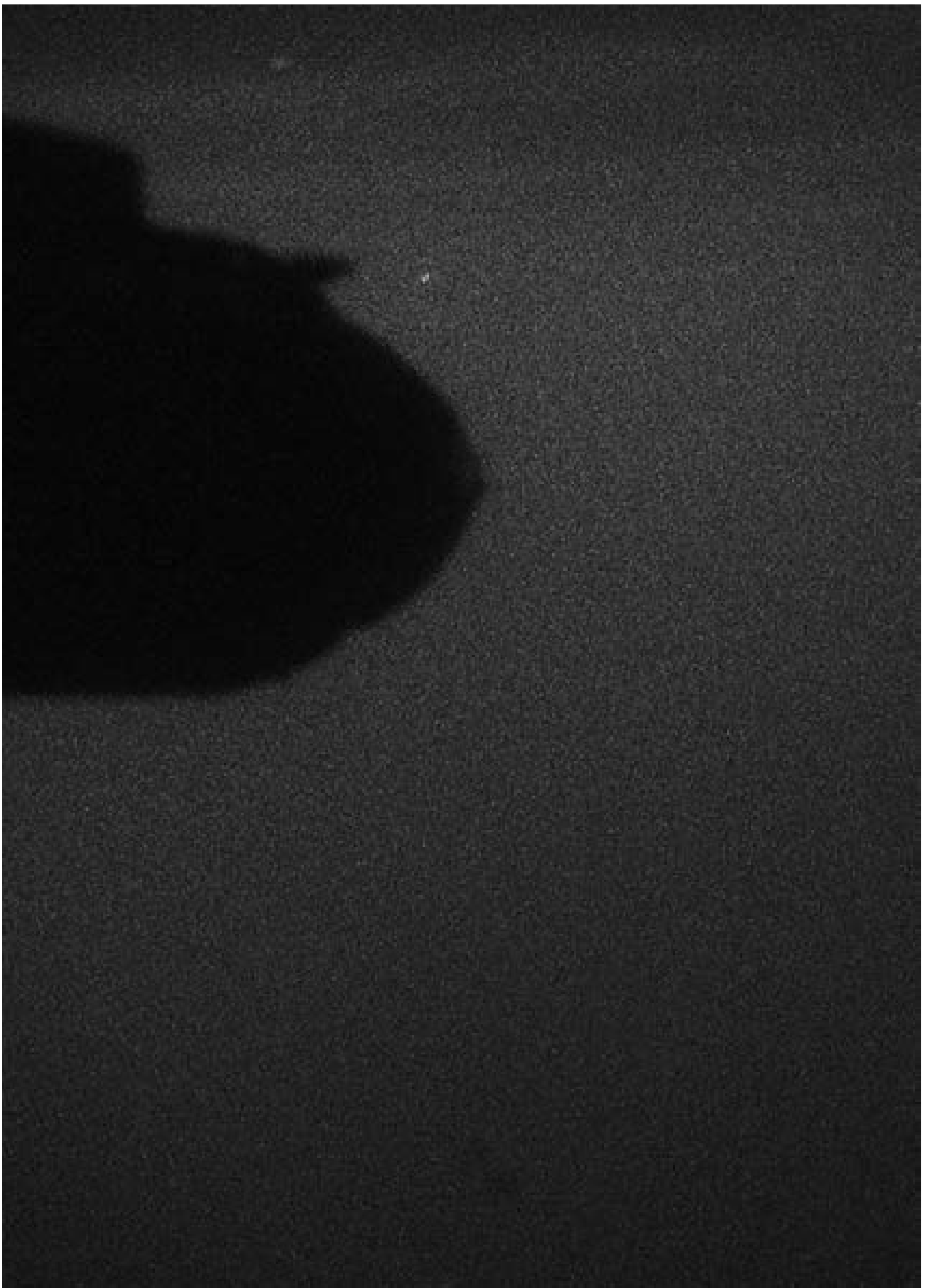
I think it's mainly about searching for new forms of life, because all we know about is the life which lives on our planet, and people are trying to find traces of life everywhere else, but only our terrestrial forms of life are known so far.

Now we know that where we have water, we have life, and this is a very strict law. If Lake Vostok doesn't contain any life, that will be a kind of new discovery as well.”

4.

LAGO SUBMERSO

subglacial Lake













#26

Localização: 77° de latitude Sul e 105° de longitude Oeste
250 quilômetros
Temperatura da água : - 3°C
Oxigênio: 59 ppm
Presença visual de vida subaquática: registro negativo

#26

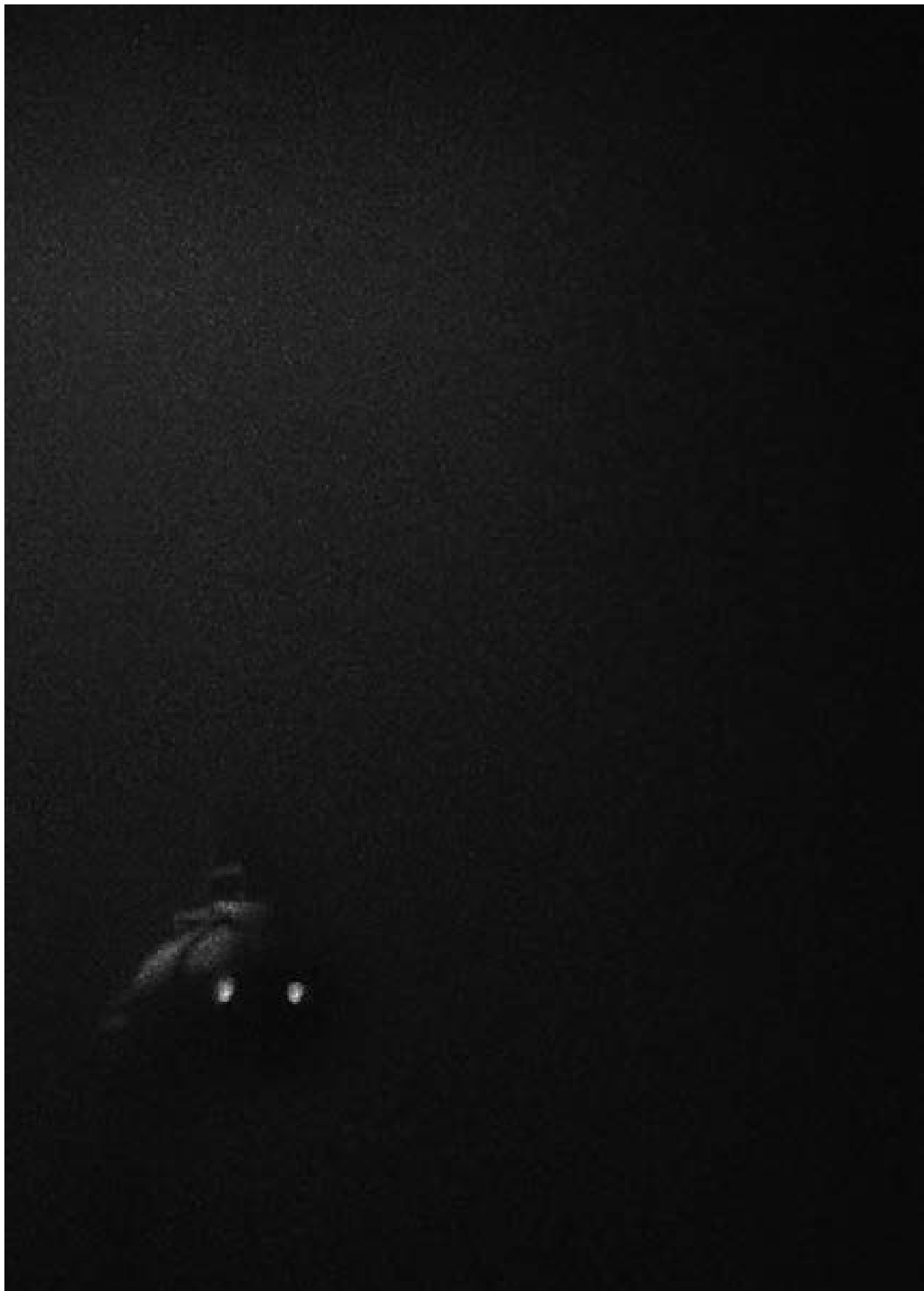
*Location: 77° South, 105° West
250 kilometers
Water temperature: -3C
Oxygen: 59 ppm
Visual presence of underwater life: negative*

5.
MICROSSUBMARINO RUSSO
russian micro-submarine











The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every sale, purchase, and expense must be properly documented to ensure the integrity of the financial statements. This includes keeping receipts, invoices, and bank statements in a secure and organized manner.

Next, the document outlines the process of reconciling the books. This involves comparing the company's internal records with the bank statements to identify any discrepancies. If there are differences, the accountant must investigate the cause, such as a missed entry or a bank error, and make the necessary adjustments to the books.

The document also covers the preparation of the financial statements. This includes the balance sheet, income statement, and statement of cash flows. Each statement provides a different perspective on the company's financial performance and position. The balance sheet shows the company's assets, liabilities, and equity at a specific point in time. The income statement shows the company's revenues and expenses over a period, resulting in net income or loss. The statement of cash flows shows the changes in the company's cash and cash equivalents over the same period.

Finally, the document discusses the importance of reviewing the financial statements. The accountant should carefully analyze the numbers to identify any trends, strengths, or weaknesses. This information is crucial for management to make informed decisions about the company's future operations and investments.











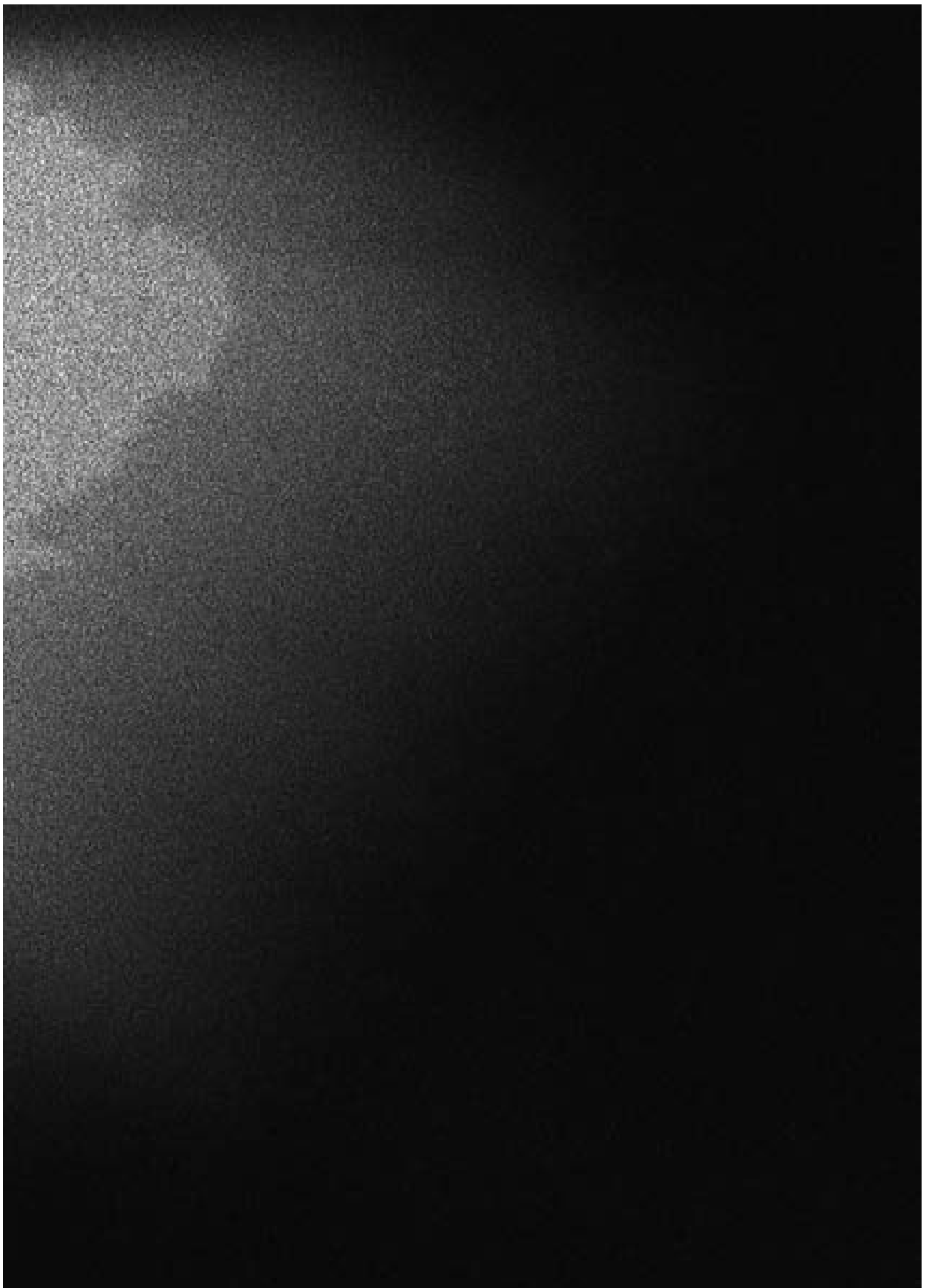


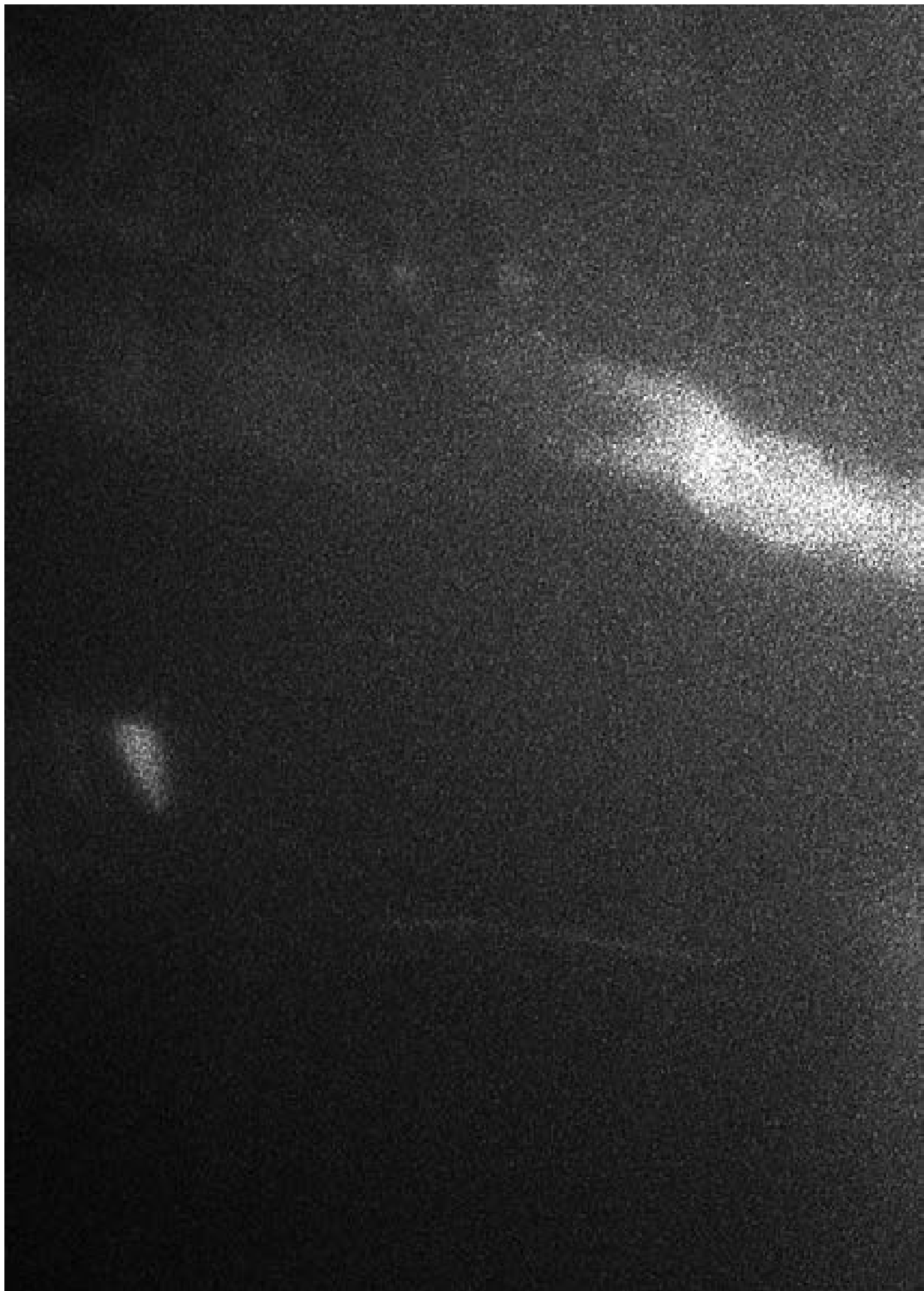


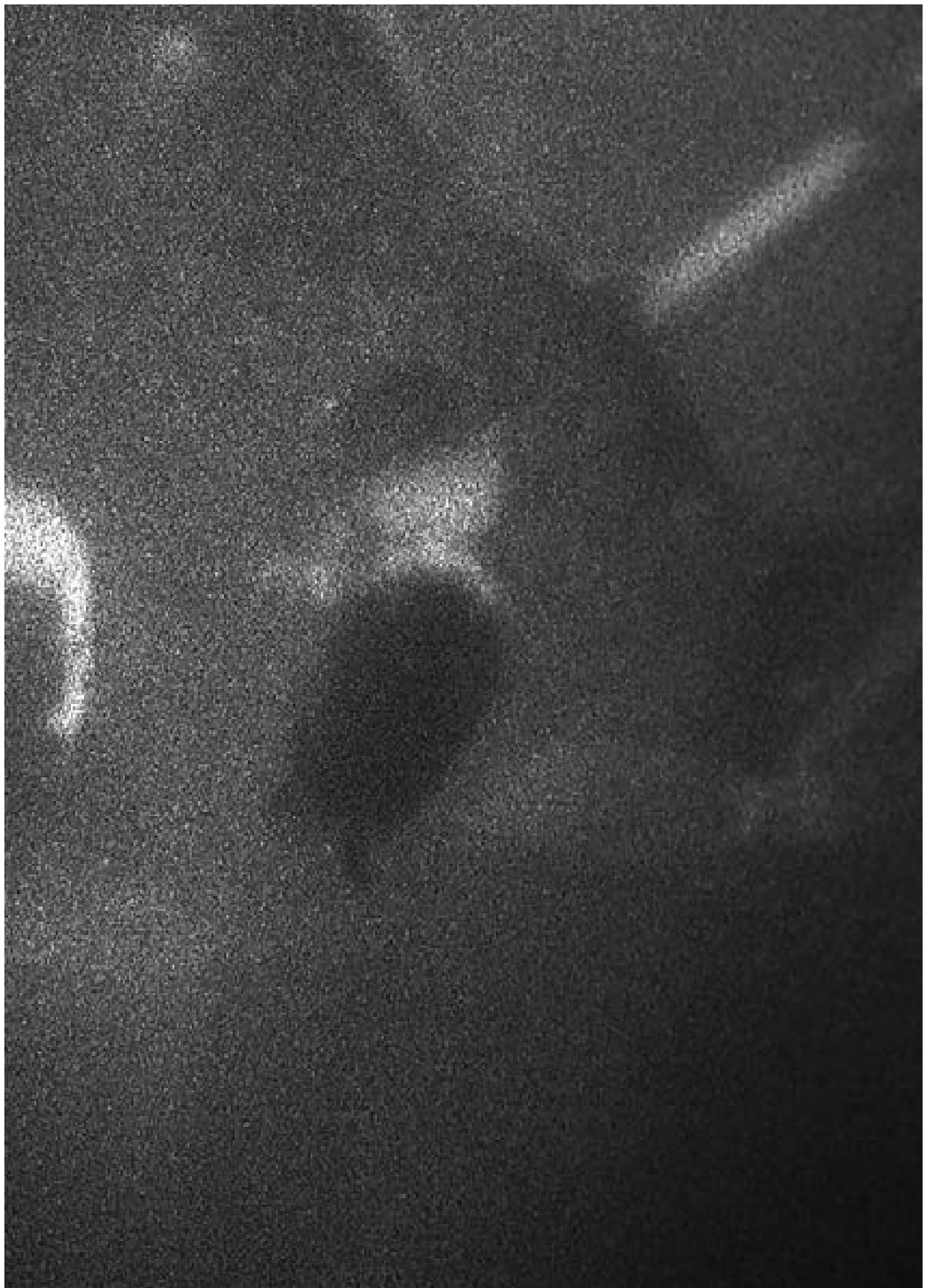


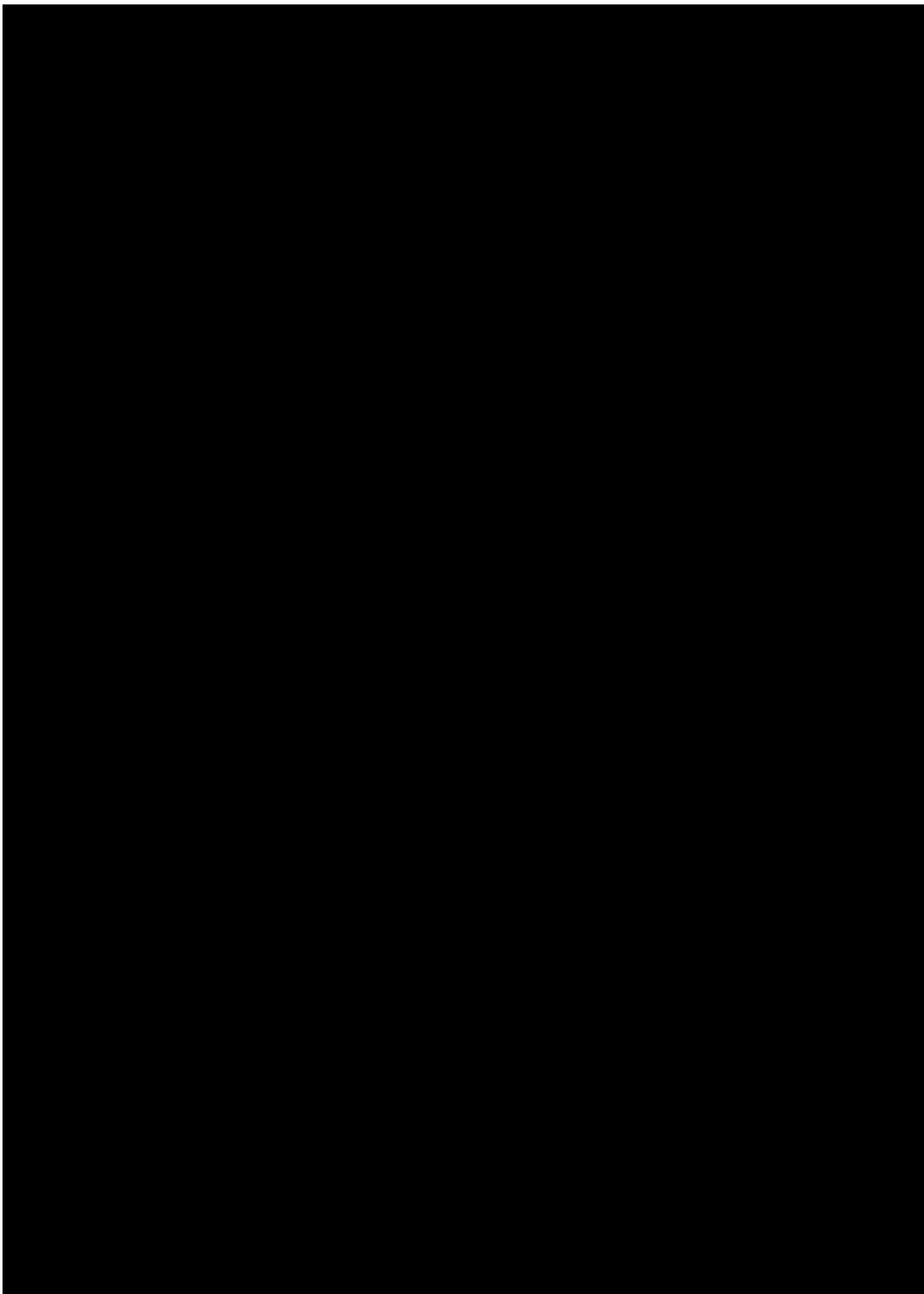




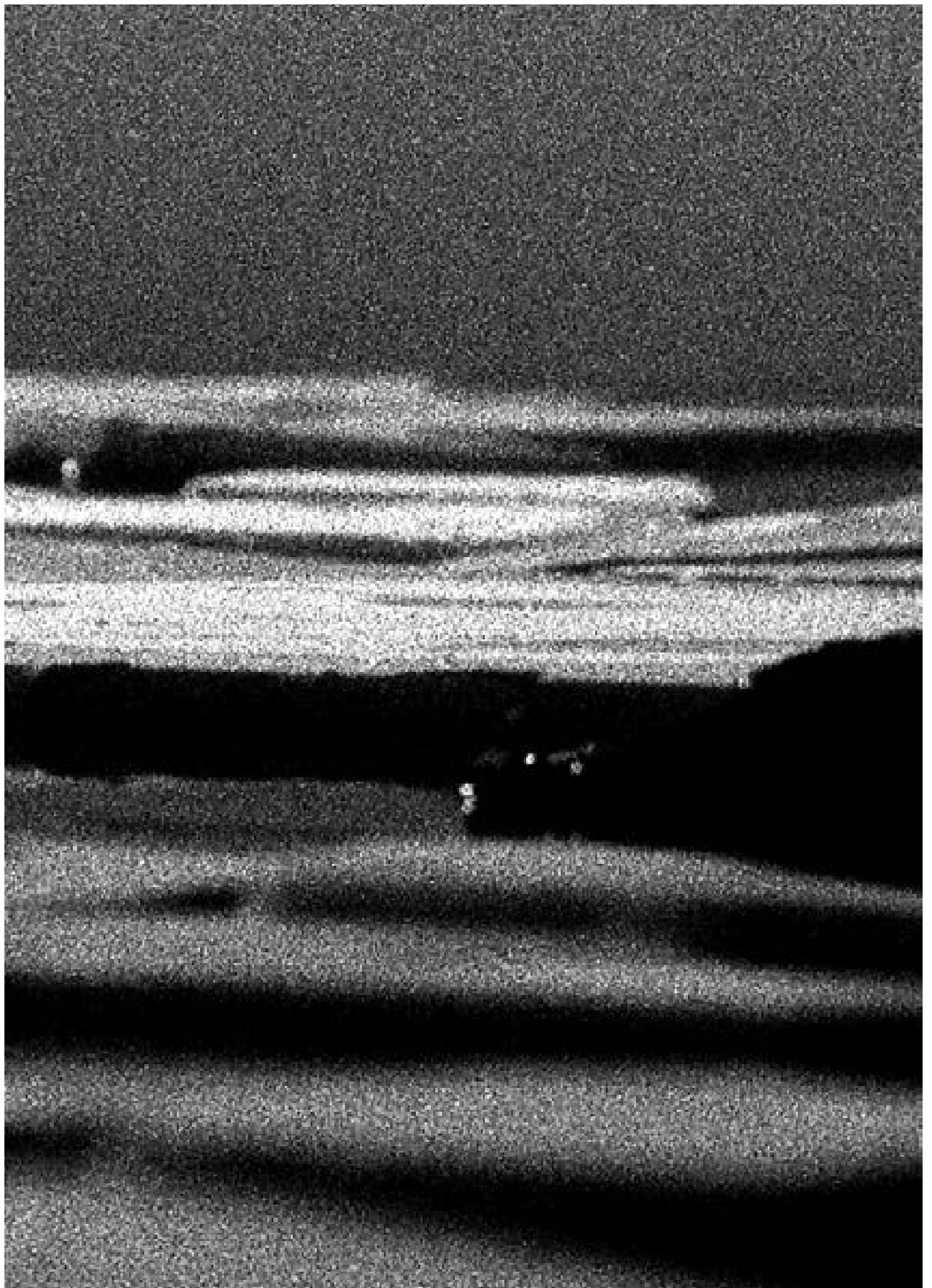


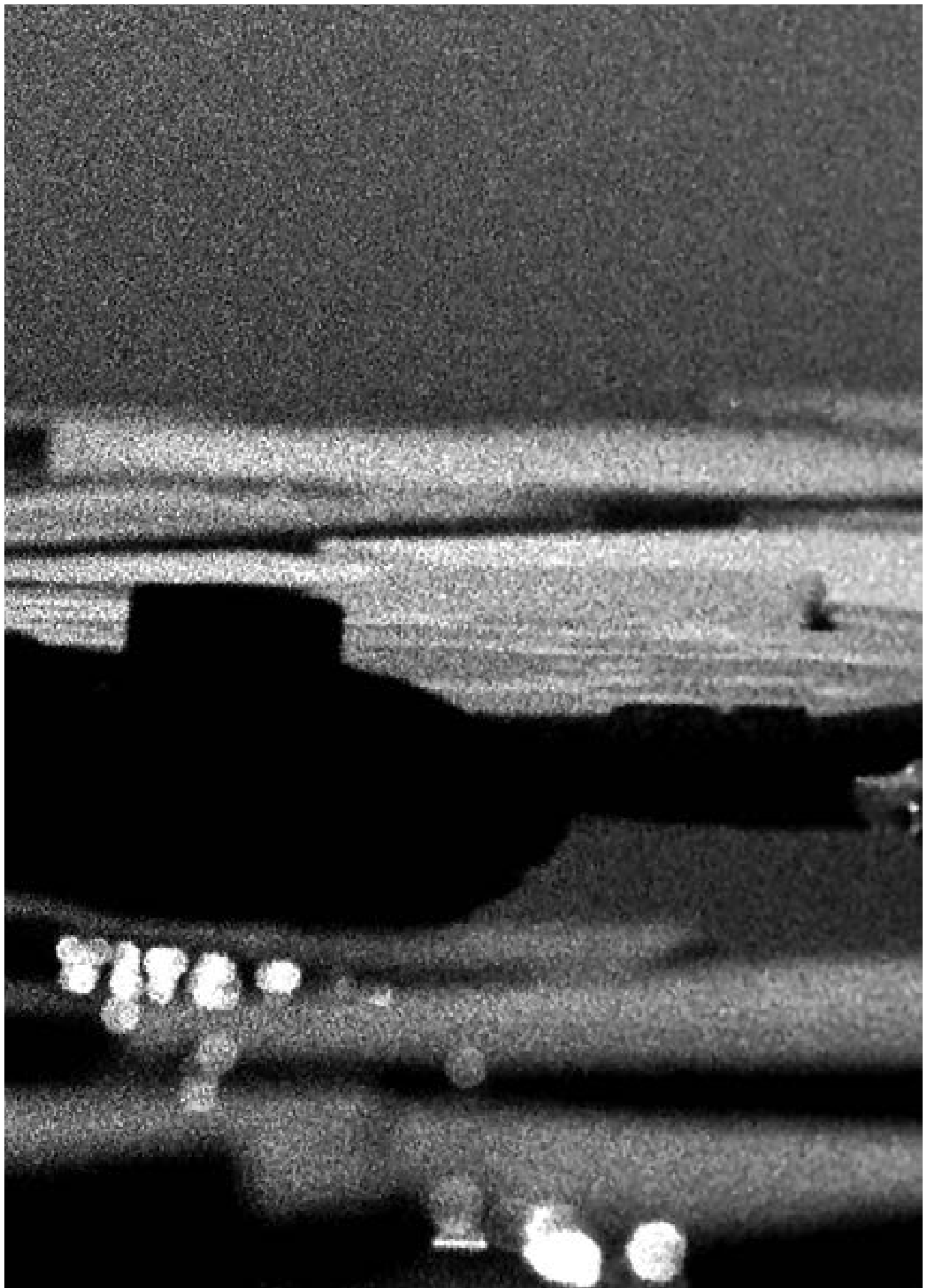




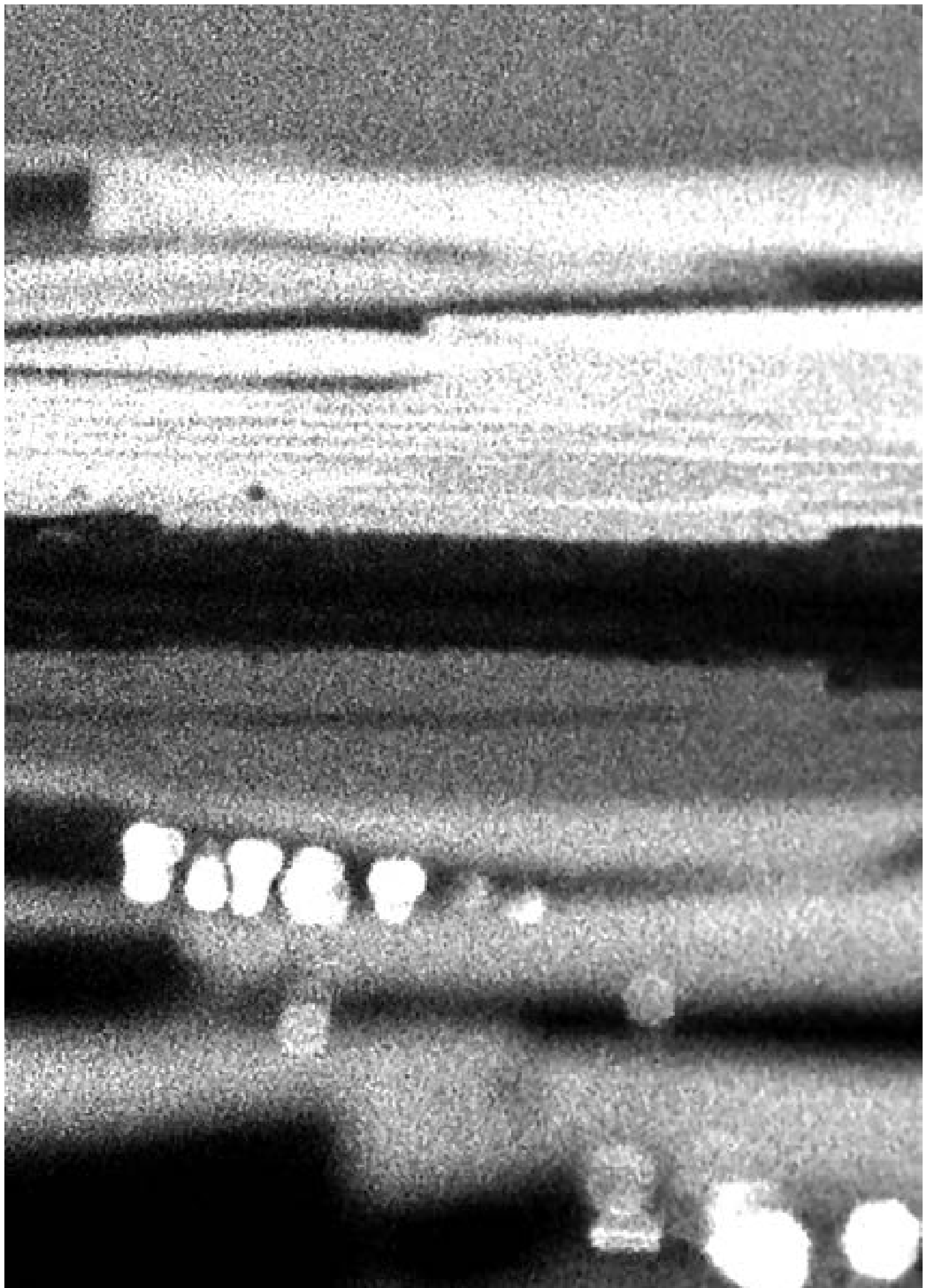


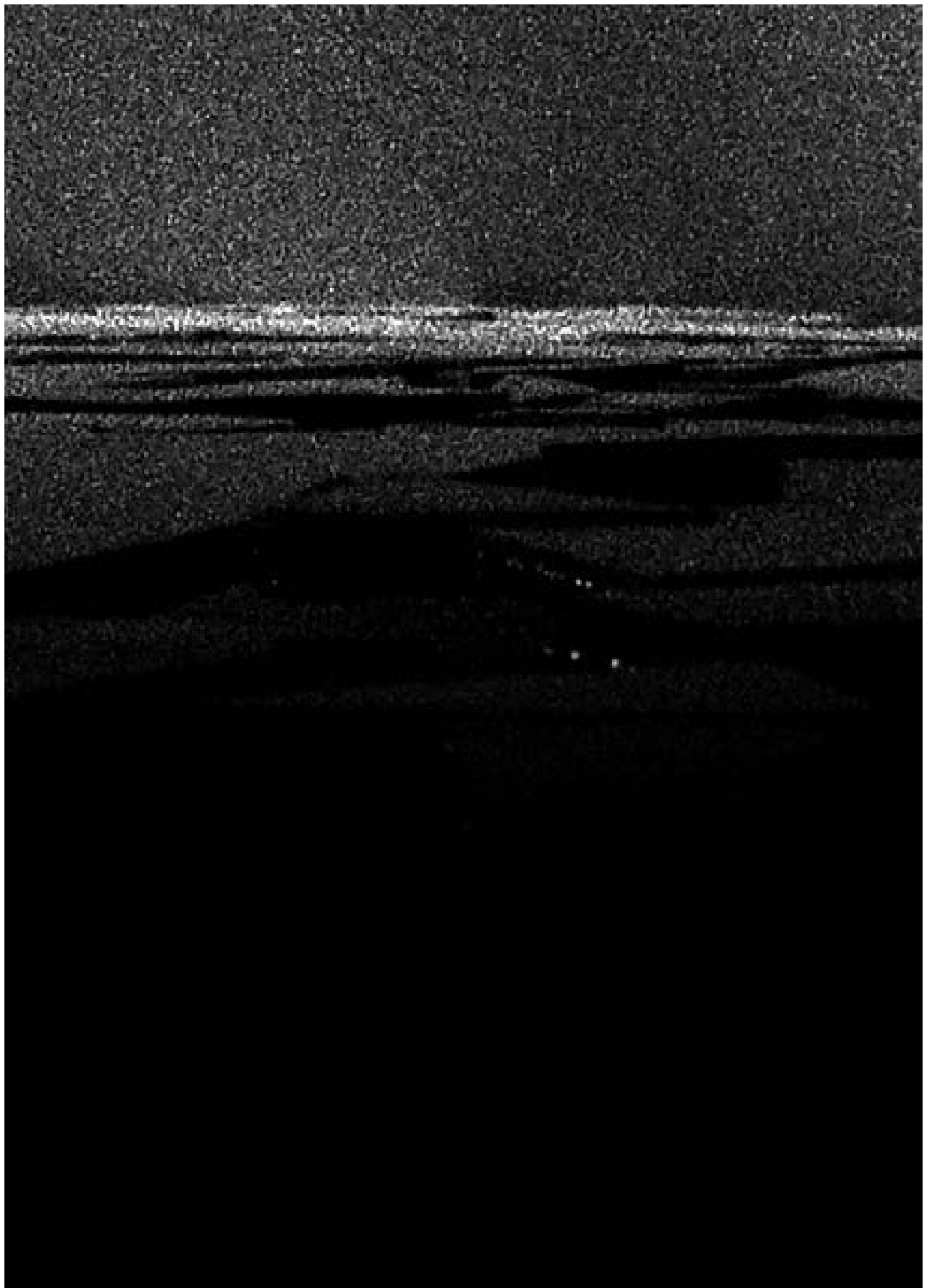
6.
DE VOLTA AO GELO POLAR
back to the polar ice



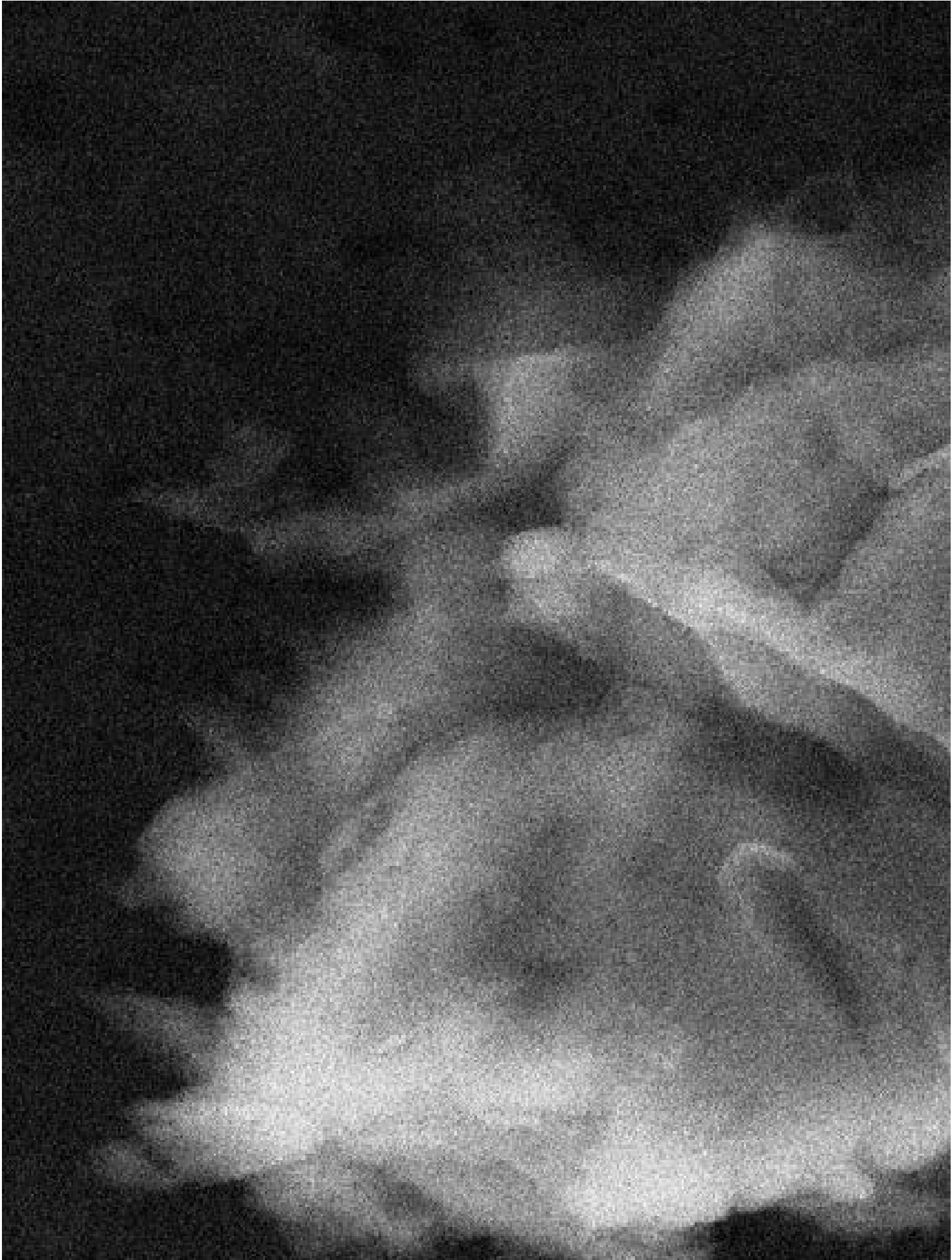




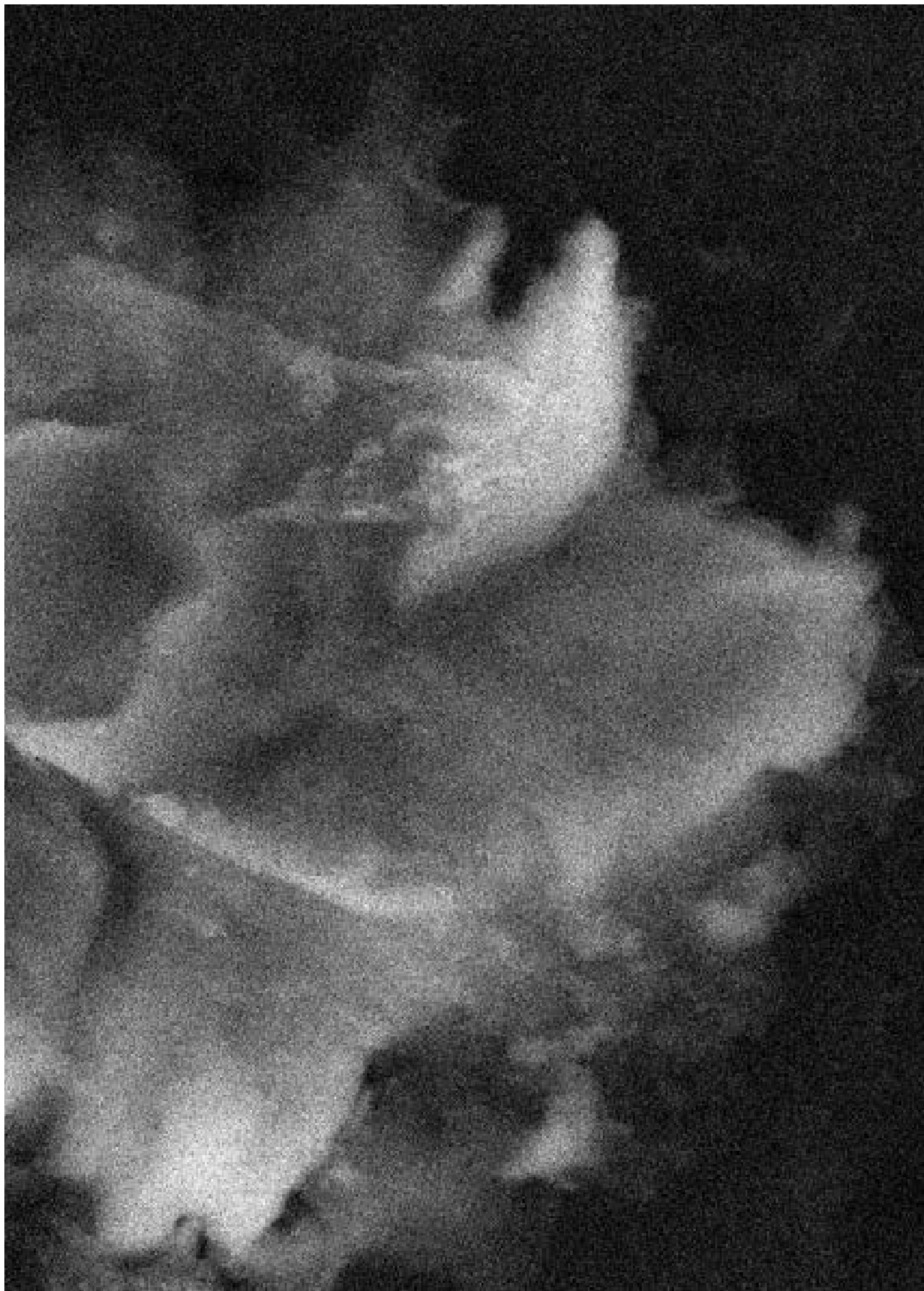






A black and white microscopic image showing a complex, textured surface. The image is dominated by dark, irregular shapes and patterns, suggesting a highly detailed and possibly crystalline or fibrous structure. The lighting is uneven, with some areas appearing brighter than others, highlighting the intricate details of the sample. The overall appearance is that of a microscopic view of a natural or synthetic material with a high degree of complexity and irregularity.

5 μ g 50x = fotografia microscópica de amostra retirada do lago VOSTOK



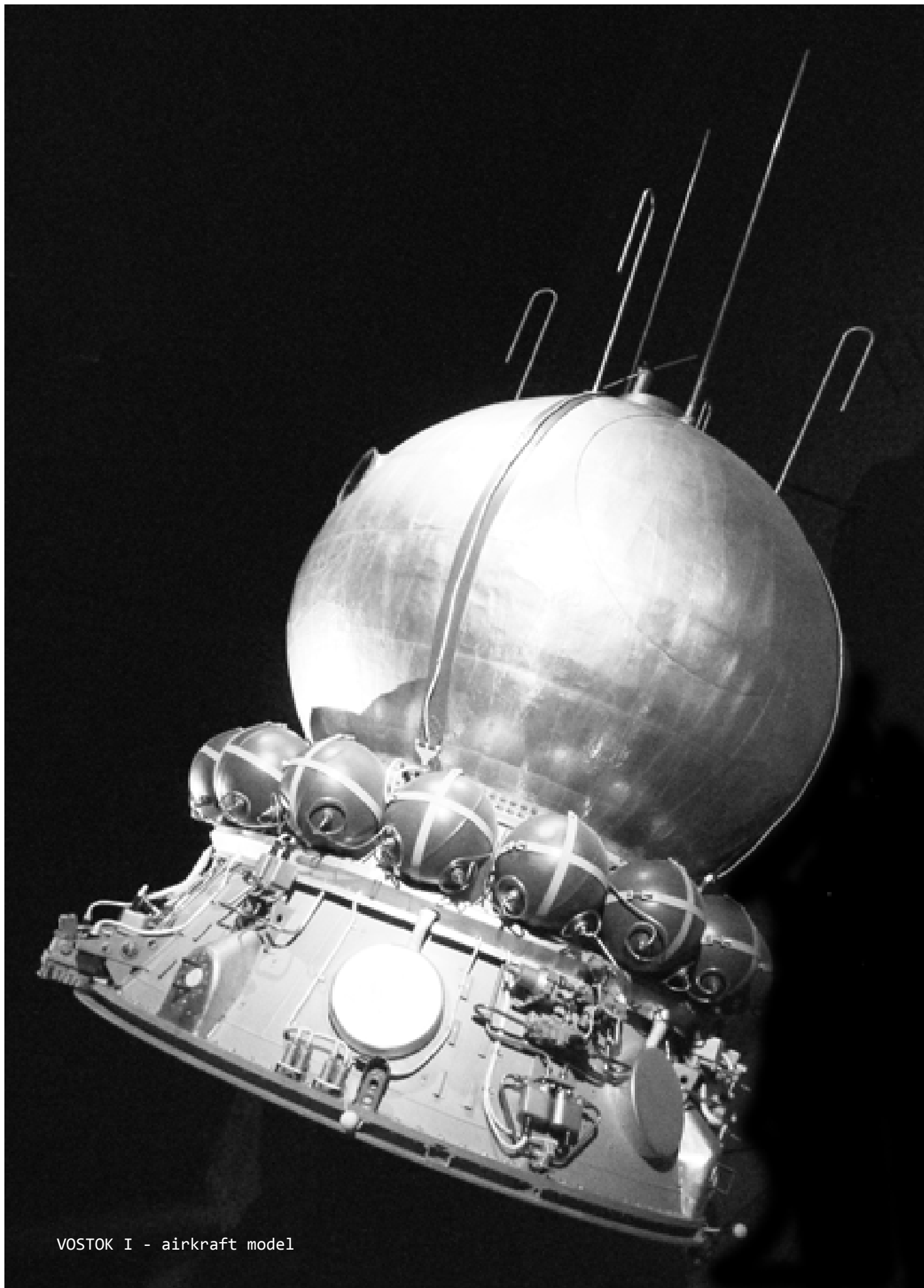
Some texts were inspired by testimonies of scientists about Lake Vostok. Images were taken from miniatures and mockups built by the artists. The image of the Vostok I spaceship is a collage of the actual visual records with their prototypes shown in the French Air and Space Museum. Yuri Gagarin was the first man to orbit Earth. In 2012, Russian scientist took samples out of the subglacial lake Vostok. The rest is fiction.

Alguns textos foram inspirados por depoimentos de cientistas sobre o lago Vostok, as imagens foram capturadas a partir de miniaturas e maquetes construídas pela artista. A imagem da nave VOSTOK I é uma colagem da fotografia real da aterrissagem e também das maquetes exibidas no Museu Francês do Ar e do Espaço. Iuri Gagarin foi o primeiro homem a orbitar a Terra. Em 2012, cientistas russos puderam retirar amostras do lago submerso Vostok, o resto é invenção.

Apoio:



Projeto realizado com o apoio do Governo do Estado de São Paulo,
Secretaria de Estado da Cultura - Programa de Ação Cultural - 2012



VOSTOK I - aircraft model

_____ / 500

edição limitada
livro de artista