



FUTUSUMA

Sports Product Design at University of Oregon
Capstone Project
by **Christel Thue**

Overconsumption





Sea levels rising



DR Deadline, Danish News

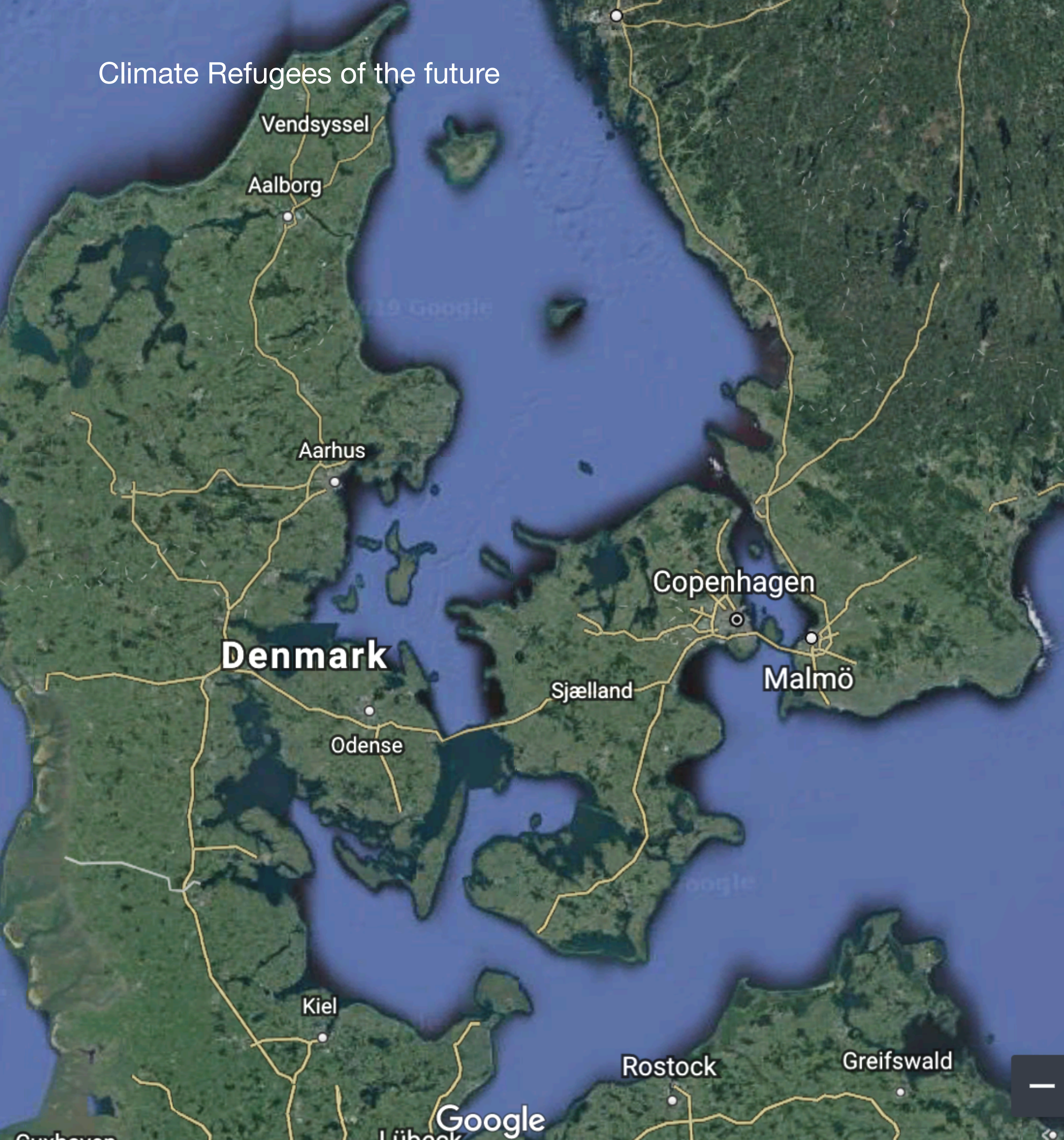


National Geographic



The New York Times

Climate Refugees of the future



Denmark when seal levels rise

Consumers

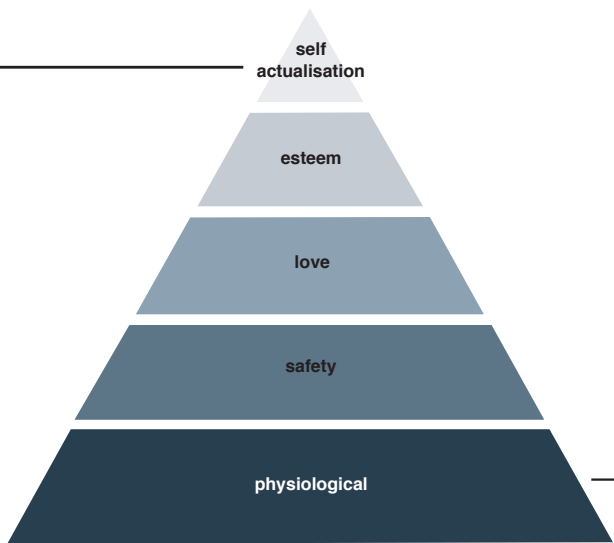
Now

Explorer



- Travels around the world to explore and challenge herself.
- In great fitness & have trained and prepared for event.
- **Want** gear which can help her reach peak performance.

Female



Future

Survivor



- Race to get permission to stay on continent.
- Unprepared & not in peak fitness.
- **Need** gear for physical advantage to survive The Futusuma Race.

Futusuma Race

24 h race in changing environments

cross country skiing

road cycling

running



Gelus

cold & dry climate

-6°C

cross country skiing

25 km

6 hours



Testa

changing weather conditions;
fog, wind, rain & sun.

0 - 28°C

Road cycling

197 km

7 hours



Ventus

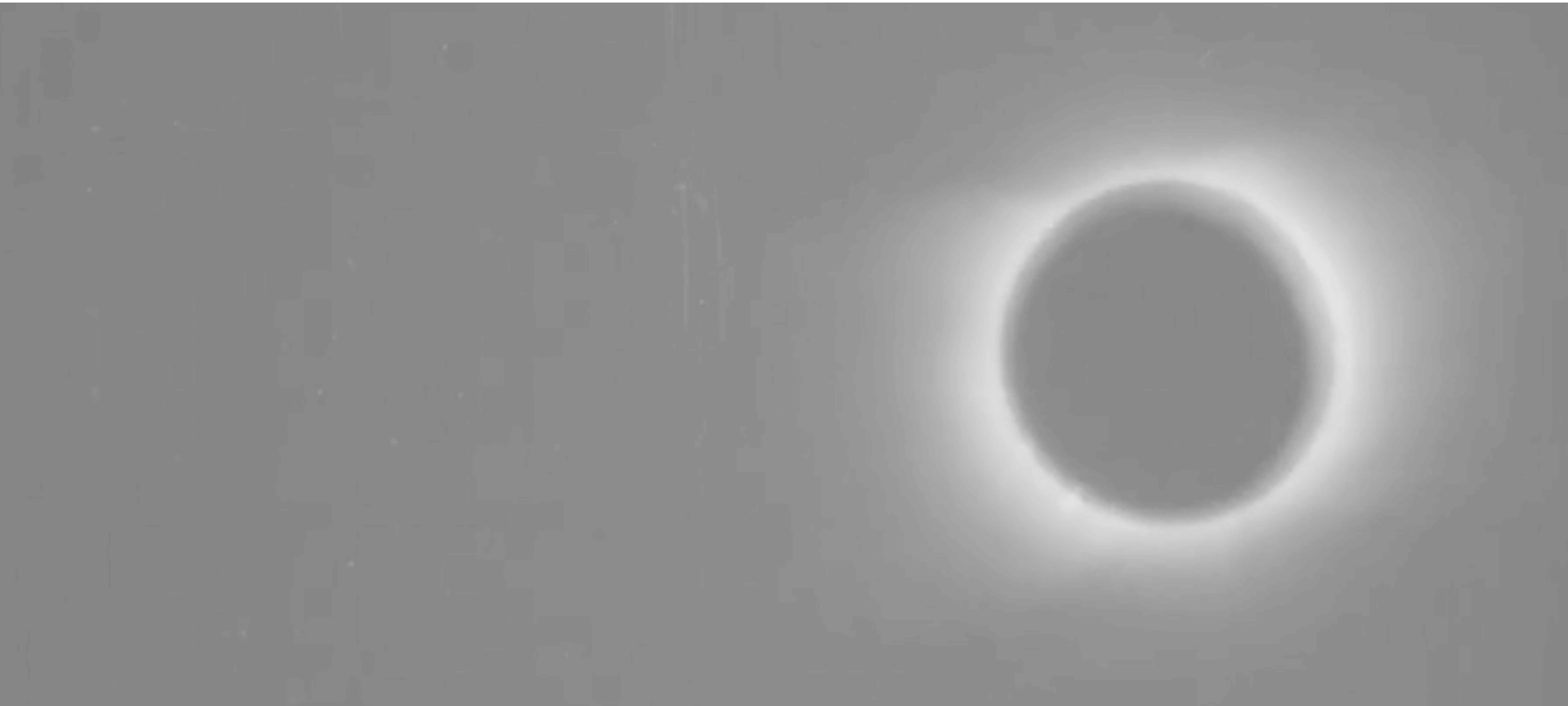
mild cold climate with high possibility of rain.

10°C

night running

49 km

4 hours





jobs to be done:

Gelus, cold & dry climate - 6°C

high insulation, easy to use trims.

Testa, change weathers 0 - 28°C

Waterproof, adjustable layers while in motion.

Ventus, mild cold climate 10°C

Windproof, Water Resistant, adjustable features.

for all products

**Great fit, High Breathability, ultra-small packability,
Lightweight, High Visibility**

FUTUSUMA

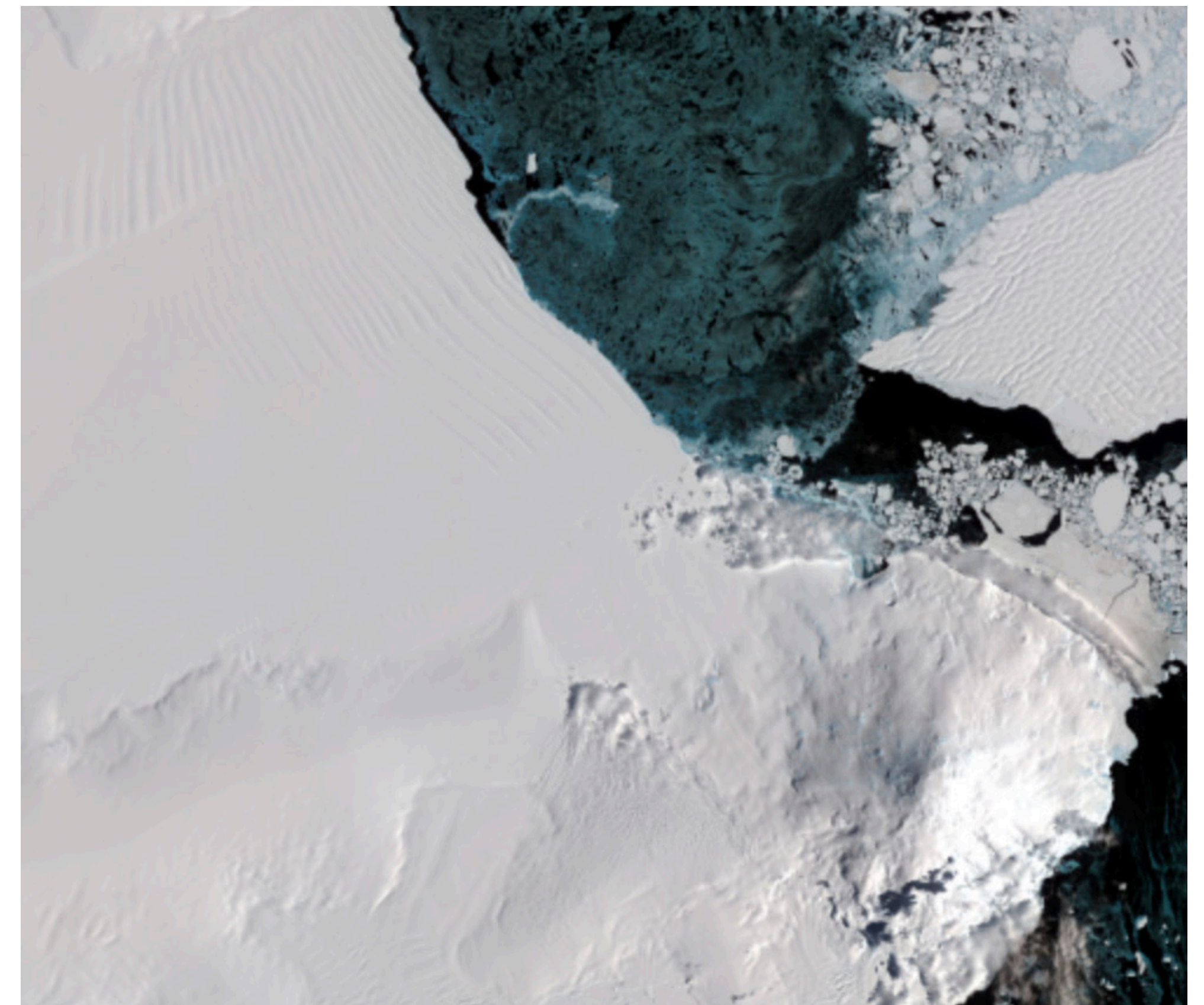
An outerwear system to survive the extreme weather conditions of the Futusuma Race.

three jackets;

High Insulation Jacket for cross country skiing in Gelus

Protective shell for cycling the mountains of Testa

Light weight shell to run through Ventus.



Superhumans of today



colinobradly

more meaning - you describe it as a "huge puff Michelin man shaped jacket" which I can't get to match what a journalist listed you to wear. If you or your wife could find a few minute to speak with me about your apparel for the exposition and what could be improved that this would be a massive help to my project. Since I am based in Pdx maybe this could work. All the best Christel Thue

The bid down puffy was the Mountain Hardwear absolute zero

But my outer layers when I was pulling the sled was Bergans of Norway Antarctic jacket and bib pants

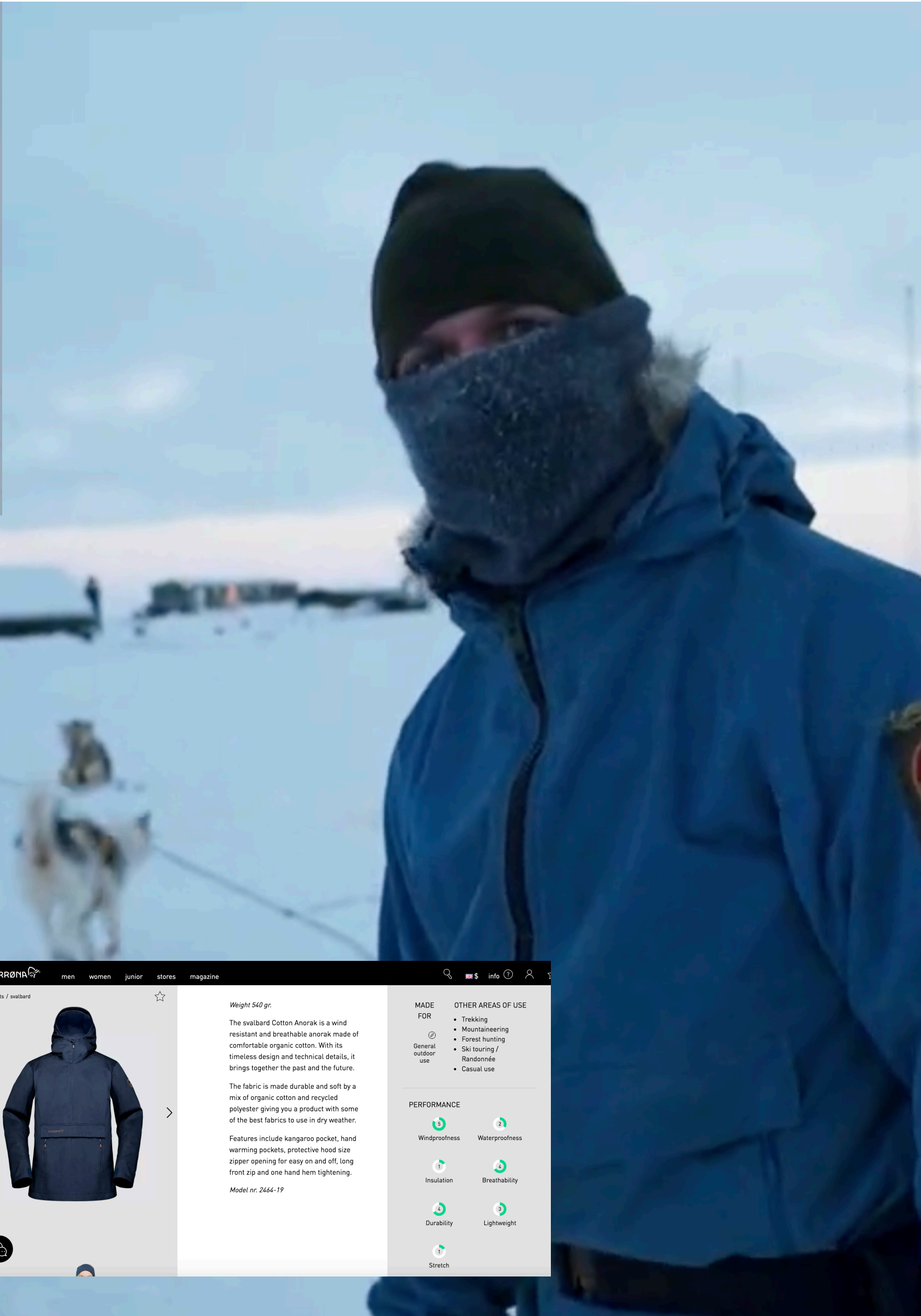
Hope that helps

February 12, 4:15 PM

Thank you for replying! It helps a lot:)



Sirius Dog Sled Patrol



NORRØNA men women junior stores magazine

All Products / svelbard

NEW



Weight 540 gr.

The svelbard Cotton Anorak is a wind resistant and breathable anorak made of comfortable organic cotton. With its timeless design and technical details, it brings together the past and the future.

The fabric is made durable and soft by a mix of organic cotton and recycled polyester giving you a product with some of the best fabrics to use in dry weather.

Features include kangaroo pocket, hand warming pockets, protective hood size zipper opening for easy on and off, long front zip and one hand hem tightening.

Model nr. 2464-19

MADE FOR

- General outdoor use

OTHER AREAS OF USE

- Trekking
- Mountaineering
- Forest hunting
- Ski touring / Randonnée
- Casual use

PERFORMANCE

- Windproofness
- Waterproofness
- Insulation
- Breathability
- Durability
- Lightweight
- Stretch

Athlete insights



Carly
Skiing



Jessie
Cycling



Sarah
Running



Chrissy
Trail Running



NEED	LIKE	RUNNING	DON'T WANT
BREATHABILITY	STYLE/LOOK		Packability
GREAT FIT (PRIORITY)	colors		Multi-use (can be used for different sport)
Light weight	HOOD (with great fit)		
WATER REPELLENT	TRIMS (easy adjustable)		
Pockets (easy to enter)	zip pulls (easy to grab)		
	INSULATION		
	WATERPROOF		

- ↓
- BREATHABILITY
 - GREAT FIT (MOBILITY)
 - LIGHT WEIGHT
 - WATERREPELLENT
 - POCKETS (EASY TO ENTER)

Industry Innovation Finds



Ultra Lightweight Zipper



Hydrophobic Down



Tone-in-tone reflective tape

Opportunity

- **Women's products in gender neutral colors**
- **Thermoregulation system developed for Women**
- **Ability to adjust layers while in motion**

Weight & Packability market

High insulation (Belay/ Mountain)
(turquoise big puff jacket)
#LT4-8
Brand **The North Face**
Product **Summit L6 AW Down Belay Parka (summit series)**
Gender **Womens**
Size **S**
Material **800 Fill Goose Down ,
Ultralight DryVent 2L overlay for targeting
weather protection,
Ultralight Pertex fabric (for durability w/ minimum weight)**

Weight **680g** (measured with no tags)
Price **\$605** (March 2019)
Packability **30 cm L 52cm Ø**
Volume **6.450 cm3**
Assembled **stitched. baffel lofts**
Notice
Made in **Vietnam**



Protection (running)
(ultra-light grey shell)
#LT4-2
Brand **Arc'teryx**
Product **Cita SL Jacket Womens, Holograph S**
Gender **Womens**
Size **S**
Material **100% Polyester**
body
Contrast: **(upper side of torso, underarm, back)**
100 % nylon.
Price **\$379.00** (March 2019)



#LT4-2
Brand **Arc'teryx**
Product **Cita SL Jacket Womens, Holograph S**



COMPETITIVE LANDSCAPE

Retail Market Research

High insulation
(blue down jacket)
#LT4-1
Brand **Arc'teryx**
Product **Cerium LT Hooded Womens**
Gender **Womens**
Size **M**
Material **100% Nylon, Anaston (Fabric by TORAY)**
main body: White Goose Down
(80% down, 20% feather),
collar, shoulder, underarm, cuff,
100% Polyester, Cordolite®
Price **\$279.00** (March 2019)
Packability (bag flattened to square)
23 cm L x 34 cm Ø
(Bag measurements: bottom 34 cm square, L 24 including drawstring channel.)

Weight **300g** (measured with no tags on)
Volume **2113 cm3**
Assembled **seams**
Notice **80 g showing in stitches, (falling out)**
Made in **Myanmar (Burma)**



#LT4-1
Brand **Arc'teryx**
Product **Cerium LT Hooded Womens**



Protection (cycling)
(purple shell)
#LT4-6
Brand **7meshinc**
Product **Gen Jacket Women's**
Gender **Womens**
Size **L**
Material **Gore-Tex Active. 44% Nylon 30% polyester 26% EPTFE**
Weight **155g** (measured with no tags)
Price **\$355.00** (sale 217.00 March 2019)
Packability **21 cm L 21 cm Ø**
Volume **735 cm3**
Assembled **stitched. Taped seams inside.**
Notice
Made in **China**



#LT4-6
Brand **7meshinc**
Product **Gen Jacket Women's**

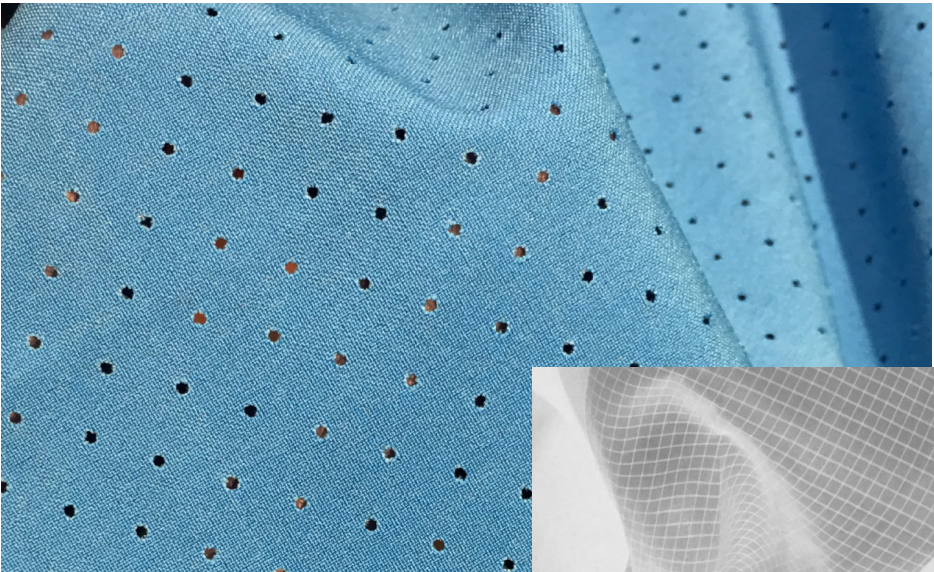


Mood / Inspiration

thin contrast color trims



elegant finish



curved hems



simplicity



hacked products



volume contrasts



tied



Motion

Upper body is in a streight upright position.



Arms are lifted up in front of body and moves down alk the side to push away from the ground with the ski pol

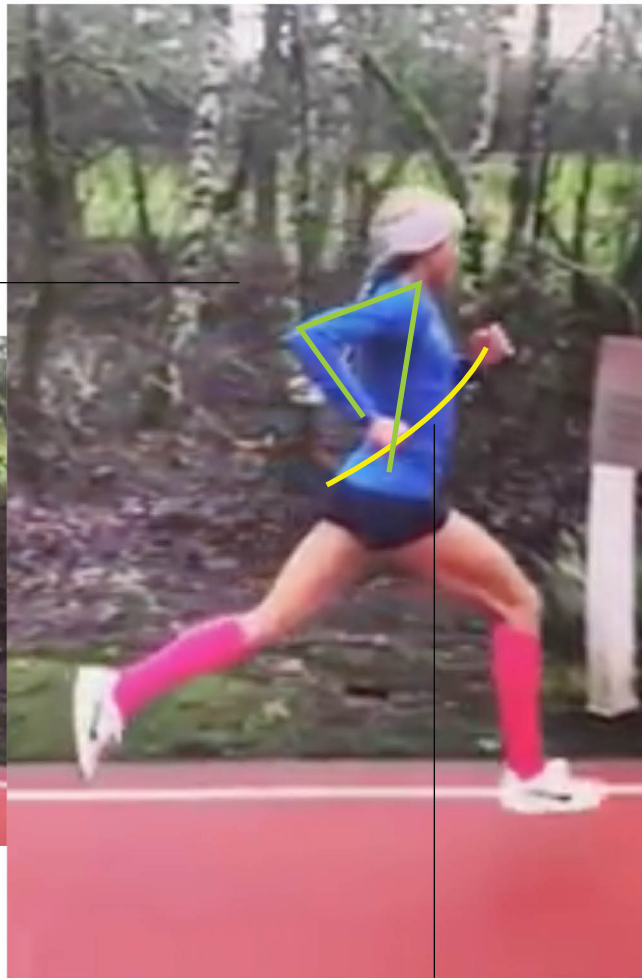


Upper body and arms are in a forward bended locked position.



Arm motions only occur when hands move position on handlebar or to reach for supplies located on rides lower back.

Upper body is in a streight upright position.



Arms are lifted up in front of body and moves down along the side to support the bodies forward moving motion.

Wind protection zones



Ski



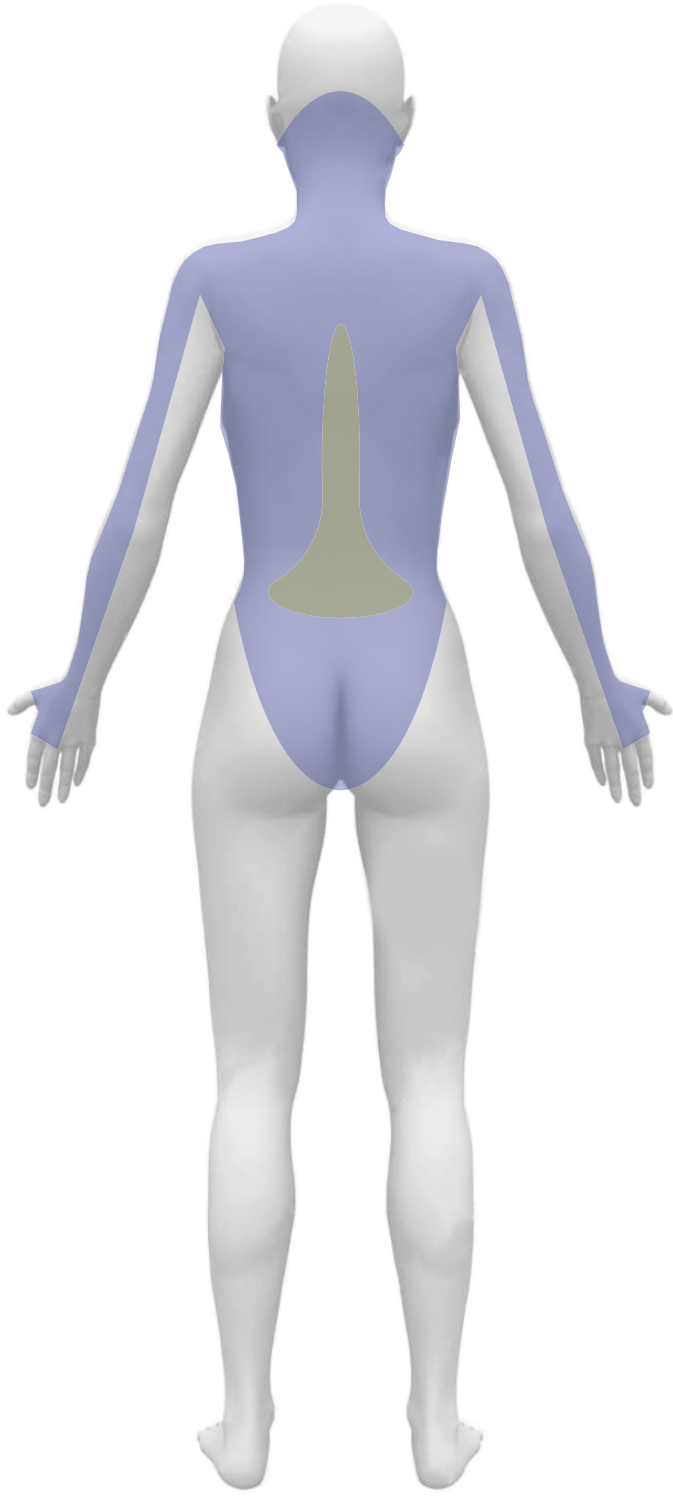
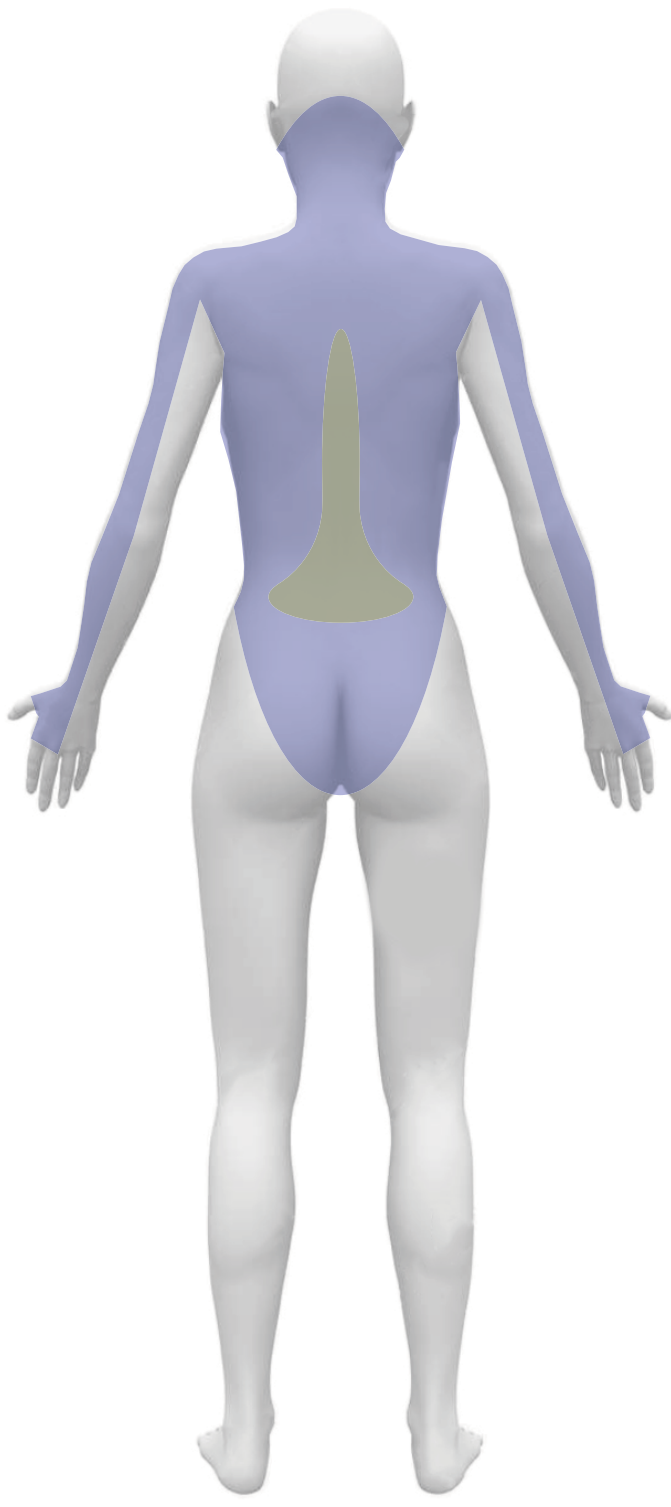
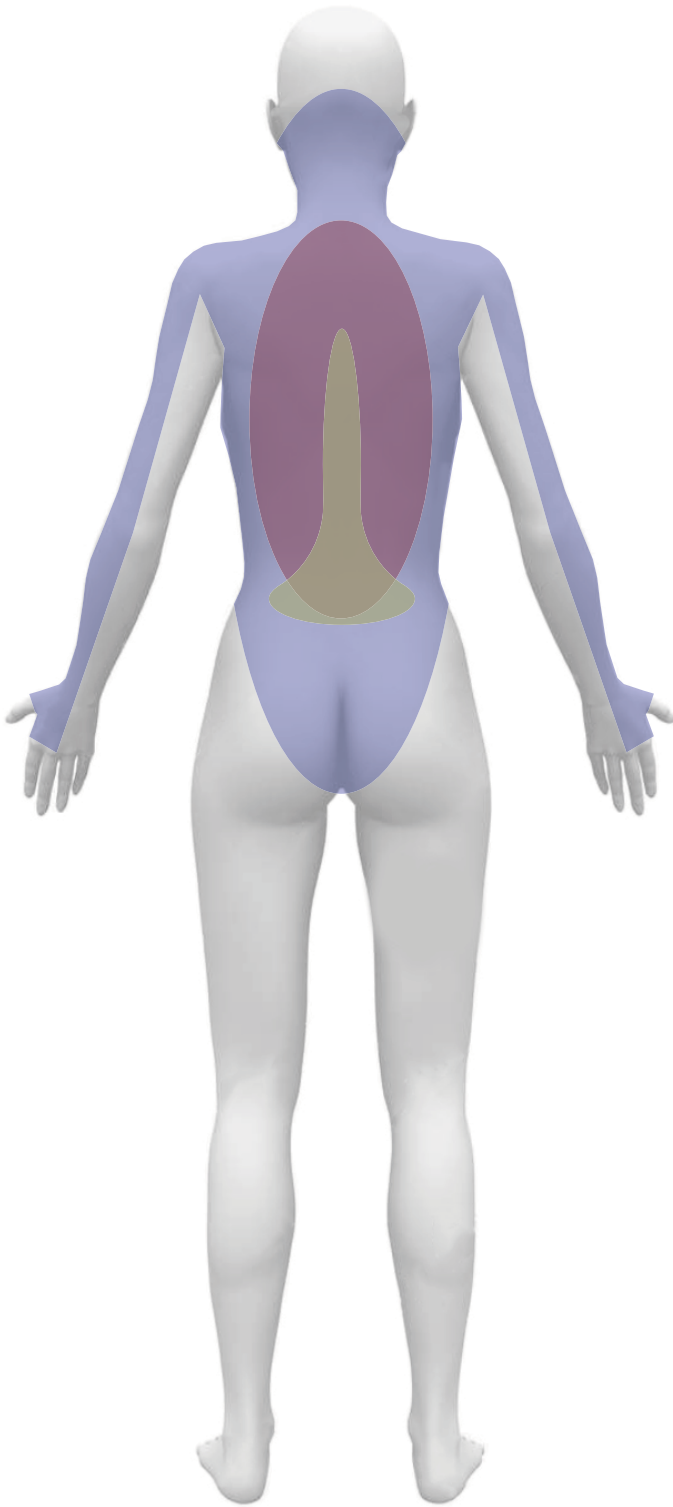
cycle



run

Protection zones

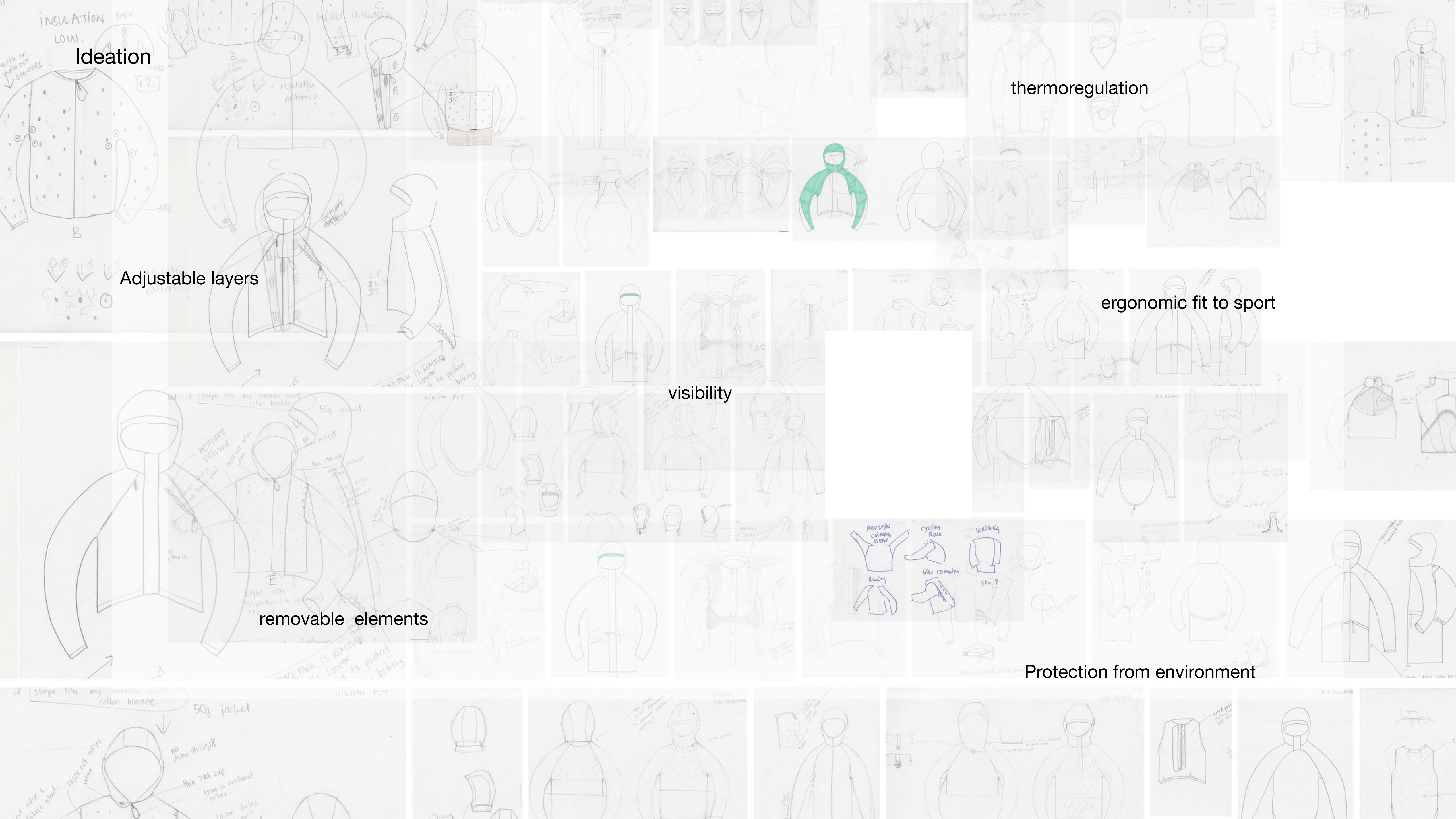
- wind protection zone
- high insulation zone
- sweat zone



Ski

cycle

run



Ideation

thermoregulation

Adjustable layers

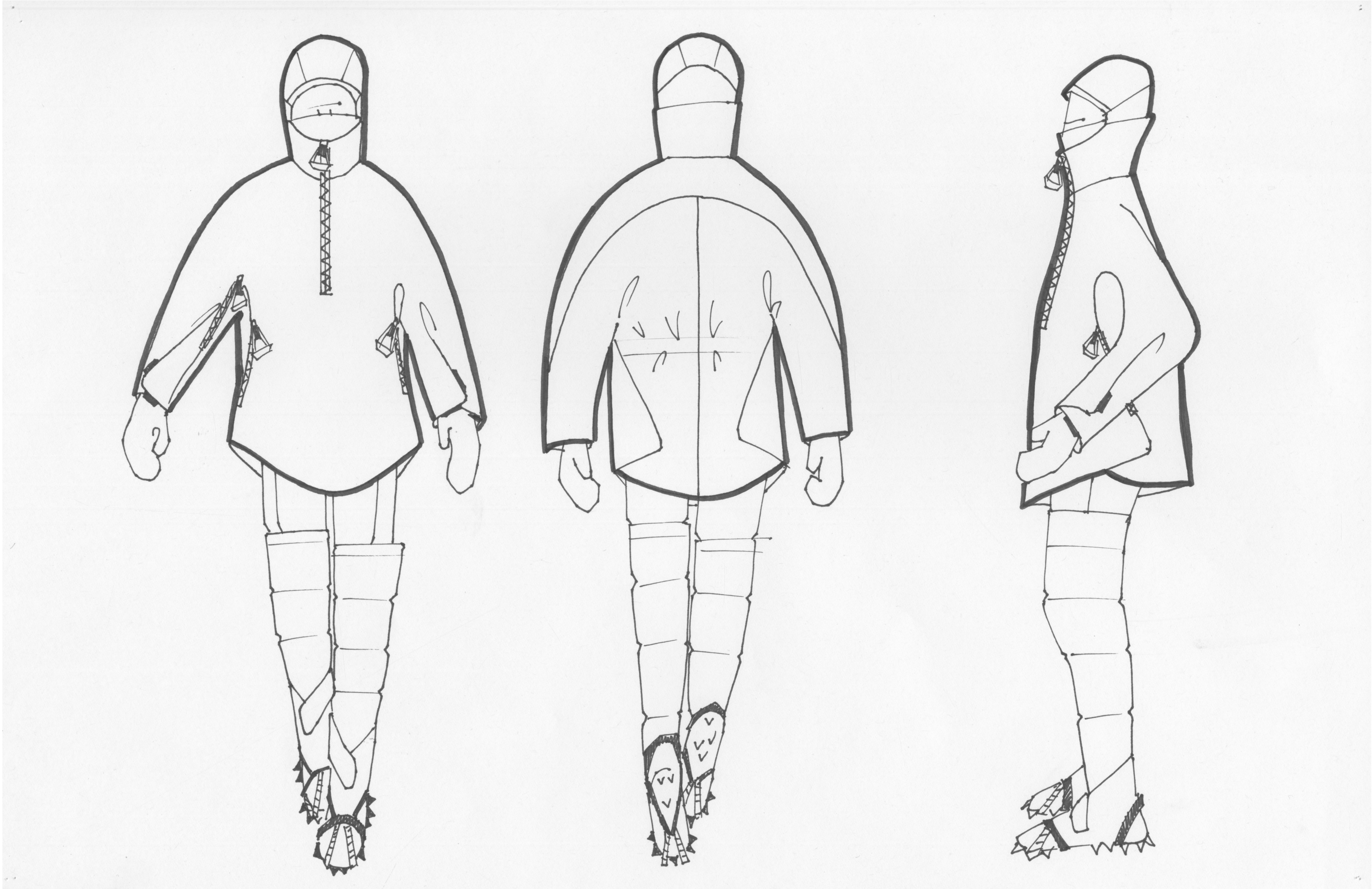
ergonomic fit to sport

visibility

removable elements

Protection from environment

Final Design
Gelus Ski Jacket



Ski jacket patterns making



Making Jacket w/ Ultrasonic Welding



Gelus Ski Jacket

high visibility patterns

adjustable hood w/ increased range of motion & hearing

extra high collar for protection

Face protection with merino wool facing

CF half zipper w/ windstopper

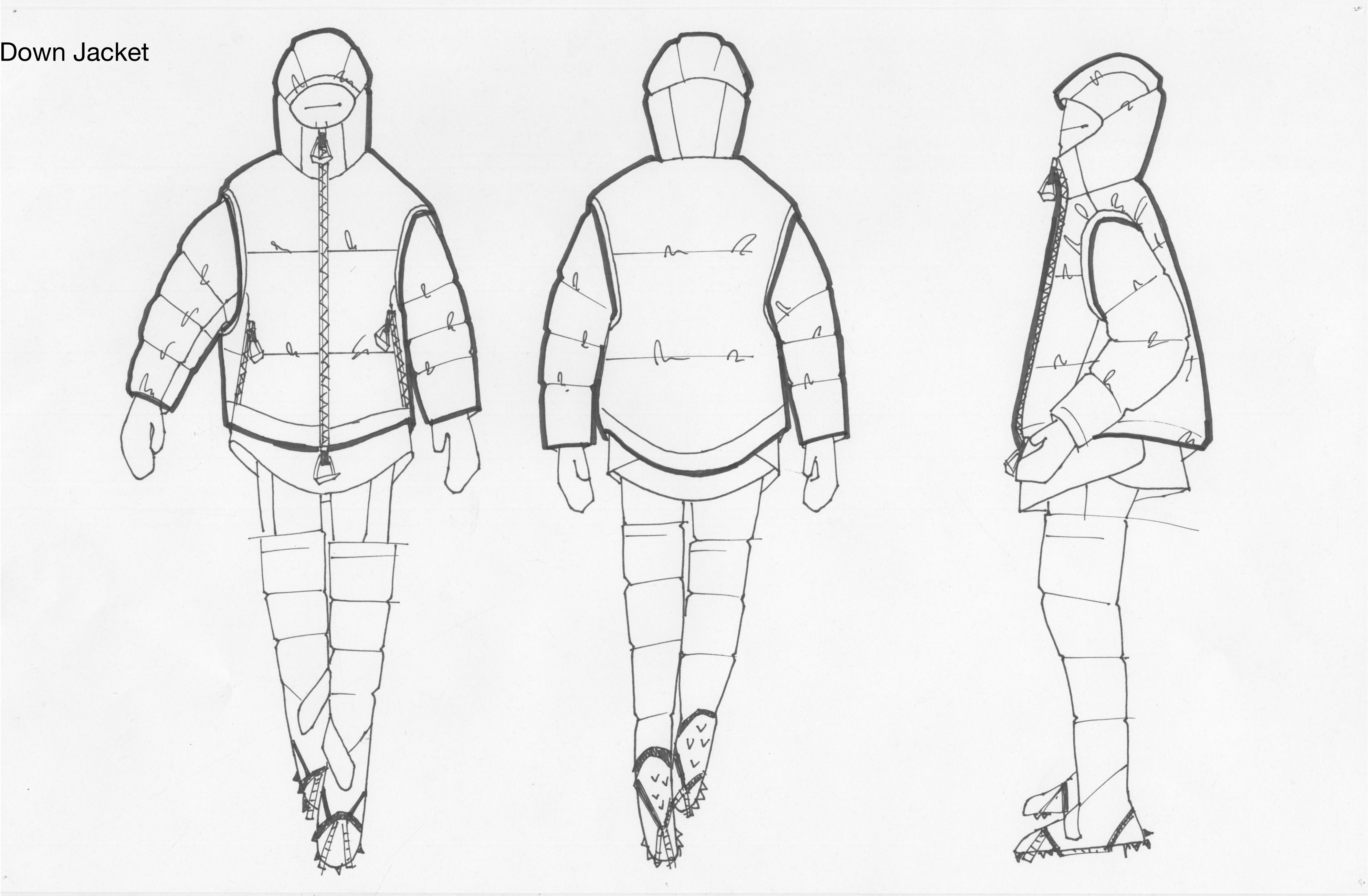
improved arm mobility in fit

connecting side pockets

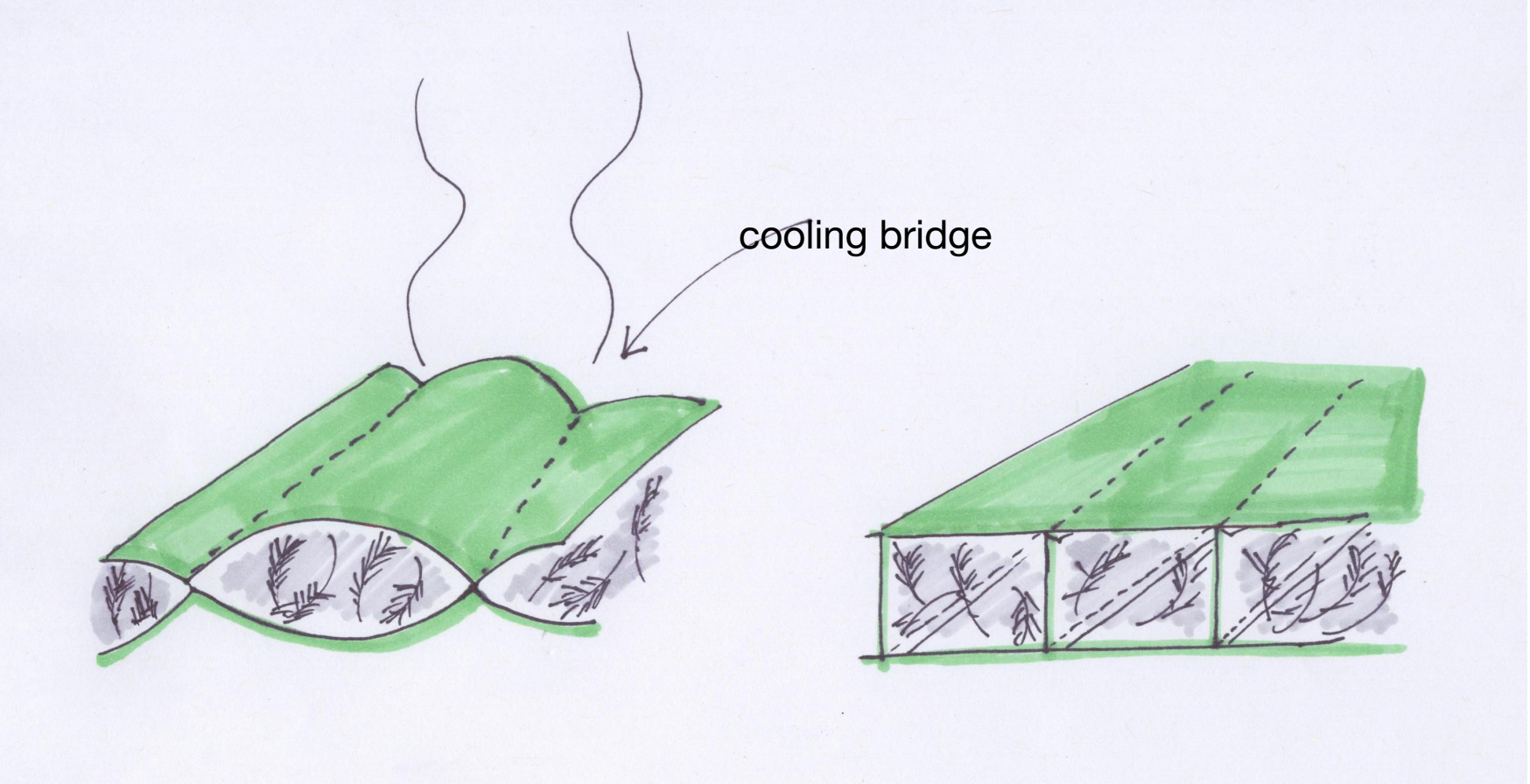
hem line shaped for protection & mobility



Final Design
Gelus Hydrophobic Down Jacket



Baffle constructions

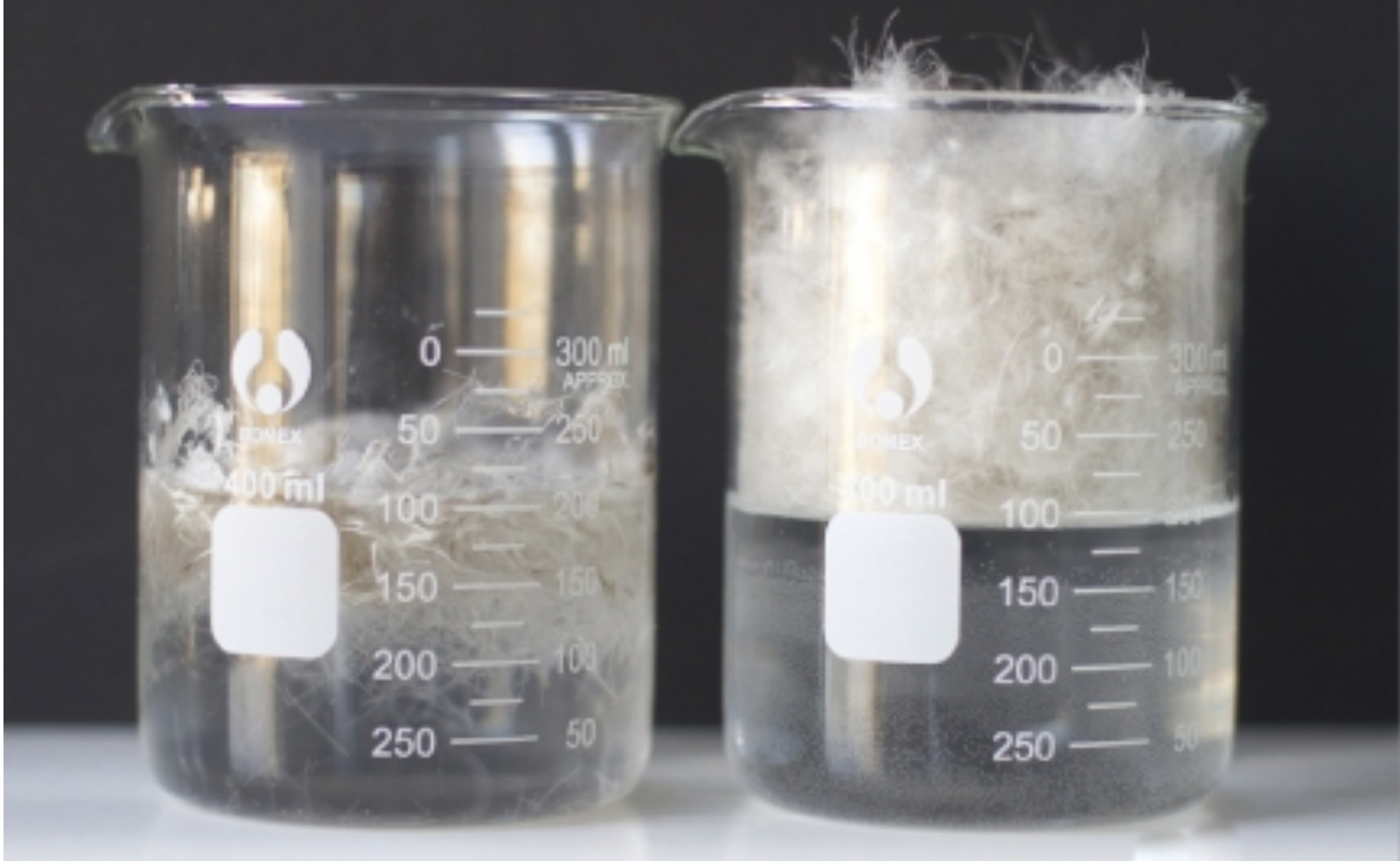


Sewn - Through Baffle

Lofted Baffle



Hydrophobic Down



untreated down

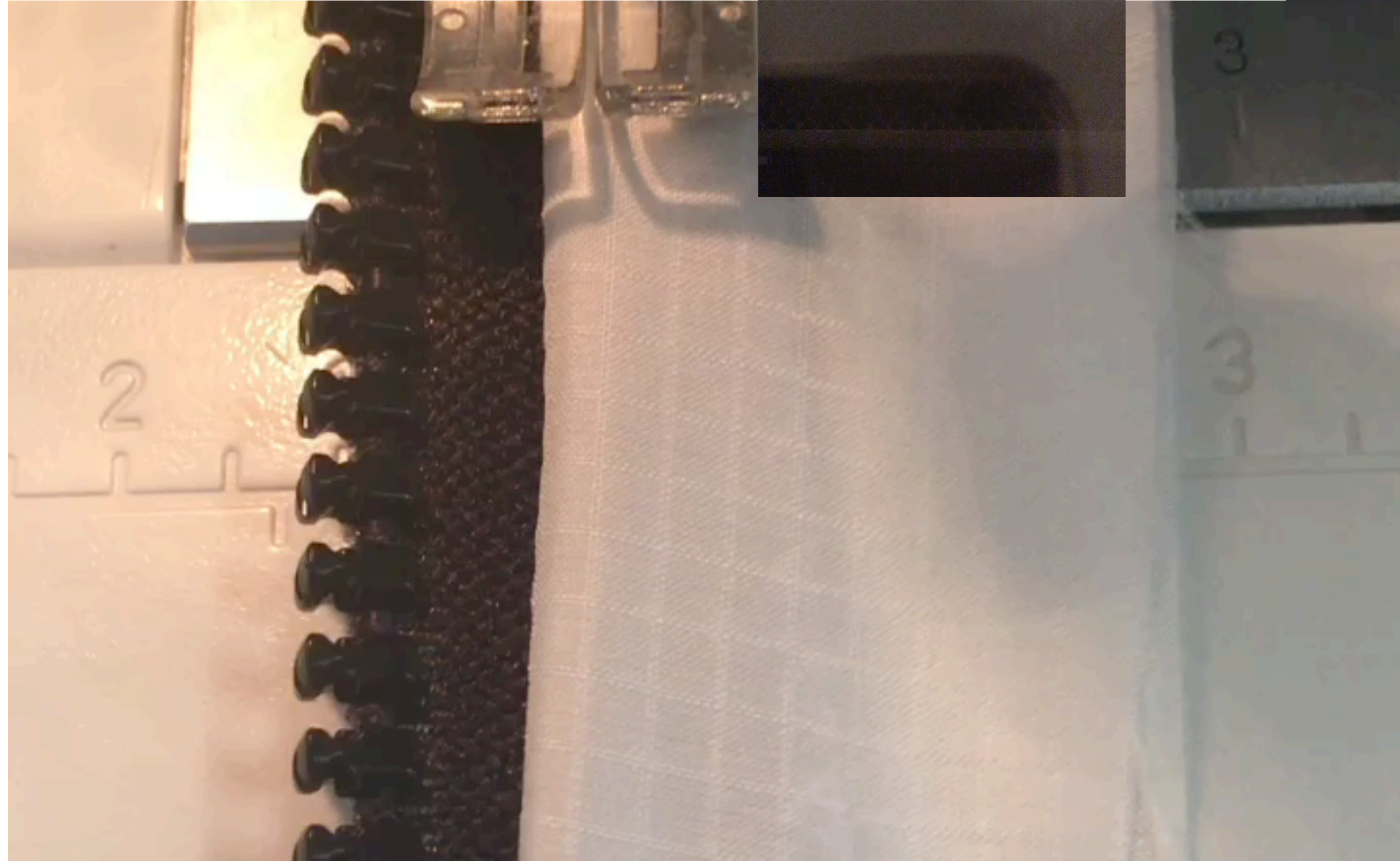
hydrophobic down



Final Design Down patterns making



Final Design Down making



Gelus Hydrophobic Down Jacket

adjustable hood

lofted CF placket to eliminate cooling bridge

Lofted Baffle construction on body
to eliminate cooling bridges

sewn through baffles on sleeves
to maximize mobility

800-fill Hydrophobic Goose Down

adjustable hem



Gelus Hydrophobic Down Jacket

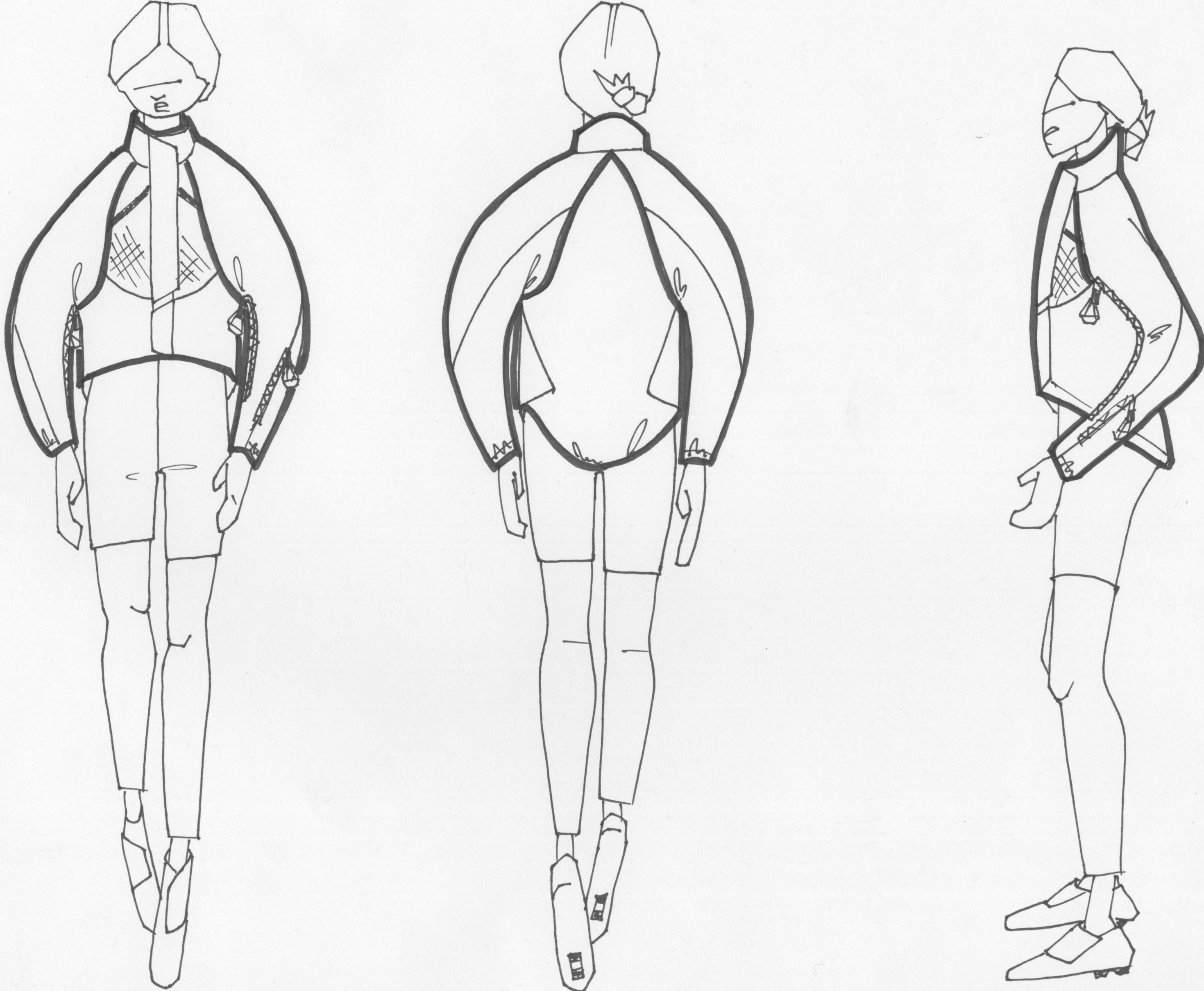


removable sleeves



Zip pockets connecting to
Gelus Ski Jacket

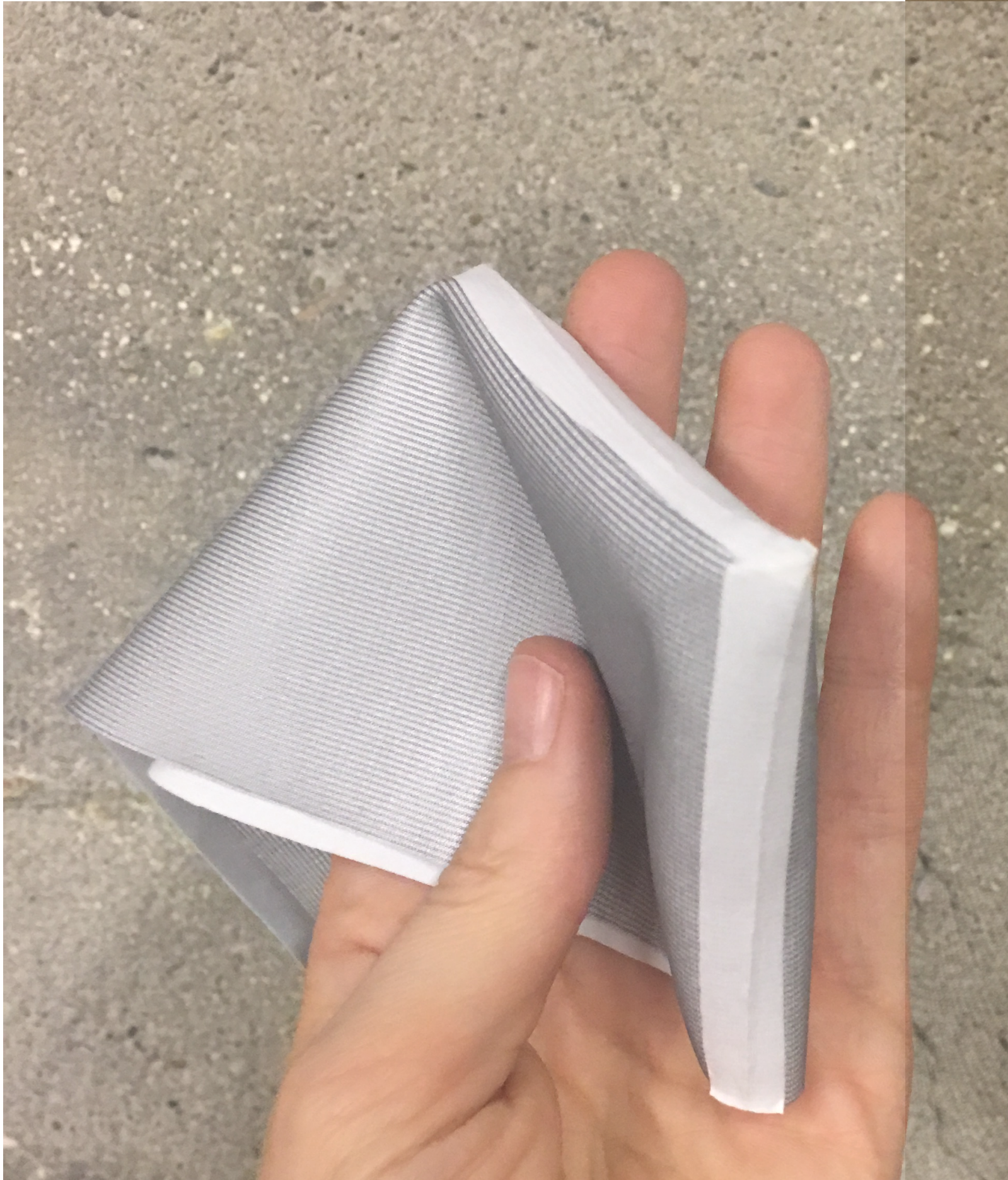
Final Design
Testa Cycling Jacket



Final Design cycling patterns making



Final Design cycling making



Testa Cycling Jacket

Final Design running video presentation

ergonomic fit

adjustable fit

increase airflow and thermoregulation

removeable sleeves

reflective patterns

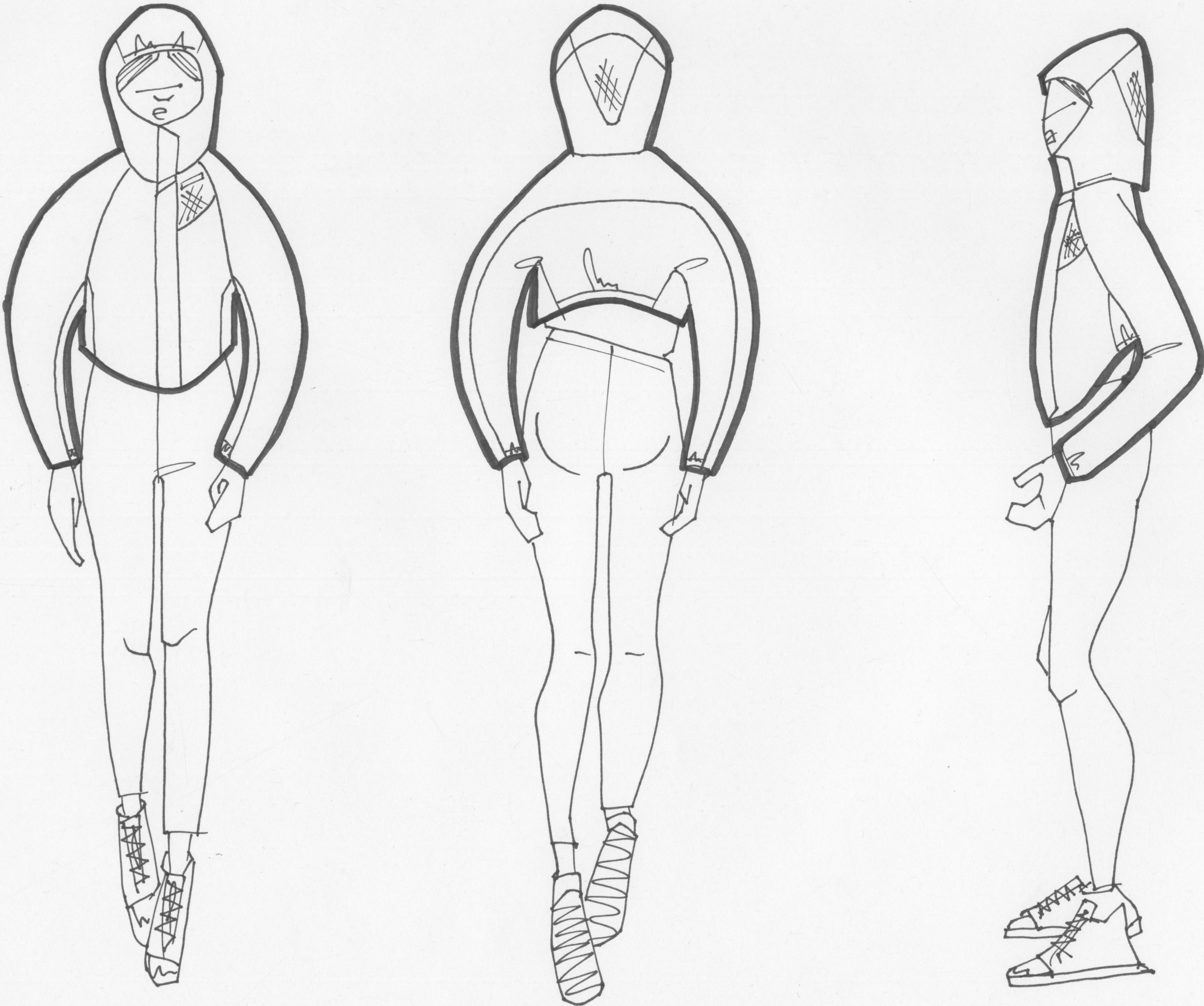
straps to store sleeves

easy to access back pockets

low profile velcro cuff closing



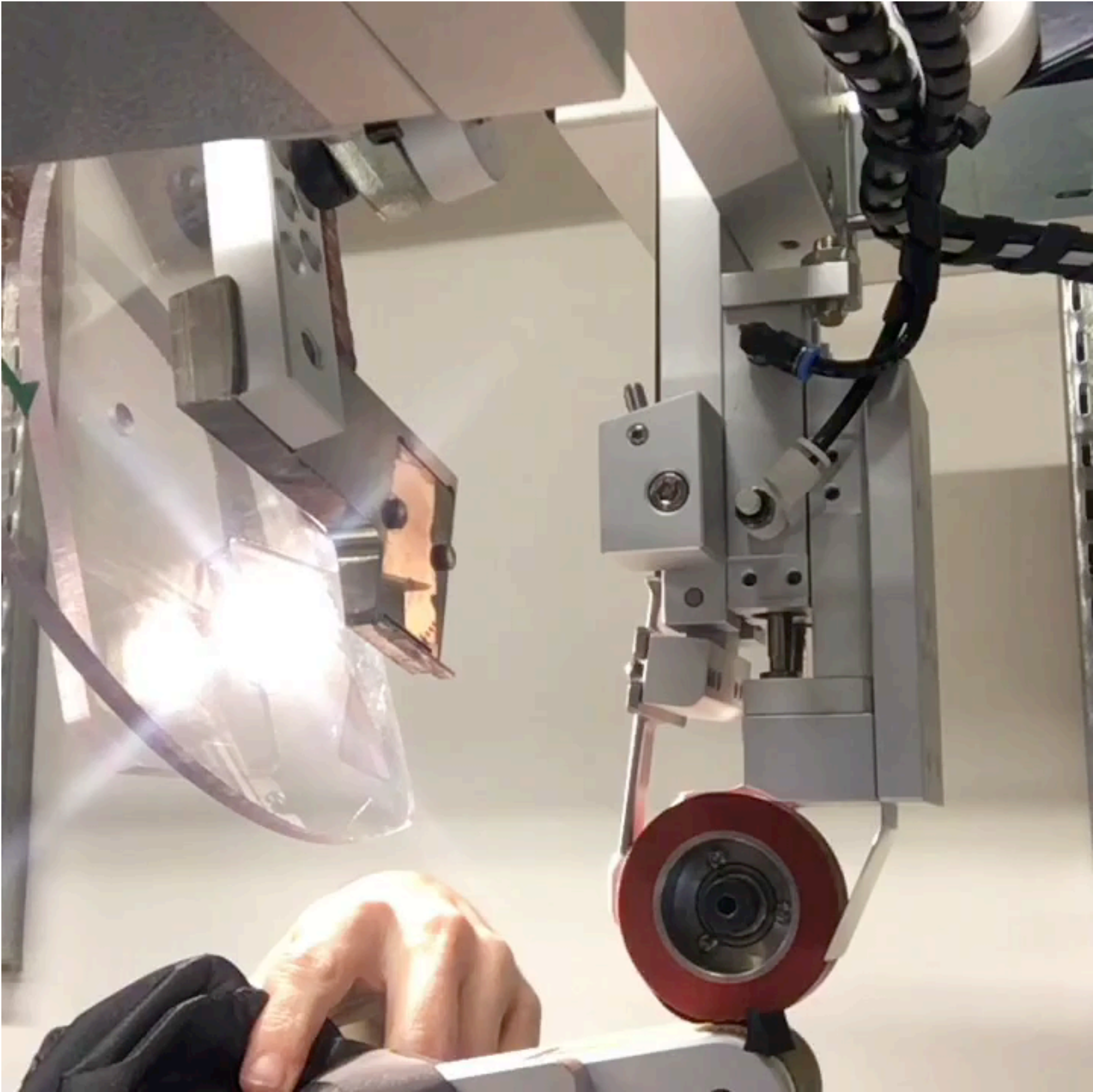
Final Design
Ventus Running Jacket



Final Design running making



Final Design running making



taped seams

Ventus Running Jacket

space for ponytail

Easy removable hood

Reflective patterns

strap to store hood

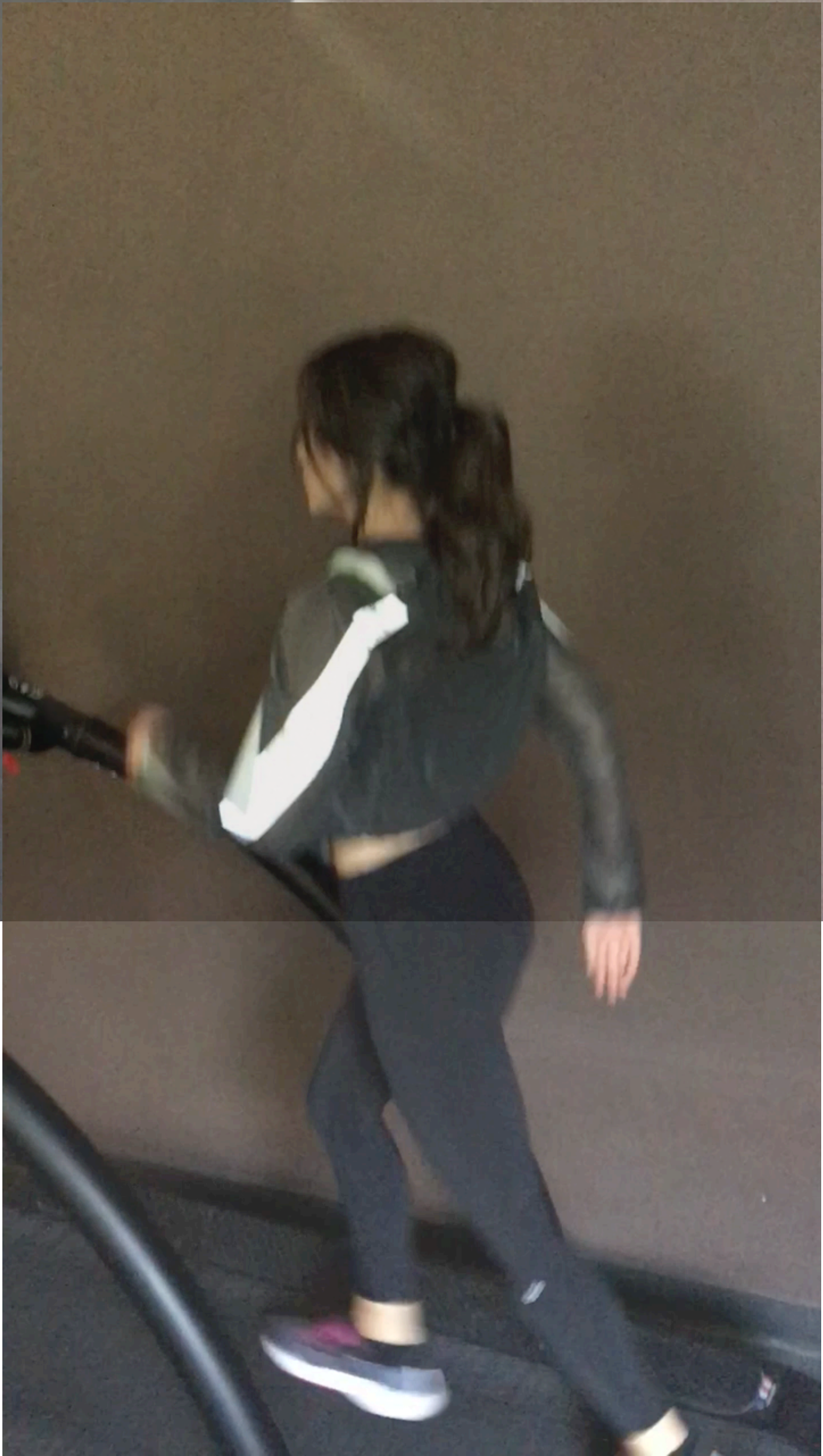
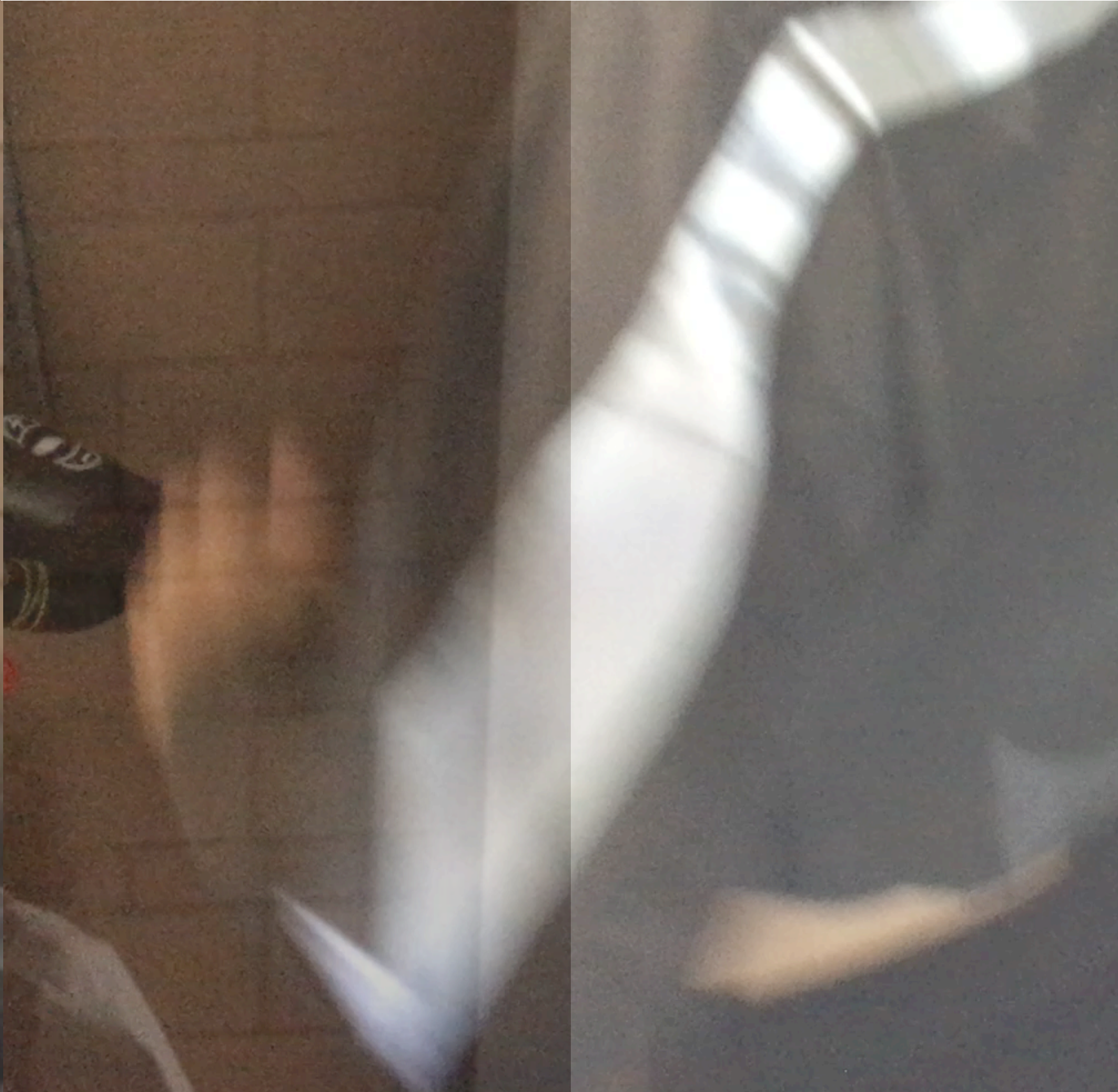
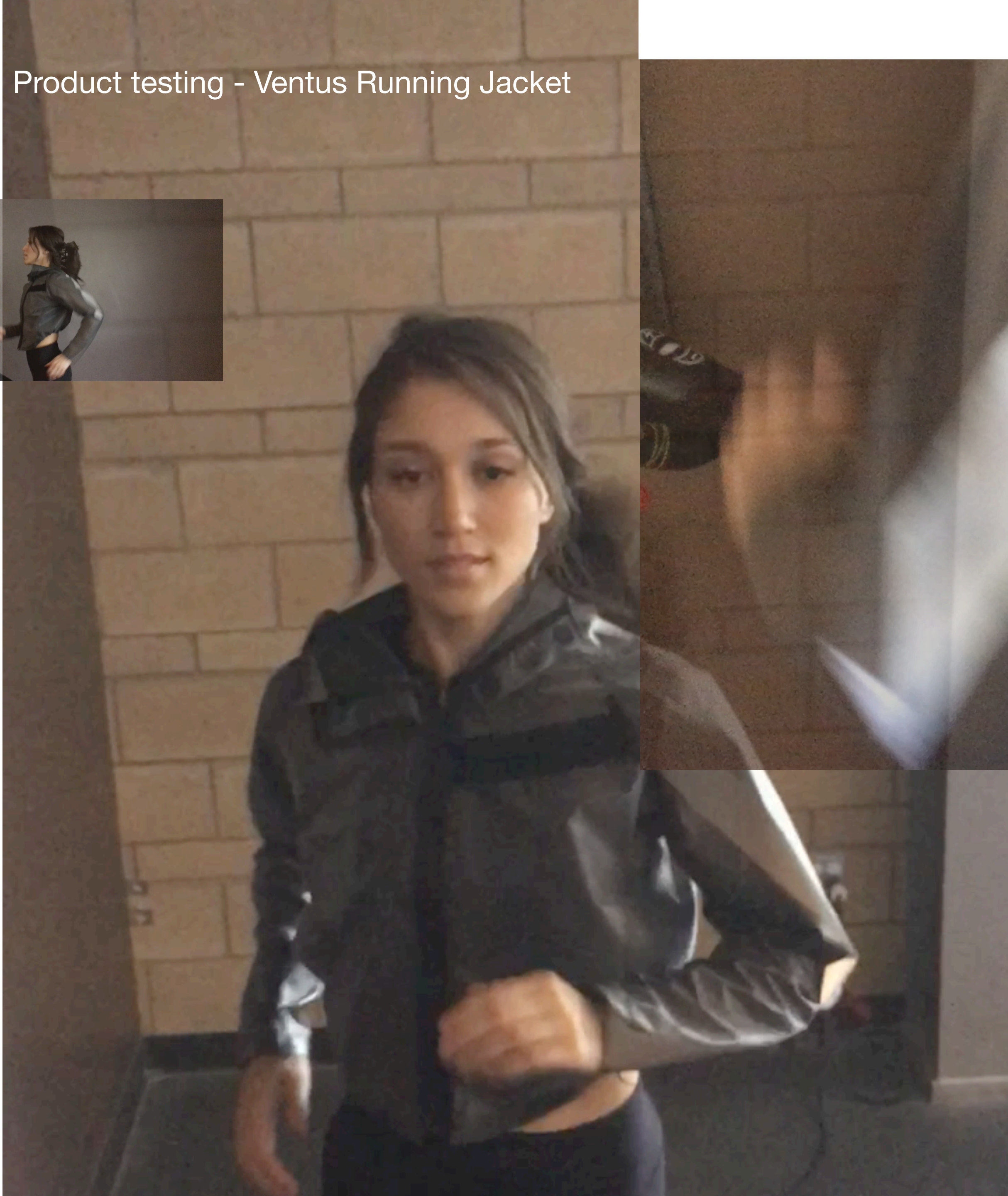
increased mobility in construction

optimal packability

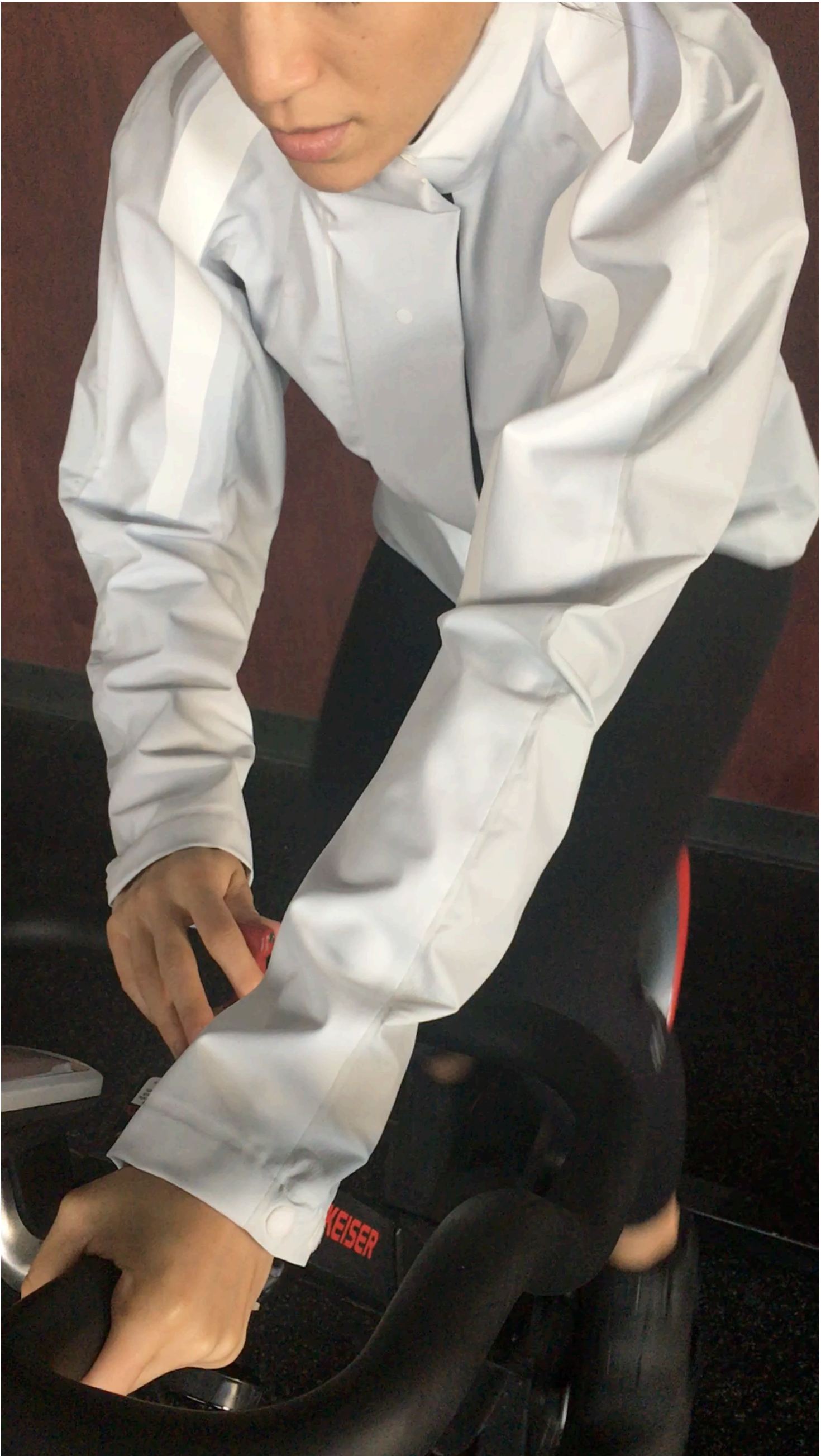
adjustable waistband



Product testing - Ventus Running Jacket



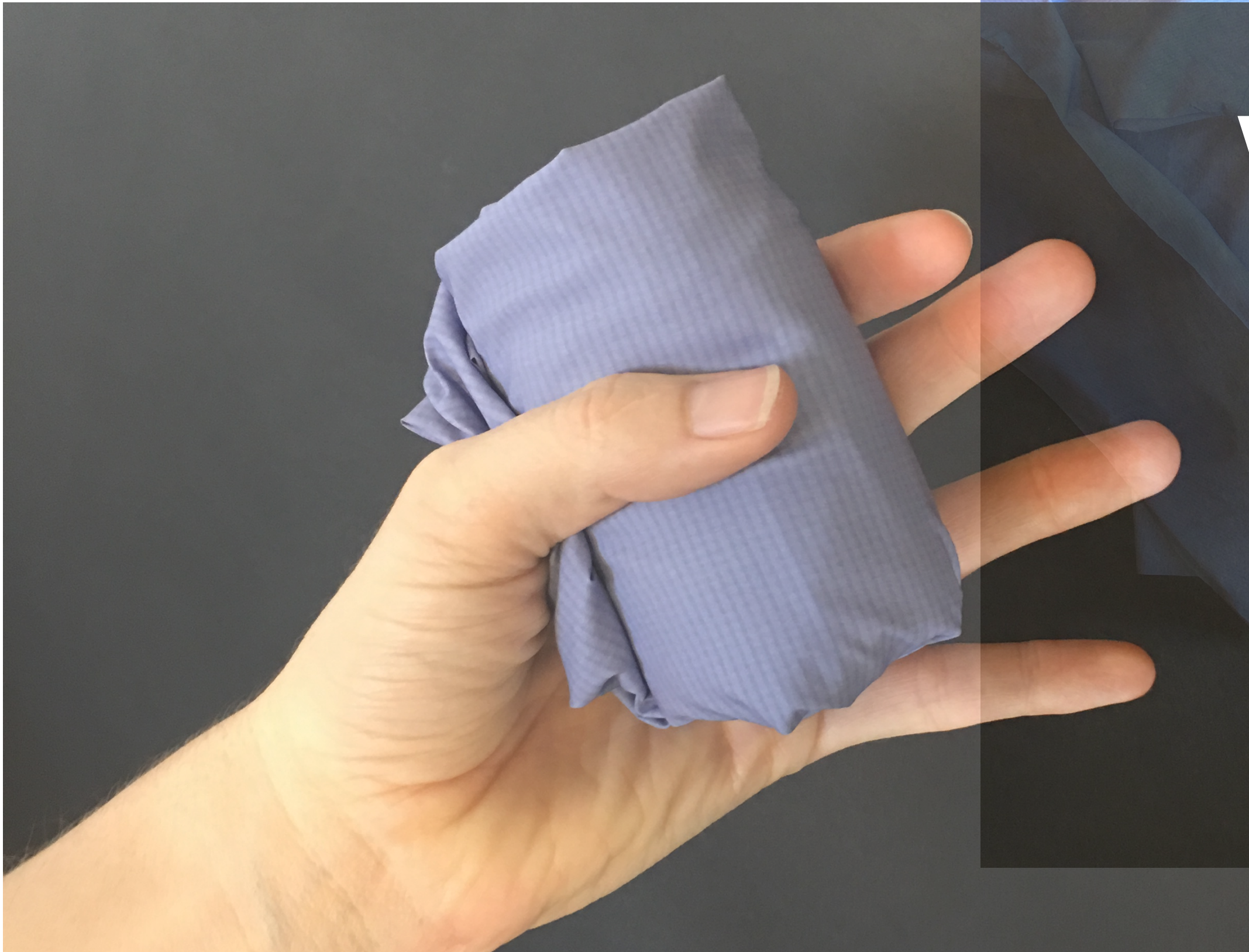
Product testing - Testa Cycling Jacket



Test - Weight & Packability



< 65 g



= 51 g
w/ Hood



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