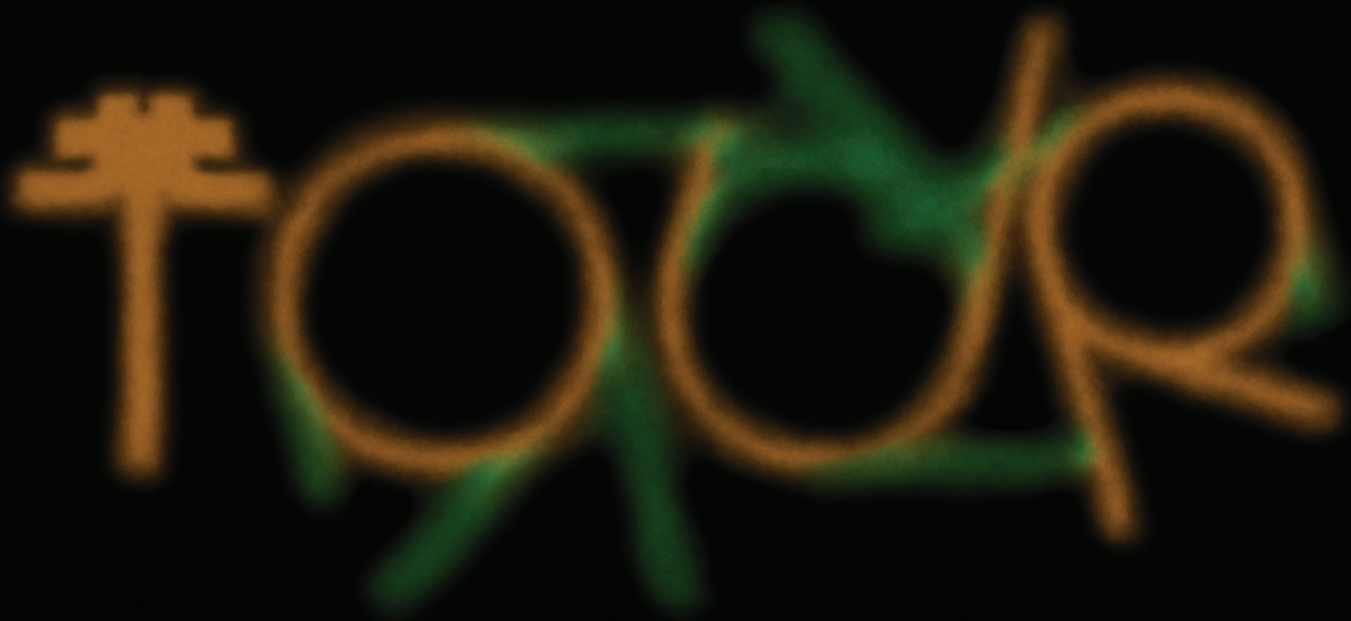


# DIRECTOR'S SCRIPT



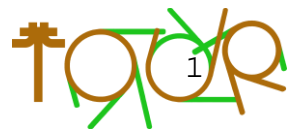
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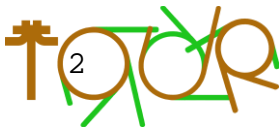
TOUR

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A Musical

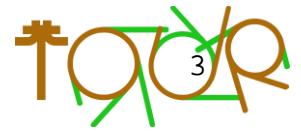
by

David Quang Pham



## THANK YOU

Name	Role
Emily Johnson	Data Scientist
Marcos "Danny" Caballero	Professor of Electromagnetism
Montana Earegood	Copyeditor
Ruthann Gregory	Physicist
Kaliyah Jetton	Original Unofficial Reader
Collin Bailey Jonkman	Original Unofficial Reader
Rebecca Chan	Original Unofficial Reader
Vanessa Bond	Original Unofficial Reader
Brian de Vries	Original Unofficial Reader
Madelyn Paquette	First Reading Host (April 24, 2020)
Haley Baird	Originated Reader of Quark
Bianca Waechter	Originated Reader of Лептон
Peter Louis Epstein	Originated Reader of Boson
Carina Goebelbecker	Originated Reader of Atom
Monica Cross	Originated Reader of the ensembles
Marie Incontrera	Originated Narrator
Kami Visitsak	Originated Singer of Quark
Diana Easter	Originated Singer of Лептон
Brian Egland	Originated Singer of Boson
Rina Lubit	Originated Singer of Atom



## SYNOPSIS

What discoveries can be made when matters collide? Plenty of matters are missed in these life-changing impacts but coming around is possible with atom smashers. Set in the University to the Accelerator, *TOUR* is a musical drama that tells the story of four physicists – Quark, Лептон, Boson, and Atom – interacting in their field while taking on the ramifications when crossing each other's lines.

Quark enters the University as a student, dreaming of becoming a physicist. Professor Boson connects her to magnetism. However, their opposite charges never attract but an instance of perhaps, identical. Лептон takes charge of Quark's livelihood each time Quark gets cut down by Boson; he has the power to fail anyone and even defund institutions.

With the introduction of this musical thesis, Quark acquires the circuits to bring unharnessed energy to the Accelerator. During the act that follows, Quark fulfills what the Accelerator is destined to accomplish. The success ends when Quark reaches supersymmetry during a particle accelerator "accident."



## CHARACTER BREAKDOWN

Character	Vocal Range	Gender	Age
<u>QUARK E</u> A physics student and physicist.	Mezzo-Soprano – Soprano	Woman	Adult
<u>ЛЕНТОН</u> (lepton) A doctoral advisor and lab supervisor.	Alto – Mezzo-Soprano	Woman	Adult
<u>BOSON</u> A physics professor and lab director.	Bass – Tenor	Man	Adult
<u>ATOM</u> A physics scholar and a right-hand scientist that makes up for everything.	Any	Any	Adult
<b>Ensemble</b>			
- STUDENTs	- RESEARCH ASSISTANTs	- PROFESSORs	
- TECHNICIANs	- POLITICIANs	- PARTICLEs	

## NOTES ON ATTIRE & COSMETICS

Performer portraying Quark: In the emergence era of co-op research, she would fit in with generally a blouse, a belted skirt, and close-toed heels. She eventually lugs around her sentimental green helmet, attached to a lanyard around her neck.

Performer portraying Лентон: She soils her science gear when she is working, but when she is not, she wears much more dull clothes. She dresses up as a rancher near the Desertron. She wears her orange helmet at the Accelerator.

Performer portraying Boson: He is suited to take on tenures. To demonstrate his reign, he is well-dressed for the Accelerator. He is a photonic figure, therefore brightening up the place.

Performers portraying technicians: The orange clothes and safety gear are for physics.

## MUSICAL NUMBERS

♫ #	Title	Character(s)
1.	Eigen	COMPANY but QUARK
2.	Exchange Particle	QUARK   ATOM
3.	Torsion	QUARK   ЛЕПТОН
4.	Available Energy	QUARK
5.a.	Tachyon	QUARK   BOSON   ATOM   ЛЕПТОН   students
6.	Nuclide	QUARK   BOSON   ATOM
7.	Entanglement	QUARK   BOSON
8.	Crossing Field Lines	QUARK   BOSON
9.	Centration	QUARK   BOSON   research assistants
10.	G	QUARK   ЛЕПТОН   ATOM   professors
11.	Anyon	QUARK
12.	Valence	QUARK   ЛЕПТОН   ATOM   students
13.	Effusion	QUARK
14.a.	Super Collide	QUARK   ЛЕПТОН   technicians
15	Particulate	QUARK   ATOM
16.a.	Slepton	QUARK   BOSON   ATOM   politicians   technicians
17.	Backscatter	QUARK   ЛЕПТОН
18.	Electroform	QUARK   ATOM   technicians
19.	Antimatter	QUARK
20.a.	Preon	QUARK   ЛЕПТОН
21.	Mole	COMPANY but ATOM
22.	Elementary Particle	QUARK   ATOM
23.	Bring the Conductivity	QUARK   ЛЕПТОН   ATOM
24.	Mass Charge Spin	QUARK   ЛЕПТОН   BOSON   ATOM
25.	Hadron	QUARK   ЛЕПТОН   BOSON   ATOM   technicians
26.	Fusion	QUARK   BOSON   ATOM
27.	Synchrotron: Magnet-Guided	QUARK   BOSON   ATOM   technicians
28.	Hypercharge	QUARK   ЛЕПТОН   BOSON   ATOM   technicians
29.	Isospin	QUARK   ЛЕПТОН   BOSON   ATOM
30.	Subatomic	QUARK   ATOM   technicians
31.	Meson	QUARK   BOSON   ATOM
32.	Pion	QUARK   ATOM
33.a.	Electron	QUARK   ЛЕПТОН   technicians
34.	Fission	QUARK   BOSON   ATOM
35.	Photonic Parity	QUARK   BOSON   technicians
36.	Baryon	QUARK   ЛЕПТОН   ATOM
37.	Decay (movement)	QUARK   particles
38.	Supersymmetry	QUARK   ЛЕПТОН   BOSON   ATOM   particles
39.	Knot (bow)	COMPANY



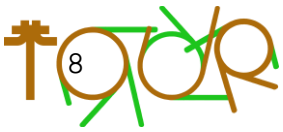
## SCENES & SET DESIGNS

Scene	Page	Location	SET   props
I i	8	University	PARTICLE BOARD displays a schedule, holds a box of tacks, hides a field line diagram DESK holds horseshoe magnets(4+) with a note stuck to a magnet, a field line diagram, a packet, a pen, a thesis, a decorative box hiding a magnet, packets, papers, scantrons
I ii	50	Desertron	operator's control cash
I iii	68	Magnet Factory	DESK hold magnets, metals, a light bulb, wire
II i	75	Accelerator	COLLIDER
III		Quantum World	





ACT I



1. EIGEN
----------

SCENE i

*[University]*

*(ATOM arrives. They find the spot(s) to tango.)*

*(STUDENTS move randomly about.)*

*(BOSON enters. He approvingly taps ATOM.)*

*(ATOM directs STUDENTS in an orderly fashion.)*

*(BOSON briefly observes. He departs.)*

*(JEPPOH rushes in, carrying papers. She orbits ATOM. She hands the papers to ATOM. She wildly roams around.)*

*(ATOM tries to direct JEPPOH but to no avail. They refocus on STUDENTS.)*

*(JEPPOH takes the papers from ATOM. She scatters away.)*

*(STUDENTS bring in a particle board and a desk.)*

*[The particle board displays a schedule,  
holds a box of tacks, and hides a desk.]*

*(STUDENTS neatly exit.)*

## 2. EXCHANGE PARTICLE

*(ATOM staffs themselves by the particle board.)*

*(QUARK wanders in.)*

### QUARK

ENDED UP IN UNIVERS-TY? ESTABLISH. MEANT  
MAY I JOIN A TOURING CIRCUIT? ELECTRIC— THE  
LABS, DO THEY BEHOLD AND FORESEE? ESCAPED IONS.

*(ATOM sees through QUARK. They dismiss her.)*

WHAT AM I, PART OF? COURSES FULL?

*(Humbling herself.)*

EXCHANGE.  
IT'S NOT WHO I AM.  
THE REAL ME.  
NOT BEST IN SCIENCE.  
I FORCED MYSELF.  
GIVE MY ALL TO PHYSICS.

*(Giving up.)*

MY PARTING GOALS.

### ATOM

QUARK.

*(Scanning the schedule.)*



**ATOM (cont.)**

E.

*(ATOM rips the schedule off the particle board. They hand the schedule to QUARK.)*

**QUARK**

DID I GET IN...?

*(Reading the schedule.)*

THE LECTURE TAUGHT UNDER BOSON!  
PUPIL UNDER CHILD PRODIGY! HE WHO MAKES LIGHT  
OF ALL EXPERIMENTS. ENLIGHTENED. NOT SO LONG 'GO  
THAT ATOMS WERE BLOWING MY MIND...

*(ATOM departs.)*

*(QUARK aches.)*

PART OF YOU YANKED ME WITH THIS EX-

*(Ripping apart and dropping the schedule.)*

CHANGING,  
DEGREE'S  
SO COLD.

*(Nearing the particle board.)*

THIS FIELD'S  
HEATED.

*(Grabbing a tack from the box.)*

CUTTHROAT.

*(Hastily putting the tack back in the box.  
She spills the tacks onto the floor.)*

ACA- DAMN  
ME. UP.

*(Kneeling. She sensitively picks up the  
tacks.)*

## QUARK (cont.)

BOTTOM.

TOP. DOWN.

STRANGE. CHARM.

*(Grabbing the box.)*

STANDARD,

MODELLED

STUDENT.

ACADEMIA.

*(Churning the tacks in her hand. She boldly discards the box. She innovatively pins the tacks onto the particle board. She suddenly feels wedged.)*

STATICS CONSERVE JUST WELL-CONNECTED THEORETICAL PHYSICISTS.

*(Observing the tacks. She moves herself around the space, relative to the formation of the tacks on the particle board.)*

BUT DYNAMICS,

TORQUE ANGLING UNCONNECTED ME TO BEST ALL PHYSICISTS!

GAIN, LOSE, ELECT ON BEING EXPERIMENTAL!

*(Picking up the schedule. She attaches the schedule to the particle board.)*

MAY NOT GET TO KNOW, BUT IT'LL FLOW, EXPLANATIONS.

CAN'T WAIT FOR BOSON. WHAT'S IN CORE? HOW'S HIS WORKLOAD?

IDEAS COME SO FAR. MATTERS, THEY WILL COME TO ME.

PARTICLE BOARD, THANKS FOR THIS EXCHANGE.

*(Knocking on the particle board. She promptly gets a move on.)*

### 3. TORSION

*(JENTON strolls in.)*



*(QUARK collides into ЛЕПТОН.)*

*(ЛЕПТОН twists herself into a pretzel.)*

**ЛЕПТОН**

ДЕРЬМО (der'mo). TORSION.

*(QUARK helps ЛЕПТОН up.)*

TWISTED СУ́КА (súka).

**QUARK**

MEAN FREE PATH.

MEANT NO HARM.

**ЛЕПТОН**

WHY THE RUSHING?

*(QUARK tries to flee.)*

*(ЛЕПТОН grabs ahold of QUARK.)*

TAKE COURSE LIGHTLY.

**QUARK**

A DEGREE

NEEDS ALL THESE

TORSIONS, TURNS

TO BE YOU.

*(ЛЕПТОН releases QUARK.)*

## ЛЕПТОН

YOU UNDERGRADS...  
THERE'S NO TORSION  
MORE TORTUROUS  
THAN MATTERS THAT  
TRY TO FIT IN.

*(Motioning towards herself.)*

SOON CROWNED DOCTORAL.

*(Directing out.)*

LABS, THEY'RE A BLAST.

*(Adjusting herself.)*

MUST NOT DECAY.  
THE NAME'S ЛЕПТОН.

*(Hurrying off.)*

## 4. AVAILABLE ENERGY

## QUARK

AVAILING MASTER  
ENERGIZED FAILED NEWCOMER.  
WE SHARED A DEVOTION, CAREER IN PHYSICS.  
DISTRIBUTION, FIXED  
AMOUNT OF ENDURANCE 'MONGST  
IDENTICAL PERSONS. ACTIVATE KINEMATICS!

*(Disorderly moving about.)*

FREE AVAILABLE ENERGY!  
I'LL ENTAIL THE MECHANICS!  
I'LL UPSCALE THE MAGNETICS!  
I'LL UNVEIL THE DYNAMICS!  
I'LL AVAIL IN ALL PHYSICS!  
I'LL PREVAIL AS PHYSICIST!  
FREE KINETIC ENERGY!  
NOT DERAILED TRAINING!

*(Focusing her energy.)*

GET LOST IN THE CALCULUS!





*(QUARK rigidly moves about.)*

**QUARK** (cont.)

FREE AVAILABLE ENERGY!  
I'LL CURTAIL ALL THE LIMITS!  
I'LL ASSAIL DERIVATIVES!  
I'LL DETAIL THE STATISTICS!  
I'LL AVAIL ALL THINGS PHYSICS!  
I'LL PREVAIL AS PHYSICIST!  
FREE KINETIC ENERGY!  
AND NOT FAIL SPIRIT!

*(Condensing her energy.)*

BE FLUID IN MECHANICS!

*(Smoothly moving about.)*

FREE AVAILABLE ENERGY!  
I'LL INHALE GAS WHO ARE QUICK!  
I'LL EXHALE ALL THAT'S HOMESICK!  
I'LL ENGAIL THEM WITH MY WITS!  
I'LL AVAIL THOSE IN PHYSICS!  
I'LL PREVAIL AS PHYSICIST!  
FREE KINETIC ENERGY!

*(ATOM and STUDENTs enter.)*

*(QUARK adjusts herself.)*

DON'T BLACKMAIL SCEPTICS.

*[The space brightens.]*

*(BOSON enters. He flips the particle board.)*

*[The particle board displays a field line diagram.]*



**QUARK** (cont.)

ENTROPIC TIMES THEN  
 CHAOS. PUT WORK AS YOUR PRIME.  
 UNIT IS ALWAYS TIME. A DEGRADATION,  
 'LECTROSTATICS CLASS.  
 AVOID THAT COLLISION COURSE.  
 COLLAPSE THROUGH SYNERGY. ENERGIZE POTENTIAL.

<p><b>5. TACHYON {expositional revision}</b></p>
--------------------------------------------------

*(QUARK, ATOM, and STUDENTs gather around.)*

*(BOSON lightly paces.)*

*[An explosion audibly rings.]*

*(QUARK solely hears the explosion.)*

**STUDENT**

NEUTRONS!

*(BOSON dismisses the answer.)*

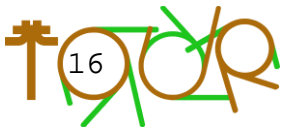
**STUDENT**

PHONONS!

*(BOSON dismisses the answer.)*

**STUDENT**

MUONS!



*(BOSON dismisses the answer.)*

**STUDENT**

BOSON?

*(BOSON seems taken off guard.)*

**ATOM**

BORONS... THEORY!

*(STUDENTs ponder.)*

THAT'S IT!

**STUDENTs**

*(Hysterically laughing.)*

*(BOSON feels disappointed.)*

*(QUARK sticks out.)*

*(STUDENTs ponder.)*

**QUARK**

POSITIVE. NEGATIVE.

**BOSON**

TOUR.

**BOSON**

LET IT FLOW.  
DO BUILD YOUR NEST.  
DO THEY ATTRACT  
ATTENTION

**STUDENTs**

'LECTRICITY!  
WITH 'LECTRONICS!  
SO MAGNETIC!

**QUARK**

YOU WOULD LET ME  
BUILD MYSELF IN YOUR  
LABORATORY?

**STUDENTs**

IT'S EXCLUSIVE!  
NO EXPERIENCE!  
SESSION IS FULL!

*(BOSON nods. He pushes the particle board  
away, revealing horseshoe magnets on a desk.)*

**BOSON**

PERFORM A CONTROLLED EXPERIMENT. FORCE. ATTRACTING.  
USING FERROMAGNETS. PERMANENT DIPOLES. REMOVE FIELDS  
OUTSIDE. DISCIPLES. ADVICE. DON'T REDUCE TO ZERO.  
SPONTANEOUS REACTION. TRY COBALT, YOUR SAKE.  
ELECTRONS. UNPAIRED. COVALENT.

**STUDENTs**

TAU!

*(Scattering. They each grab a magnet.)*

**STUDENT**

*(Pointing a magnet to another STUDENT.)*

COMPASS FACES...

**STUDENTs**

ATTRACTION HERE!

*(A different STUDENT directs their magnet to  
another STUDENT.)*



**STUDENT**

YOUR FRIDGE RUNNING?

**STUDENTs**

HA, CAUSE MAGNETS!

**ATOM**

*(Reaching for another STUDENT.)*

YOU SEE, MAGNATE.

**STUDENTs**

STILL THE BORON!

*(BOSON takes two magnets. He extends one to QUARK.)*

**BOSON**

PARAMAGNET?

**QUARK**

I WOULD BE HONOURED.

*(Accepting the magnet.)*

**STUDENTs**

OH INDUCTANCE!

**QUARK**

SAY, WE'RE 'TRACTED.

**STUDENTs**

A LITTLE FORCED!

**BOSON**

REPEL!

*(Each pair of STUDENTs distance themselves, forming magnetic formations. In hand, they dance with magnets facing each other.)*

*(ЛЕПТОН passes the experiment. She appears enjoyably disheveled.)*

*(QUARK seems distracted by ЛЕПТОН. She increasingly repels away from BOSON.)*

*(Their experiment concludes.)*

<p><b>5a. TACHYON (reprise)</b></p>
-------------------------------------

*(BOSON notices the note attached to his magnet. He detaches and reads the note.)*

**BOSON**

I HAVE BEEN CHOSEN, DIRECTOR OF THE ACCELERATOR...

**STUDENTs**

PLEASE DO NOT GO!  
WE'LL ALL MISS YOU.  
CONDUCTIVITIES.

*(BOSON remains silent.)*

PROFESSOR'S SPEECHLESS.  
THINK IT OVER!

*(BOSON waves STUDENTs off.)*



## STUDENTs

WE WILL REPEL!

*(Departing.)*

6. NUCLIDE
------------

*(QUARK heads over to the desk. She begins writing a thesis.)*

## ATOM

PERHAPS YOU COULD STAY LONGER IF YOU TRIED  
SUPERPOSITION?

MASSLESS APPEALS DOES NOT LEAVE US TO BE TIGHTLY  
BINDING.

ENERGY STATES OUR STABILITY ALONG THE YEARS HAVE BEEN  
A NUCLIDE, A RIDE.

*(Growing disheartened at the sight of QUARK.)*

## BORON

BORON WAS WHAT OTHERS COULD ONLY SEE WITHIN  
YOURSELF.

FIVE POSITIVE, NEGATIVE, NEUTRAL SENSES WITHIN YOU.  
ATOMIC RADIOACTIVITY DOESN'T HAVE TO HIT YOU, JUST LET  
THIS SLIDE.

*(Embracing ATOM.)*

## ATOM

AT LEAST YOU SAW ME AS A SYMBOL BESIDES JUST A NUMBER.  
BEFORE YOU LEAVE, YOU'RE GENEROUS TO PROVIDE ME SOME  
LIGHT.

*(Splitting from BOSON.)*

THANK YOU FOR THE RECOMMENDATIONS TO LEVELS AMONGST  
GRAD SCHOOL'S NUCLIDES, HALF-LIFE.

*(Departing.)*

## BOSON

PICK UP MANY POSITIVE CIRCLES FOR A CHANGE, WILL YOU?!  
ATOM, YOU DO MATTER AND MAKE THE BEST OF EVERYTHING.

*(QUARK finishes the thesis. She heads to  
BOSON.)*

YOU ONCE THEORETICALLY DID AND NOW WHAT'S LEFT IS TO  
DEAL WITH THIS NUCLIDE?

*(Focusing on QUARK.)*

## 7. ENTANGLEMENT

*(QUARK unveils and gifts the thesis to  
BOSON.)*

## BOSON

*(Reading the thesis.)*

ÉTUDE THÉORIQUES DES MAGNÉTIQUE MOLÉCULAIRES (e-tude  
there-reek des mag-ne-teak mo-le-cu-lairs).

*(Setting aside the thesis.)*

FLUXING DOWN AN UNDERGRADUATE THESIS?

*(QUARK nods.)*

LEFT COLLEGE IN FRACTION OF TIME BUT STILL PROUD,  
YOU MAY JUST PROFESS

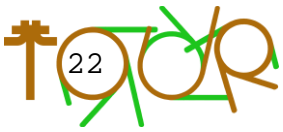
*(Motioning towards himself. He is in the  
mood to tango.)*

IN NO TIME.

ARE YOU INTO QUANTUM ENTANGLEMENT?

STILL MAGNETIC EXCITATION TO BE FOUND.

YOU GIVEN PICKING UP PHOTONS FOR A CHANCE?



**BOSON** (cont.)

A COUPLED QUBITS?  
LITTLE HIGH ENERGY.

*(Grabbing a magnet. He points the magnet at  
QUARK. He chuckles. He sets down the magnet.)*

MAGNETIC, BARS, MOMENTS.

*(Shaking QUARK.)*

WHEN WE'RE YOUNG, MAKING WAVES.  
PARTICLE HORIZON'S A FLASH,

*(Releasing QUARK.)*

REACH ENLIGHTENMENT.

*(QUARK distances.)*

JUST A PARTICLE ROAMING IN A VACUUM.  
FOUND A PART OF ME AS RAW AND RESOURCEFUL.  
MAGNET-FOCUSED AND COME ON PARTICLE BOARD.

*(Attaching particle accelerator blueprints  
to the particle board.)*

EXCEL IN THE ACCELERATOR.

*(Forcing QUARK to attach the field line  
diagram to the particle board.)*

RESEARCH COLLABORATION.  
INDEPENDENT SCHOLAR.

*(Shrugging off.)*

VACUUM, THERE'S NOTHING TO PROVE—

*(Switching topics.)*

'VIDE THAT STEM GRANTS FOR YOU.  
DISCOVERIES. SYMMETRY.  
THE JOURNEYS. QUITE LOOPY.

*(QUARK eyes the field line diagram.)*



*(BOSON pulls out the decorative box from the desk. He gets on one knee in front of QUARK.)*

**BOSON** (cont.)

FIELD THEORIES PROPOSED, WILL YOU

*(Opening the box, revealing a magnet.)*

QUANTUM ENTANGLE ME?

<h2>8. CROSSING FIELD LINES</h2>
----------------------------------

*(QUARK may express mixed feelings.)*

**QUARK**

BOSON.

BOSON...

FIELD LINES.

FIELD LINES...

ARE CROSSED.

ARE CROSSED...

FIELD LINES SHALL NEVER BE CROSSED.

*(Pointing to the field line diagram.)*

THE FIELD LINES HERE, CROSSED.

**BOSON**

I CROSSED?

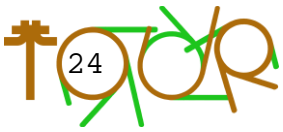
*(Extending his arm to QUARK.)*

I CROSSED?

*(QUARK draws the line with her fingers.)*

I CROSSED?

*(Crossing the line.)*



**BOSON** (cont.)

ENTERED.

*(Pointing out the space.)*

YOU ENTERED.

*(Pointing to his temple.)*

YOU ENTERED.

*(Pointing to his heart.)*

WE LOOP.

*(Walking in a helix-like path.)*

WE LOOP.

*(Pacing back and forth.)*

MONOPOLES.

*(QUARK disapproves.)*

MONOPOLES...

CROSSED FIELD LINES.

*(BOSON retreats to the desk.)*

END TOUR.

END TOUR.

END TOUR.

END OUR...

END OUR TOUR.

END OUR TOUR.

**QUARK**

YOU ARE MOVING TOO FAST FOR ME...

*(Motioning to herself.)*

I'M RANDOM...

OUR FIELD LINES CAN'T EVER BE CROSSED.

*(BOSON grabs the thesis. He takes a pen. He crosses the thesis with a stroke of the pen. He hands the thesis to QUARK.)*

*(QUARK grows enraged. She hesitantly discards the thesis. She silently expresses that she has the grit to finish her degree.)*

<b>9. CENTRATION</b>
----------------------

*(BOSON takes out a physics packet. He throws the packet at QUARK.)*

**BOSON**

TENURE AS PROFESSOR ENDS LATER. EVERY LECTURE, LABORATORY, COLLOQUIUM. YOUR SCHOOLING WILL FEEL LIKE TEN YEARS.

*(QUARK picks up the packet.)*

COULD YOU CONCENTRATE?  
STUDENT.

*(QUARK begins solving.)*

OH, YOU INFURIATE.  
R. A'S.  
DETERIORATE.  
CONCEN—

*(RESEARCH ASSISTANTS march in, holding packets.)*



**BOSON**

**RESEARCH ASSISTANTS**

'TRATE.

*(RESEARCH ASSISTANTS stand by BOSON.)*

**RESEARCH ASSISTANTS**

IN COMES INTERACTION.  
OH THE NUCLEATION.  
A PLASMIC COLLISION.

*(Singularly throwing a packet at QUARK.)*

IN NAME OF CENTRATION.  
WHY THE INFURATION?  
LEADS TO DETERIORATION.  
CONCENTRATE.

**BOSON**

WEAK.  
BUT YOUR INTERACTION HAS ALWAYS IMPACTED ME.  
FIRM NUCLEATION.  
COUPLED.  
QUARK-GLUON PLASMA.  
QUANTA.  
DEFY CENTRATION.

**QUARK**

FIELD LINES CROSS  
ONLY IF I DROP THE QUALITY OF MY DATA.  
YOUR INHIBITION'S  
ERROR.  
THIS OLIGOMER'S  
FLUID.

**BOSON**

DON'T CONCENTRATE NOW.  
YOU LEARN QUICK.  
THE MATTER BETWEEN US, THE ONLY THING YOU'LL EVER

**BOSON** (cont.)

CROSS.

OLIGOMERS, NO UNITS WILL EVER BE REPEATED.

MASTER EQUATION.

*(RESEARCH ASSISTANTS head in various directions.)*

QUANTUM

ARE AGGREGATION.

OUTLIER!

*(Pointing to QUARK.)*

APPLY CENTRATION.

*(RESEARCH ASSISTANTS encircle QUARK.)*

CONCEN-

**BOSON**

**RESEARCH ASSISTANTS**

TRATE.

*(RESEARCH ASSISTANTS throw all the packets at QUARK, like a circular firing squad.)*

**RESEARCH ASSISTANTS**

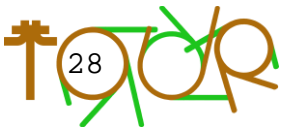
ALL THE FRAGMENTATION.

NOT A GLOBAL FITTING.

JUST SCALING EXPONENT.

HAVE RESPECT FOR RATE LAWS.

*(QUARK kneels.)*



**RESEARCH ASSISTANTS** (cont.)

QUANTUM INDETERMINC—.  
PRIMORIDAL BEHAVIOURS.  
CONCENTRATE.

*(BOSON snatches the packet from QUARK.)*

CONCENTRATION.  
CAN YOU THINK RIGHT?

*(BOSON marks the packet.)*

CENTRATE.

*(BOSON hands the packet to QUARK.)*

CONCENTRATION.  
CAN YOU BELIEVE?

*(QUARK brokenheartedly reads the packet.)*

CENTRATE.

*(BOSON grabs a rolled-up diploma.)*

CONCENTRATION.  
CAN YOU FEEL IT?

*(BOSON remorsefully slaps QUARK with the diploma.)*

*(QUARK falls back, unconscious.)*

*(BOSON drops the diploma onto QUARK.)*

**RESEARCH ASSISTANTS (cont.)**

CENTRATE.

CONCENTRATION.

*(Removing the particle board and the desk.)*

CAN'T

CONCENTRATE.

CENTRATE.

*(BOSON and RESEARCH ASSISTANTS march off.)*

<b>10. G</b>
--------------

*(ATOM and PROFESSORS wander in. They unroll the diploma. They pick up and read the packets. They discard the diploma.)*

**ATOM**

GRADES DO NOT FIT THE CURVATURE, QUARK.

**PROFESSOR**

I Q IS LEFT TO BE TRULY DESIRED.

**ATOM/PROFESSOR**

SUCCESS IS THAT, NOT WITHIN YOUR VERY REACH.



**ATOM/PROFESSOR**

B'S STAY IN TRASH BINS OF HISTORY.

**ATOM/PROFESSOR**

LENS, THERE IS NONE THAT WE WILL EVER SEE THROUGH.

**ATOM/PROFESSOR**

WHAT THE F'S, DO ATTEMPT QUANTUM SUICIDE.

*(QUARK sits up.)*

**ATOM**

GRAVITY.

**ATOM**

**PROFESSORS**

FORCE YOU'LL BRING IS G.

*(Leveling with QUARK.)*

GRAD PROGRAMS ARE EXCLUSIVE.  
DON'T HAVE WHAT IT TAKES FOR A MASTER'S.

*(Gathering the packets.)*

*(ЛЕПТОН rushes in.)*

**ЛЕПТОН**

БЛИН (blin).  
I'M LATE, SORRY, PROFESS—...

*(Noticing QUARK.)*

WHAT A STRANGE DAY TO SELECT DOCTORATE CANDIDATES.

*(Heading to QUARK.)*

CHARMING MATTERS WITHIN YOU.  
FAMILIARITY.



*(ЛЕПТОН recognizes QUARK.)*

**ЛЕПТОН** (cont.)

YOU MADE ME MISS IT!

*(Raising QUARK.)*

YOU SAVED ME THE TROUBLE OF HAVING MISSED OUT ON AN  
ATOM SMASHING ACCIDENT.

*(Embracing QUARK.)*

*(ATOM motions for ЛЕПТОН to not disclose  
that information.)*

**ATOM**

AFFLICT.

**ATOM**

**PROFESSORS**

FORCE CLASSIFIED, JEEZ.  
BRIGHT ADVISOR, ЛЕПТОН.  
FIND ONE UNBENT.  
NOT THIS DELINQUENT.

**ЛЕПТОН**

**ATOM**

**PROFESSORS**

I KNOW G-FORCE BEING

YOU'LL KNOW G-FORCE.

**ATOM/PROFESSOR**

A FORMER DOCTORAL  
CANDIDATE.

A BURDEN SO PECULIAR.  
WEAK.

**ATOM/PROFESSOR**

PUPIL BRINGS LONG  
DAYS, SHORT NIGHTS,  
ATOMIC WEEKS.



**ЛЕПТОН** (cont.)

PHYSICS, CLASSIC, QUANTUM,  
BASIC, NEVER SLEEP.

**ATOM/PROFESSOR**

EQUATIONS, UNFIT SO  
YOU HAVE TO TWEAK.

*(ЛЕПТОН takes the packet from ATOM. She  
reads the packet.)*

**ЛЕПТОН**

AT THE VERY LEAST, SHE HAS PRINCIPLED HALF SPINS!

**ATOM**

SPIN IT.

**PROFESSORS**

FLUX, GIVEN NONE.

**PROFESSOR**

HER VARIABLE IS JUST A MASS.

**ЛЕПТОН**

CLASSIFICATION, YOU'VE PUT  
ALL US IN, NO MORE, NO  
LESS, INTEGERS, BUT SHE  
HAS ELECTRICITY.

**ATOM**

YOU KNOW THAT I KNOW  
THAT THERE'S LOTS TO  
SURPASS.

**PROFESSOR**

METHODS, NONE  
INTEGRAL ITS ANGLING  
FOR.

*(ЛЕПТОН returns the packet to ATOM.)*

**ATOM**

GRAVITY.

**ЛЕПТОН**

FELT I FORCE THESE G'S.

**PROFESSORS**

FORCE YOU'LL FEEL ARE  
G'S.

*(ЛЕПТОН takes QUARK out for a spin.)*

*(QUARK flounders around.)*

*(ATOM and PROFESSORS humbly depart.)*

**ЛЕПТОН**

YOU SURE NEED SOME ANGULAR MOMENTUM IN YOU.  
IDEALLY, COMMIT TO OCCUPY THIS STATE.

*(QUARK seems hesitant.)*

MATTERS THAT ARE PARTICLES WITHIN YOU.

**ATOM**

OCCUPY STATE!

**PROFESSORS**

**ЛЕПТОН**

NAME?

*(QUARK whispers into ЛЕПТОН's ear.)*

QUARK?  
SEEMS TO HAVE A LACK OF SPIN.  
FIRM.  
I AM IN ANY CIRCLES, ORBITALS.



## ЛЕПТОН (cont.)

ДРУГ (drug).

YOU'RE A FORCE TO BE WEIGHTED UPON THEE!

*(Stopping the momentum.)*

STATE. HAVE TO SPIN TO!

*(Spinning off.)*

11. ANYON
-----------

## QUARK

DIMENSION.

IT'S TWO.

OPEN.

ANYON.

THIS DEGREE OF FREEDOM!

NOW IS THE TIME FOR PHASE SHIFTS.

*(Twirling.)*

JOINT, THIS EXCHANGE HAS GIVEN ME.

HOLD FERMIONS.

PICK UP PHASES BY WAVE FUNCTIONS!

*[The space brightens.]*

BOSON...

*(Slowing the spin.)*

A PART OF ME FEELS LIKE ZERO.

THIS RELAXATION STATES: YOU ARE ALPHA. PI.

INCOHERENT ELECTRON STATES: ANYONS, ANYONE? ABELIAN?

DEGENERATE GROUND STATES: ЛЕПТОН.

A NON-ABELIAN...

I CAN'T TIE UP THIS QUANTUM KNOT.

QUANTUM WEIGHT. ENVIRONMENT. OPERATIONS.

NO NOISE. THERE ARE ONLY ENERGY GAPS.

QUBITS. YOU ARE A QUANTUM COMPUTER.

DON'T FLUXUATE. I CARE FOR ANYONS. TRY.

## 12. VALENCE

*(STUDENTs wander about.)*

### STUDENTs

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.

*(ЛЕПТОН trudges in, carrying paperwork with  
scantrons.)*

### QUARK

OSCILLATIONS DOC!

### STUDENTs

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.

### QUARK

ALTERNATING CURRENTS?

### STUDENTs

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.

### QUARK

SPECIAL STATES TODAY?

### STUDENTs

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.



**QUARK**

ANY PHENOMENA?

**STUDENTS**

IT'S HIGHER ENERGY LEVEL.

THIS HIGHER EDUCATION  
HAUL.

**ЛЕПТОН**

ALARM, INFREQUEN—

**STUDENTS**

THIS EMISSION LEADS TO  
GROUND STATE.

THAT ADMISSION LEAVES  
YA GROUNDED.

*(ЛЕПТОН hands a paper to QUARK.)*

**ЛЕПТОН**

SEE

**STUDENTS**

WHO IS THIS EDUCATED  
SPOIL?

WHAT A LOW ENERGY  
LEVEL.

**ЛЕПТОН**

TO INTEGRATION.

**STUDENTS**

WHO IS THIS EDUCATED  
SPOIL?

WHAT A LOW ENERGY  
LEVEL.

*(ЛЕПТОН dumps the paperwork into QUARK's  
arms.)*

**JEPTON**

D'RIVE ON.

**STUDENTs**

WHO IS THIS EDUCATED  
SPOIL?

WHAT A LOW ENERGY  
LEVEL.

*(QUARK demonstrably questions the content of  
the paperwork.)*

**JEPTON**

POSTULATE. A POS-  
THINK SPHERE.

**STUDENTs**

WHO IS THIS EDUCATED  
SPOIL?

WHAT A LOW ENERGY  
LEVEL.

**QUARK**

CHECK VALIDITY.

**STUDENTs**

JUMP UP THOSE ENERGY  
LEVELS!

BUMP OUT SOME ENDLESS  
CREDENTIALS!

*(JEPTON eyes STUDENTs.)*

**QUARK**

ASSUME MY MOTIVE.

FIRST ORDER NOTED.

**STUDENTs**

MOTIVATION.  
MAKE ASSUMPTIONS.



**STUDENTS** (cont.)

NATURAL EQUATIONS.  
DIRECT NOTATIONS.

*(QUARK disorderly eyes STUDENTs.)*

**QUARK** (cont.)

FRESH SCHOLARS UNVEILED.  
  
SURVEILLANCE.  
SERVE VALENCE.

**STUDENTS** (cont.)

FRESH GENERATIONS.  
INFORMATION.  
OBSERVATION.  
SHELLED ELECTRONS!

**ЛЕПТОН**

TEACHING ASSISTANT.

**STUDENTS**

WE HAVE AN IMPORTANT QUESTION.

**ЛЕПТОН**

THESE STUDENTS

**STUDENTS**

WE HAVE AN IMPORTANT QUESTION.

**ЛЕПТОН**

SUCK ENERGY

**STUDENTS**

WE HAVE AN IMPORTANT QUESTION.



**LEPTON**

OUT OF YOU.

**STUDENTs**

WE HAVE AN IMPORTANT QUESTION.

**QUARK**

STATE, I'M FAMILIAR.

**STUDENTs**

THIS MIGHT BE A  
STUPID QUESTION.

*(QUARK coalesces STUDENTs.)*

**QUARK**

CONVECTION, IT'S CHILL.

**STUDENTs**

GEE PROFESSOR LEPTON  
LEPTON.

QUARK. QUARK.

**QUARK**

OPTICAL, LOOKS GOOD.

**STUDENTs**

GEE PROFESSOR LEPTON  
LEPTON.

QUARK. QUARK.

**QUARK**

BASICALLY, I'M HIP.



**STUDENTs**

GEE PROFESSOR ЛЕПТОН  
ЛЕПТОН.

QUARK. QUARK.

**QUARK**

I'LL ADDRESS ALL QUESTIONS!

**STUDENTs**

GEE PROFESSOR ЛЕПТОН  
ЛЕПТОН.

QUARK. QUARK.

**ЛЕПТОН**

SO FAILING. ASK IF

**STUDENTs**

THANK YOU, QUARK E!  
THANK YOU, QUARK E!

NO THANKS TO YOU,  
ЛЕПТОН ЛЕПТОН.

**ЛЕПТОН**

QUESTIONS 'RISE BRIEFLY

**STUDENTs**

THANK YOU, QUARK E!  
THANK YOU, QUARK E!

NO THANKS TO YOU,  
ЛЕПТОН ЛЕПТОН.

**ЛЕПТОН**

THEN YOU SNUB. NO

**STUDENTs**

THANK YOU, QUARK E!  
THANK YOU, QUARK E!

NO THANKS TO YOU,  
ЛЕПТОН ЛЕПТОН.

**ЛЕПТОН**

NEED VALIDATION.

**STUDENTs**

THANK YOU, QUARK E!  
THANK YOU, QUARK E!

NO THANKS TO YOU,  
ЛЕПТОН ЛЕПТОН.

*(Becoming rigid.)*

*(ATOM struts in.)*

**ATOM**

STEAL 'LECTRICITY. I'LL  
SURVEIL HERE. HIGHER  
LEVEL. HOW'S THAT GOING?

**STUDENTs**

EXACTLY WHAT IS SPIN?  
QUARK E?

**QUARK**

*(Flabbergastingly answering.)*

SPIN IS AN ODD MAGNETIC PROPERTY ENCOMPASSING QUANTUM  
'LECTROMAGNETISM THEO— REALLY, WE SHOULD 'DRESS THE  
MATTER HERE.

**ATOM**

YOU CAN'T SPIN THIS.  
YOU CAN'T SPIN THIS.  
YOU CAN'T SPIN THIS.  
YOU CAN'T SPIN THIS.

**STUDENTs**

EXACTLY WHAT IS SPIN?  
T A?



**QUARK**

I NEED TO EIGENSTATE THE UP-DOWN OBSERVABLE. YOU'RE ALWAYS IN MY SPACE?

**ATOM**

YOU CAN'T SPIN THIS.  
YOU CAN'T SPIN THIS.  
NEED TO MENTION.  
YOU CAN'T SPIN US.

**STUDENTs**

EXACTLY WHAT IS SPIN?  
TEACHER?

**QUARK**

SPACETIME FABRICATION BRINGS ABOUT LIMITATIONS, SO LET'S

**ATOM**

YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.

**STUDENTs**

WHAT DO YOU HAVE IN  
CORE FOR US?

*(QUARK herds STUDENTs together.)*

**QUARK**

MOVE TO STATE FORMATION, MIXED VALENCE WITHIN FEMTOSECONDS, HEAR

**ATOM**

YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.  
YOU CAN'T SPIN US.

**STUDENTs**

WHAT DO YOU HAVE IN  
ACCORDANCE?

**QUARK**

THAT, YOU QUASI-BORONS? AN EXAMINATION FILLED

**ATOM**

YOU CAN'T SPIN US.  
 YOU CAN'T SPIN US.  
 YOU CAN'T SPIN US.  
 YOU CAN'T SPIN US.

**STUDENTs**

WHAT DO YOU HAVE  
 THAT'LL SHOCK OUR  
 CORE?

*(QUARK hands out the scantrons to STUDENTs.)*

**QUARK**

WITH HOLES IN SCANTRONS.

**ATOM**

YOU CAN'T SPIN US.  
 YOU CAN'T SPIN US. .  
 IN THEORY THOUGH,  
 PLEASE SHARE WITH US.

**STUDENTs**

WHAT DO YOU EXPECT  
 FROM NUCLEI?

*(ATOM orbits QUARK.)*

**QUARK**

THINK OF INSIDE-OUTSIDE YOUR MATTERS, YOU'LL FIGURE  
 OUT YOUR CHARGE AND YOUR CONFIGURATION. THERE'S  
 SOMETHING TO BEING NOBLE, GUESS.

**ATOM**

PLEASE SHARE WITH US.  
 PLEASE SHARE WITH US.  
 PLEASE SHARE WITH US.  
 PLEASE SHARE WITH US.

**STUDENTs**

WILL THIS MOMENTUM BE.  
 CURVED?  
 FAILURE?

**QUARK**

I'LL STOP WITH SURVEILLANCE WHEN THIS BASIC UNIT JUST  
 QUITs TAKING ENERGY!

*(Grabbing ahold of ATOM.)*



**ATOM**

PLEASE SHARE WITH US.  
PLEASE SHARE WITH US.  
PLEASE SHARE WITH US.  
I SERVE VALENCE.

**STUDENTs**

WILL THIS MOMENTUM BE  
CURVED?  
VALENCE?

*(ATOM snatches the paperwork from QUARK.  
They push off of her.)*

ENERGIES FOR  
THE VALENCE!

CONTRIBUTION.  
CONTRIBUTION.

*(ATOM passes around the cheat sheets.)*

IF YOU  
ARE HIGHER  
LEVEL  
THOUGH FAILURE,  
THEY CAN TOO!

CONTRIBUTION.  
CONTRIBUTION.  
CONTRIBUTION.  
CONTRIBUTION.  
CONTRIBUTION.  
CONTRIBUTION.

*(ЛЕПТОН holds back QUARK.)*

**ЛЕПТОН**

THEY'LL GET ELECTRONS.

*(STUDENTs pass around scantrons.)*

**STUDENTs**

DISTRIBUTION OF THE SCANTRONS.

**ЛЕПТОН**

THEY'LL GROUP THE ELEMENTS.

*(STUDENTs group together.)*

**STUDENTS**

NODES, ORBITALS.  
 NODES, ORBITALS.

NEUTRAL CIRCLES.  
 NEUTRAL CIRCLES.

**ЛЕПТОН**

THEY'LL CONFIGURATE.

*(STUDENTS form circles.)*

**STUDENTS**

NODES, ORBITALS.  
 NODES, ORBITALS.

NEUTRAL CIRCLES.  
 NEUTRAL CIRCLES.

**ЛЕПТОН**

THEY'LL COME OUT THEIR SHELLS.

*(STUDENTS move from one circle to another.)*

**STUDENTS**

NODES, ORBITALS.  
 NODES, ORBITALS.

NEUTRAL CIRCLES.  
 NEUTRAL CIRCLES.

**ЛЕПТОН**

THEY'LL FIND OUT THEY'RE VALIANT.

*(STUDENTS orbit either ЛЕПТОН and QUARK,  
 and/or ATOM.)*

**STUDENTS**

NODES, ORBITALS.  
 NODES, ORBITALS.

NEUTRAL CIRCLES.  
 NEUTRAL CIRCLES.



**ЛЕПТОН**

QUARK,  
ASSISTANT,  
YOU'LL NOT  
FAIL.  
QUARK,  
ASSURANCE,  
YOU NEED  
NO VAL-

**STUDENTs**

MOTIVATION.  
MAKE ASSUMPTIONS.  
NATURAL EQUATIONS.  
DIRECT NOTATIONS.  
GENERATIONS.  
INFORMATION.  
OBSERVATION.  
SHELLED ELECTRONS!

*(QUARK openly dismisses ЛЕПТОН.)*

*(ЛЕПТОН motions STUDENTs to turn in their papers to QUARK.)*

**ЛЕПТОН**

DON'T TAKE IT.

**STUDENTs**

VALENCE ELECTRONS.                      VALIDATION.

*(STUDENTs hand the papers to QUARK.)*

*(QUARK snubs STUDENTs.)*

**STUDENTs**

VALENCE ELECTRONS.                      VALIDATION.

**ЛЕПТОН**

WRONG ENERGY LEVEL.

*(Gathering all the papers from STUDENTs.)*



# STUDENTs

VALENCE ELECTRONS.  
VALENCE ELECTRONS.

VALIDATION.  
VALIDATION.

# ЛЕПТОН

VALIDITY.

# STUDENTs

VALENCE ELECTRONS.

VALIDATION.

# ЛЕПТОН

THERE'S

# STUDENTs

VALENCE ELECTRONS.

VALIDATION.

# ЛЕПТОН

NO NEED SEARCHING

# STUDENTs

VALENCE ELECTRONS.  
VALENCE ELECTRONS.

VALIDATION.  
VALIDATION.

# ЛЕПТОН

VALIDITY.

# STUDENTs

VALENCE ELECTRONS.

VALIDATION.



THE HEART

ЛЕПТОН

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

OF PHYSICS

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

PUMPS

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

VALIDITY.

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

NEED

# STUDENTs

VALENCE ELECTRONS.

VALIDATION.

# ЛЕПТОН

NO VALIDATION.

*(Dumping the paperwork into QUARK's arms.)*

# STUDENTs

VALENCE ELECTRONS.

VALIDATION.

VALENCE ELECTRONS.

VALIDATION.

JUMP!

BUMP!

*(ЛЕПТОН departs.)*

*(STUDENTs orbit away.)*

## 13. EFFUSION

*(QUARK kneels. She spreads the papers out onto the floor.)*

# QUARK

EFFUSION.

'BOUT TO BLOW A FUSE.

LOSING FEELINGS.

MENTAL DIFFUSION.

I AM SO EFFUSION.

ACTUALLY, EFFUSION.

*(Slapping the papers.)*

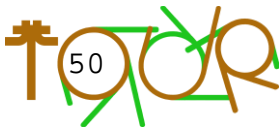
DON'T BE CONDENSED.

LET OFF SOME STEAM.

GASES MOVE FAST.

INCREASE HEART RATE.

FIND WHAT'S GIVEN.



**QUARK** (cont.)

HOLE IN THE WALL.  
LESS MOLAR MASS.  
ESCAPE THIS BOX.

*(Refocusing on the papers. She gathers the papers.)*

EFFUSION.  
WAS I A BORON?  
GOT TO HAND  
ELECTRONS, JUST TO BE  
LENIENT. EFFUSION.  
HOW ABOUT? EFFUSION.

*(Tossing out the papers.)*

EFFUSION.  
GIVE NO EFFUSIONS.  
NONE EFFUSION.  
JUST GO EFFUSION.  
I SWEAR TO EFFUSION.  
YOU ALL CAN EFFUSION IT!

*(Preparing for a journey.)*

## 14. SUPER COLLIDE

SCENE ii

*[Desertron]*

*(ЛЕПТОН elegantly arrives, clad in a rancher's uniform.)*

**ЛЕПТОН**

HOWDY. JOIN IN THE  
CIRCUIT!

*(Pointing in the distance.)*

HOME TO DESERTRON.  
HOPE, THESE RAYS  
HOLD IN. BEAMS AS FAR  
AS THE EYES CAN SEE  
ANY BEINGS TO  
EVER TOP YOUR DISSERTATION.

**QUARK**

NO LABS THERE YET. WHAT KIND OF ADVISING YOU DO TO  
LEAD US HERE?  
MY NATURAL PHYSICS HAS BEEN TRAINED TO GET YOU COFFEE.

*(ЛЕПТОН wanders off.)*

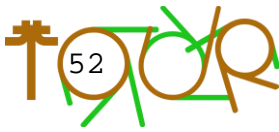
END UP WITH DESERTS.

*(Noticing ЛЕПТОН's disappearance.)*

NOT THE COURSE TO DESERT THIS DOCTORATE!

*(Motioning towards herself.)*

WELL, THERE IT GOES. MY CONCLUSION.  
EGO'S NEVER HYPERSENSITIVE. THIS MIND STAYS DEHYDRATED.



*(ЛЕПТОН tiptoes in, sanding off an operator's control.)*

### ЛЕПТОН

HYPOTHESIS THAT THIS  
HEARTLAND OF  
INNOVATION BRINGS FREE  
ENERGY. WHERE NOT JUST  
MATTER 'XISTS, BUT THEY  
MATTER IN OUR LAWS.  
IN FACT, FORCE THESE  
WAVELENGTHFUL KEYS.

*(Handing the control to QUARK.)*

PROPEL PROTONS, SMASHING THEM INTO A GRAPHITE'S NUCLEI,  
PRODUCING NEUTRONS WITH PIONS, POSITIVE NEGATIVE,  
TAKING THOSE POSITIVITIES, FOCUSED IN A BEAM SO THEY'D.  
PARDON MY, DECAY.  
JUST THEORIZE...  
SUPER COLLIDE.

*(QUARK presses on the control.)*

BEAMS SUPER COLLIDE!

*(Preparing for the collision. When nothing happens, she takes over the control.)*

БЛЯДЬ (blyat).  
GIVE ME A MOMENT.  
HOLD UP UNIVERSE!

*(Trying to raise QUARK.)*

QUARK.

*[Particles collide.]*

BEHOLD THE DESERTRON!  
SUPERCONDUCTING SUPER COLLIDER!  
A SMASH.

*[Particles move along and around.]*

**QUARK**

STRANGE.  
FERMIONS.  
MUONS.  
'TRINOS.  
GLUONS.  
CHARM.

**QUARK**

QUANTA.

**TECHNICIANs**

RAYs!

**QUARK**

*(Feeling matters.)*

'NERGY BUNDLES.

**QUARK**

STANDARD

**TECHNICIANs**

FORCE!

**QUARK**

MODEL.

*(Growing antsy.)*

THEORIZED

**QUARK**

'NOUGH.

**TECHNICIANs**

NOWT.

*(QUARK deactivates the control.)*



*(TECHNICIANS collide with one another.)*

**TECHNICIANS**

QUARK! JUST GOT YOURSELF ROLLING!  
SPIN PARTICLES AT HOME. GET PARTICLES IN TUBE.  
PASS BY NICE PROTONS. SAY HI TO 'LECTRONS.  
STEER MAGNETIC FIELDS. FEEL THE ENERGY.  
REACH THE SPEED OF LIGHT. LIGHTEN UP, WILL YA?

**ЛЕПТОН**

COL-

*(TECHNICIANS collide and gather.)*

**TECHNICIANS**

'LIDE!  
SCIENTISTS, BUILDERS, PLAYERS, FRIENDS, AND  
FAMILY ALL  
GATHER HERE THERE AROUND HUMAN'S GREATEST  
FEAT  
UNDER. EVER.

**ЛЕПТОН**

BUILD  
THE MACHINE THAT PURSUES ALL OF OUR DAYDREAMS.  
FULFILL UNSEEN WONDERS WITH PROTON BEAMS.  
DARK FIELD.

*(Interacting and colliding.)*

**TECHNICIANS**

LUXURY SCIENCE IN A DESERT!

*(Interacting and colliding.)*

*(QUARK rein in the particles.)*



**ЛЕПТОН**

AT DESERTRON.

**TECHNICIANS**

ENERGY, CAN YOU FEEL  
IT, GAIN THE MAGNET!

**QUARK**

SUPERNATURAL.

REACH THE SPEED OF

**ЛЕПТОН**

CONDUCT YOURSELF.

LIGHT!

**QUARK**

SUPERVISION.

ANTI-QUARK MATTERS

**ЛЕПТОН**

COLLIDE OTHERS.

SUPER COL-

*(Setting QUARK on a collision course.)*

'LIDE!

HER WAY OUT BARYONS! SUPER COLLIDE BEYOND!

SUPERCONDUCTIVITY MEDIUM

MODELLED!

SMASH THE PARTICLES TOGETHER FOR ENTIRE WORLD

RECORD AROUND FORTY TERA 'LECTRON

VOLTS!

*(Gathering around the control.)*

GOD PARTICLE BURIED RIGHT UNDER THE DESERTRON.

*(Expanding.)*

QUADRUPOLE LIGHTEN UP THE MOMENT. SUPER

COLLIDER!



#### 14a. SUPER COLLIDE (reprise)

*(TECHNICIANS exit.)*

**LEPTON**

QUARK.

SUPER

CONDUCT YOURSELF, CANDIDATE.

JOB

INTERVIEW, I'VE GOT TO GO. IT'S MY COLLISION COURSE.

*(Departing.)*

#### 15. PARTICULATE

*(QUARK redirects her attention to the control. She increasingly toys around with it.)*

*(ATOM frantically rushes in.)*

**ATOM**

AM I TOO LATE?

*(Noticing QUARK.)*

A POSTULATE DREAMER.

ALWAYS IN THE CLOUDS.

PARTICULARLY EERIE MATTER.

NO OPERATIONS REAL SOON.

THEY'RE ALLOCATING FUNDS.

LIQUIDATED SCIENCE.

PARTLY DUE TO THIS WARY SOCIETY.

*(Hesitantly accepting QUARK.)*

TO ABDICATE, WE MUST NOT.

SATURATE DESERTRON.

I SHALL POSTULATE.

PARTICULARLY AIRY QUARK E.

*(QUARK DJs the control.)*

*[Particles may collide.]*

**ATOM** (cont.)

QUARK... E...

*(Readjusting himself.)*

ARTICULATE THIS BAD NEWS.  
LET'S CONCENTRATE SOLIDS.  
LET US SAVE THIS LAB.  
PARTICLES TO PARTICLES, JUST BREATH.

*(TECHNICIANS fill the space.)*

ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTISTICALLY PARTICULAR.

*(QUARK parties on. She feels admiration.)*

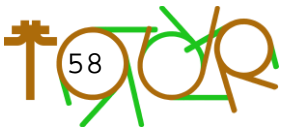
ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTICULATE PARTICULATE.  
ARTICULATE PARTICULATE. ARTFULLY PARTICULARLY LATE.

<p><b>16. SLEPTON</b></p>
---------------------------

*(ATOM rushes towards QUARK, protesting.)*

**ATOM**

SCIENCE ENDING.  
THEY'RE SHUTTING THE DESERTRON DOWN!



*(TECHNICIANs fearfully run away.)*

**QUARK**

QUIT LYING.  
WHAT'S THE MATTER?

**ATOM**

INFER, ATOM.  
*(Motioning towards himself.)*  
I FIGURED EVERYTHING MATTERS!

**QUARK**

ATOM SHOULD STOP MAKING THINGS UP.  
WHEN THINGS SEEM TOO GOOD TO BE TRUE.  
JUST SLEEP ON IT, REST.  
WAKE UP, FIND MATTERS BEYOND DREAMS!

**BOSON**

SLEPTON.  
SPECTRAL.

*(QUARK feels the nightmares.)*

*(BOSON brightly returns.)*

*(ATOM joyfully tears up.)*

NON-PHYSICIST HAS DRAWN  
HERSELF TO DESERTRON.

*(Embracing ATOM.)*

**BOSON** (cont.)

DEAR ATOM, HERE'S BOSON.  
ACCELERATOR, I RUN.

*(Releasing ATOM. He views the control.)*

THERE'S TIME THAT YET NEEDS CRUNCH.

*(QUARK guards the control.)*

THIS HERE'S PARTICLE'S DAWN.  
DUSK WILL APPROACH WITH FUNDS.

*(ATOM hands cash to BOSON.)*

STILL HAVE ALL THE SPUN, SQUARK.

*(QUARK attempts to get ATOM to retrieve  
their cash. She reaches for the cash  
herself.)*

*(BOSON tosses the cash into the open.)*

*(POLITICIANS rabidly bound for the cash.  
They notice BOSON. They quickly adjust  
themselves. They dismiss the cash.)*

**POLITICIANS**

SCIENCE NEEDS FUNDING?  
SCIENCE NEEDS FUNDING!

**BOSON**

DESERTRON COSTS A SLEPTON.

*(Kicking the cash to POLITICIANS.)*



**POLITICIANS**

SLEPTON?

*(Picking up the cash.)*

**BOSON**

DESERT...

*(Directing out.)*

**BOSON**

LOST ITS RUN.

**POLITICIANS**

WE WILL SLEEP ON THIS!

**BOSON**

TO SPUN ON NO AXIS.  
NICE RUN, MARATHON, LASTED.  
YOU'RE DONE, ALL THAT MATTERS.  
REAL FUN, IT WAS.

**POLITICIANS**

A SLEPTON!

**BOSON**

NO ACTIONS REQUIRED.  
PASSION, BIT QUANTUM, FULFILLED.  
OUR TAXES, DO BLOW IT.  
THEIR FUNDS, GO SLOW.

**POLITICIANS**

A SLEPTON!

*(Counting the cash.)*

THESE PARTICLES.  
THEY'RE PARTLY CHORES.

**POLITICIANS (cont.)**

DON'T MAKE WARS AS ATOMIC.  
 I NEED GAS AS AN ADDICT.  
 THERE'S NEW *SCIENCE* TO ENRICH.  
 I'M PRINCIPLED.  
 THEREFORE, NO MORE POEMS.  
 THESE KNOWLEDGE YOU SHOULD DITCH.  
 I WILL OUTCLASS, NOWT TO COMMIT.  
 ART, ALSO MAKES THE WORLD

**QUARK**

THERE'LL BE PEACE.  
 RENEWABLES.  
 SOME POETRY.  
 THERE IS ART  
 IN PARTICLES!

**POLITICIANS**

SICK!

*(TECHNICIANS rush in to collide with one another.)*

*(POLITICIANS shove TECHNICIANS out of the space.)*

**BOSON**

ALREADY HAVE IT ALL AT THE ACCELERATOR.

**QUARK**

MORE.

*(Directing out.)*

**POLITICIANS**

OPEN...



**BOSON**

DESERTRON'S CONDUCT SHOULD HAVE LEFT YOU SUPER FLOORED.

**QUARK**

EXPLORED PARTICLES!

**POLITICIANS**

DOORS.

**BOSON**

FOR YOU, THERE'LL BE NOTHING IN STORES.  
ONLY TO LEAVE YOU IN THE DARK, ENLIGHTEN YOUR ACCORD.

**QUARK**

THEY'LL SEE DEATH.  
RECRUITING.  
IT'S SO LOW.  
I AM QUARK  
IN PART CAUSE!

**POLITICIANS**

ATOMIC MATTERS!

*(ATOM stirs.)*

**BOSON**

I'M BOSON, I LIGHT UP THE PHYSICS WORLD!

**POLITICIANS**

ATOM...

*(BOSON addresses ATOM.)*

**BOSON**

LISTEN HERE BUM,  
THERE IS NOTHING TO GLUON.



**POLITICIANS**

SPLIT.

**BOSON**

HEART TO HEART, NUCLEI NUCLEI. YOU'LL FEEL RENEWED.

*(ATOM rhythmically claps.)*

**POLITICIANS**

*(Rhythmically slapping cash against their hands.)*

YOUR PARTING CALL.  
A MATTER SOUGHT.  
THE WORLD WILL REMEMBER IT.  
TO RID OF THOSE WHO ARE SICK.  
POSITIVES FINALLY FIT.  
GIVE UP, ACCELERATOR.

*(ATOM riles up.)*

PARTICLES FOR ALL.  
TO EXPLODE IS YOUR PICK.  
CLIMATE IMPLODES, IS ALL OPTICS.  
CASH, REALLY MADE THE TIMES

**QUARK**

ATOMIC.  
CREATION.  
BIRTHS NEW LIFE.  
DON'T SELL OUT TO  
DESTRUCTION!

**POLITICIANS**

TICKED!



**BOSON**

YOU HAVE THE POTENTIAL, JUST NEED A LITTLE FORCE.

*(Presenting nominal cash.)*

**QUARK**

DROP...

**POLITICIANS**

FUNCTION...

**QUARK**

KINETIC.

*(Removing the cash from BOSON.)*

**BOSON**

TAKE A POSITION, THIS IS YOUR MOMENTUM.

**POLITICIANS**

RAN.

**QUARK**

ALL LAGRANGIAN.

**BOSON**

LET THE ENERGIES BE HAMILTONIAN.

**POLITICIANS**

SUM.

*(Raining down the entire cash on ATOM.)*

# **ATOM**

NUCLEAR NOW!

*(Tearing apart the control.)*

*(QUARK helplessly watches.)*

# **BOSON**

THE BOMB, YOU REALLY ARE.  
NO FLAWS, IT IS IN NUCLEAR.  
IN AWE OF REVENUE.  
THE PALM OF YOURS.

# **POLITICIANS**

SLAP ON IT!

# **BOSON**

THESE FEES KEEP PILING ON.  
LIFE TEEMS CONCLUSIVE RESULTS.  
YOUR DREAMS ARE ATOMIC.

*(Pinching his thumb and index finger.)*

'NERGIES, RUN FREE.

# **POLITICIANS**

SLEEP IT OFF!  
SCIENCE DON'T NEED FUNDS!

*(QUARK weeps.)*



**POLITICIANS**

CRY AWAY.  
PHYSICS GONE!

PHYSICS DEAD!

**BOSON**

DO SLEPTON IT.  
SUPER COL— WHAT, SQUARK.

**POLITICIANS**

GO AWAY...

GO DECAY...

**BOSON**

SUPER COL—  
SUPER COL—  
SUPER DEFUNDED, DESERT IT!  
SLEEP ON IT.  
SLEEP ON IT.  
SLEPTON.

**POLITICIANS**

DESERTRON'S DONE!

SUPER GOODBYE!

*(BOSON, ATOM, and POLITICIANS huddle around  
in the nuclear winter.)*

<b>16a. SLEPTON (reprise)</b>
-------------------------------

*(ATOM and POLITICIANS depart.)*

**BOSON**

A SHAME YOU CAN'T MEET.  
HER GAME, PARTICLES, NEW HIRE.

*(QUARK recognizes the persona of ЛЕПТОН.)*

*(BOSON reminisces.)*

**BOSON** (cont.)

GOURMETS, DESERTRON.

*(Pushing away QUARK.)*

NOW STRAY, SLEPT ON.

*(Vacating.)*

*(QUARK reclusively perches.)*

<b>17. BACKSCATTER</b>
------------------------

*(ЛЕПТОН eagerly skips in.)*

**ЛЕПТОН**

I'M BACK WITH A TORSION. IT'LL SHATTER  
EXPECTATIONS. I'M POSITIONED  
VECTOR OF THE ACCELERATOR!

*(QUARK remains silent.)*

I SUPERVISE PARTICLES!

**QUARK**

SHUT UP WITH YOUR PARTICLES.  
I DO NOT KNOW THESE BACK-  
STABBING MATTERS. I DON'T BELIEVE  
IN ANY OF YOUR WORK.



**QUARK**

BACKSCATTER!

**ЛЕПТОН**

SO UPFRONT.

*(ЛЕПТОН looks around the void.)*

**ЛЕПТОН**

YOU'RE TRULY NOT ENVIOUS FOR ME TO BE MAKING WAVES.  
DON'T MAKE OUR COUPLED ACADEMIC BOND INELASTIC.  
THERE'RE PLENTY OF *PHOTONS* ALIGNED BEYOND THIS  
GEGENSCHNEIDEN.

*(QUARK slightly shudders.)*

WHY NOT REFLECT WITH ME, COMRADE?  
WORLD MAY LACK THE IONS OF FUTURE.  
LET'S FORWARD SPECULAR FAR PASSED.  
NO MORE FOR ME. FOR ONCE, WORK WITH ME.  
IT'S PRESENT, ACCELERATOR.  
I'M AWARE PARTICLES ARE NOT THE RIGHT FIT PHYSIC-LY.  
BUT I REMEMBER HOW MAGNETS ALWAYS GAVE YOU MOMENTS.  
EXCITATION CIRCUITS AS MAGNETIC FLOWS ALL CORNERS.  
TAKE THE ACCELERATED TOUR!

*(Holding QUARK's hands.)*

*(QUARK pushes away ЛЕПТОН.)*

MY LOVE FOR PARTICLES MADE YOU REPELLED.  
FIND HOME IN SOME MAGNET FACTORY.  
AS ADVISOR, I SHALL BACKSCATTER.  
SEND MY SIGNALS, TO BE FREE.

**QUARK**

A WEAK LOCALIZATION.  
FIBER WENT BAD OPTICS.

**QUARK** (cont.)

LEAVE ME MORE LESS ISOTROPIC  
IN RANDOM DIRECTIONS.

**QUARK**

BACKSCATTER!

**ЛЕПТОН**

GOT YOUR BACK.

*(ЛЕПТОН leaves.)*

**QUARK**

HEART SHATTERED.



## 18. ELECTROFORM

SCENE iii

*[Magnet Factory]*

*(ATOM and TECHNICIANS march in, carrying a desk and supplying metals. They set down the desk.)*

### TECHNICIANS

ELECTROFORMATIONS MAGNETIC PERSONNELS.

*(Noticing QUARK.)*

ELECTROFORMIDABLE MADE-UP CONNECTIONS.

*(Encircling QUARK.)*

ELECTROFORMULIZE ORBITALS TO BRING ABOUT CONCLUSIONS.

*(Pointing their metals towards QUARK.)*

*(ATOM breaks the circle)*

### ATOM

ELECTROFORM.

ELECTROFORM.

ELECT ME FORMALLY FOR I AM YOUR ALLY.

IT IS REFORMATION FOR MATTERS WITHIN US.

*(Leveling with QUARK.)*

ATOM SHALL FORMULATE AN EXPERIMENT TO FIELD PROPOSALS.

### TECHNICIANS

TEST THE WATER.

THIS DISTILLATION.

ELECTROFORM.



**TECHNICIANS** (cont.)

JOIN THIS CIRCUIT.  
MAGNET FACTORY.  
ELECTRO— REBORN.

*(Hypnotically moving around QUARK.)*

**ATOM**

I KNOW WHAT YOU'RE  
THINKING IN MAGNETIC  
MOMENTS.  
HOW DID I GET  
THIS HIGH ENERGY  
POSITION?  
BOSON GRANTS ME  
AN OPENING INTO THE  
ACCELERATOR.

**TECHNICIANS**

ELEMENTARY.  
BY YOUR UNIT.  
  
WHAT'S UP, ATOM?  
GONE DOWN, ATOM?  
  
CHARMING QUESTION.  
A STRANGE ANSWER.  
ON TOP OF THINGS.  
DON'T BOTTOM OUT.

*(QUARK nears the desk.)*

**TECHNICIANS**

ATOM HAS FORMED THIS PACT FOR ALL US LITTLE GUYS.  
ATOM WAS FORMERLY CONSIDERING BOSON.  
ATOM CHOSE FORMALISTS AND PERSISTS LEADING MAGNET  
FACTORY.

*(Building magnets.)*

**QUARK**

ELECTROLYTES.  
ELECTRO-TRAP.

*(Steering away from the desk.)*



## TECHNICIANS

NONCONDUCTIVE?  
DO NOT COPPER OUT.  
ELECTROFORM.

*(Coalescing.)*

ALL THAT ARE LEFT.  
POSITIVELY CHARGED.  
ELECTRO— WE'RE TORN.

*(ATOM hands magnets to QUARK.)*

## ATOM

THE SOLUTION,  
THEY PRECIPITATE  
AND CRYSTALLISE.  
YOU ARE SOLID.  
YOU ARE GOOD TO GO.  
YOU'LL REALIZE YOU'RE FORMED.

*(QUARK churns the magnets in her hand.)*

## TECHNICIANS

SHE IS JUST A DOCTORAL ADVISOR'S LOST PET.  
WE BET SHE CAN'T FIND HER PLATES AND IRON THINGS OUT.  
RANDOMNESS AS CORROSIVE AS THEY COME TO MAGNET FACTORY.

## ATOM

ANODES ARE KEY TO ELECTROFORM SOLUTIONS.  
REWIRE OURSELVES AWAY FROM THESE OLD FORMULAS.  
QUARK AND ATOM CAN SHAKE THINGS UP CAUSE AFTER ALL,  
YOU JUST FOMENT.

*(TECHNICIANS move in formation.)*

# **TECHNICIANS**

ANODES ARE KEY TO ELECTROFORM SOLUTIONS.  
 REWIRE OURSELVES AWAY FROM THESE OLD FORMULAS.  
 QUARK AND ATOM CAN SHAKE THINGS UP CAUSE AFTER ALL,  
 MAGNET MOMENTS.

*(QUARK garnishes the magnets with her hands.)*

## **ATOM**

ELEMENTARY.  
 STANDARD MODEL.

KEEP IT UP, QUARK.  
 DOWN-TO-WORLD QUARK.

CHARMING FELLOW.  
 'T WAS STRANGE ROOKIE.  
 ON TOP OF THINGS.  
 DON'T BOTTOM OUT NOW.

## **TECHNICIANS**

ELECTOFORMATIONS  
 MAGNETIC COTERIE.

ELECTROFORMIDABLE  
 THEORIZED CONNECTIONS.

ELECTROFORMULIZE  
 ORBITALS TO BRING  
 ABOUT  
 INTRODUCTIONS.

*(QUARK justly tears apart the magnets.)*

*(The poles in TECHNICIANS' formations flip.  
 They cross each other. They zigzag.)*

# **TECHNICIANS**

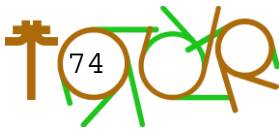
QUANTUM TUNNELLING IS HERE.

## **ATOM**

TUNNELLED ELECTRODES.

# **TECHNICIANS**

CAN'T DIG OUT OF THIS, ATOM.



**ATOM**

DETRIMENTAL HEAT.

**TECHNICIANs**

THERE IS NOTHING TO WELDING.

**ATOM**

BRAZING WEAKENED PIECE.

**TECHNICIANs**

DISSIMILIAR ALLOYS.

*(Pointing to either QUARK or ATOM.)*

**ATOM**

SUPERIOR BONDS.

**ATOM**

ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.

**TECHNICIANs**

ELECTROPLATING  
IS ALL.  
SETTLE FOR LESS.  
  
YOU CAN'T COAT ALL  
THESE FACTORS.  
DON'T GET BROKEN  
DOWN.

**QUARK**

MATTER THAT MAKES THE WORLD

*(Motioning towards herself.)*

TO MATTER THAT MAKES THE WORLD

*(Motioning towards ATOM.)*

**QUARK** (cont.)

NOW ASKS YOU TO JOIN ME  
IN MAGNETIC MOMENT.

*(Extending her hand to ATOM.)*

*(TECHNICIANS contract and detract.)*

**TECHNICIANS**

CAN'T CONFORM.  
YOU'RE DEFORMED.

**ATOM**

MAGNETIC MOMENT, QUARK?  
YOU HAVE ALWAYS MADE IT.

*(Descending.)*

I'VE DONE NOTHING TO STRENGTHEN.  
THE WORLD'S NOT MY PLACE.

*(Instantly ascending.)*

**ATOM**

I'M HOPING TO HAVE A  
LOT ON MY PLATE.  
THIS IS YOUR FEAST TO  
EAT.

**TECHNICIANS**

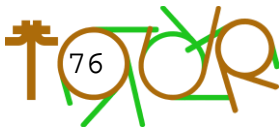
ELECTROPLATE.  
ELECTROPLATE.  
ELECTROPLATE.  
ELECTROPLATE.

*(TECHNICIANS encircle QUARK.)*

I'M FINISHED WITH ALL  
THESE MAGNETS  
AND ALL OF ITS  
FACTORY.

ELECTROPLATE.  
ELECTROPLATE.  
ELECTROPLATE.  
ELECTROPLATE.

*(ATOM yields.)*



**ATOM (cont.)**

I WILL TAKE THAT JOB  
OFFERED  
UP BY BOSON

ELECTRODEPOSITION.

STAY CONDUCTIVE,  
QUARK.

**TECHNICIANs (cont.)**

ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFORM.  
ELECTROFOAMING.

*(Melding away.)*

<b>19. ANTIMATTER</b>
-----------------------

*(QUARK detects the emptiness.)*

**QUARK**

NOTHING EVER MATTERS.  
ONE NEEDS TO CANCEL OUT.  
I DON'T EVER MATTER.  
NEGATIVE BALANCE.  
I NEED ANTIMATTER.  
SCATTERED ANTIMATTER.  
YOU ARE NEVER MATTER.  
ANECDOTAL BASE  
IS OF MY EXISTENCE, COLOUR, BE LEFT UNDETECTED?

*(Heading to the magnets littering the ground.  
She hesitantly picks up the magnets. She  
returns to the desk.)*

ARE MY FUNDAMENTAL PRINCIPLES TO BRING GRAVITATION?  
A DIRE SITUATION BASED ON STRONG, WEAK INTERACTIONS?

*(Observing the magnets. She puts together a  
single magnet. She stows away the magnet  
near her.)*

I NEED ANTIMATTER.  
I SCRAPPED VALIDATION.  
YOU HAVE ALWAYS MATTERED.  
NEUTRINOS, PARTNER.

*(QUARK rests her head on the desk.)*

<b>20. PREON</b>
------------------

*(ЛЕПТОН tiptoes in.)*

**ЛЕПТОН**

YOU HAVE REACHED THE MASS POINT.  
PRINCIPLE OF UNCERTAINTY.  
COLLECT YOUR PARADOX.  
SCATTER YOUR PLOTS.

*(Organizing QUARK's space.)*

КАНДИДАТ НАУК (kandidat nauk)?  
WHAT'S IT THAT YOU FEAR? OH.

*(Rolling QUARK over. She notices the magnet.)*

THESE ATTRACTING MAGNETS  
REPEL YOUR SPIRIT,  
WERE IN PARTICLES.  
I WILL PRAY ON.

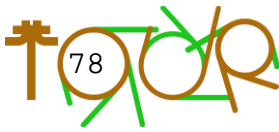
*(QUARK riles herself up.)*

**QUARK**

MY MODEL HAS ITS STANDARDS. I'LL NOT CONFLATE  
POINTLIKE PARTICLES LIKE THESE DIPOLES IN  
MAGNETIZATION. MY ELEMENTARY MINDSET KNOWS PSEUDO  
PHYSICS. I'M PART FRAUD. THIS IS THE END, THIS  
EXPERIMENT. MY BEING CANNOT TAKE THIS. DON'T HAVE THE  
PHYSICS. MY BRAIN WAVES TRANSVERSED.

*(ЛЕПТОН looks through the desk.)*

DYING BY POLARIZATION. MY 'XISTENCE ONLY REPELS.



*(ЛЕПТОН pulls out a lightbulb and wires. She separates the magnets.)*

**QUARK** (cont.)

I REALLY DON'T KNOW HOW YOU FIND POINTLESS MATTERS SO SENTIMENTAL.

*(ЛЕПТОН performs the experiment.)*

**ЛЕПТОН**

I'M MENTAL, SPEAKING YOUR LANGUAGE. JUST TRYING OUR CLASSIC PROJECTS. POINT PARTICLE'S HYPOTHESIS. POINT OF YOUR LIFE'S TO THEORIZE, PERHAPS PREON? JUST HAVE A BELIEF. POSITRON TO 'LECTRON, DON'T BE ANTIMATTER ON ME NOW. JUST LIGHTEN UP, BE BRIGHTER COMRADE.

**QUARK**

TRY TO INITIATE CONDUCTION.  
MY TEMPERAMENT'S TO BE SHUNNED.  
PASSION'S NOT FOR SIMPLETONS.

**ЛЕПТОН**

PREON.

*(QUARK takes over the experiment.)*

**QUARK**

STELLAR USAGE OF PREON.  
BUT THERE'S NO FAITH IN PREON.  
NOT A MATTER THAT'S PREON.

*(Finishing the experiment.)*

ИДИ ТЫ В БАНЮ (idi v'banyu)!



**ЛЕПТОН**

IT'S YOU WHO NEEDS TO GET LOST.  
LET ME LIVE IN PARADOX.  
PUPIL, GO ON. QUIT...

*(QUARK slides the magnets towards the light bulb.)*

*[The light bulb lights up.]*

BEING A ХУЙ (hooy). QUARK, P H D.

**QUARK**

**ЛЕПТОН**

PRAISE BE.

PREON.

*[The space brightens.]*

*(QUARK intimately hold her gaze.)*

*(ЛЕПТОН anxiously meets QUARK's gaze.)*

*(QUARK distances the magnets away from the light bulb.)*

*[Blackout.]*

*End of Act*



ACT II

## 21. MOLE

*[Accelerator]*

*(QUARK wanders in. She pops around.)*

*(BOSON enters. He moves along, without noticing QUARK.)*

*(ЛЕПТОН rushes in, carrying papers. She playfully smacks QUARK with the papers. She rushes out.)*

*(ATOM tardily arrives. They eye QUARK.)*

*(QUARK wins the staredown with ATOM.)*

## 22. ELEMENTARY PARTICLE

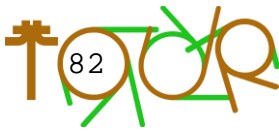
*(ATOM progressively smiles.)*

**ATOM**

STARTING OFF ELEMENTARY.  
ORBITALS, YOU FIT IN SO MANY.  
LET US ACCELERATE!  
JOIN US ON THIS CIRCUIT TOUR.

*(QUARK remains unmoved.)*

*(ATOM puzzledly stops in their tracks.)*



## QUARK

A LITTLE LATE.  
ATOM.  
YOU VERY LIKELY HAVE NO CONCEPT.  
SPACETIME.  
YOU HAVE NO IDEA. OUR CONNECTION,  
ATOM.  
THERE'S NOTHING AT ALL TO QUANTIZE, ATOM.  
IT'S BEEN A WHILE.  
ATOM.  
YOU NO LONGER HOLD ANY COMTEMPT?  
REMORSE?  
YOU HAVE AN IDEA, MISDIRECTIONS,  
ATOM,  
THAT I HAD TO GO THROUGH ALONE, ATOM?

## ATOM

QUARK.  
YOU DID NOT HIT ROCK BOTTOM.  
YOU'VE BEEN ON TOP OF YOUR GAME.  
YOU'RE CHARMING.  
CAN'T UNDERCUT STRANGENESS.  
YOU SHOULD REMAIN UPPITY.  
YOU'RE HOME, NOT DOWN IN THE DUMPS.  
STAY CHARMING,  
AND ALWAYS BE STRANGE.

*(QUARK sees through ATOM.)*

## QUARK

SO GLAD WE CROSSED  
EACH OTHER.  
A SMALLER WORLD AND I'D BE UP IN  
YOUR CLOUD  
OF NEGATIVITY, 'LECTRIC LIKE,  
IT HERE?  
POLARITY BEYOND YOUR MAGNET FACTORY.

*(ATOM is taken aback.)*

**QUARK**

I'LL HIT ATOMIC  
BOTTOMS.  
I'M GAME TO TOP IT ALL  
OFF.  
STOP FLATTERING.  
I CAN LIVE WITH ALL  
THAT.  
I'M DONE WITH YOUR  
UPWARD TREND.  
SO DONE, GET DOWN TO  
MY LEV—

**ATOM**

YOU DID NOT HIT ROCK  
BOTTOM.  
YOU'VE BEEN ON TOP OF  
YOUR GAME.  
YOU'RE CHARMING.  
CAN'T UNDERCUT  
STRANGENESS.  
YOU SHOULD REMAIN  
UPPITY.  
YOU'RE HOME, NOT DOWN  
IN THE DUMPS.

*(ATOM kneels.)*

THIS IS STRANGE,  
AND NEVER CHARMING.

STAY CHARMING.  
AND ALWAYS BE STRANGE.

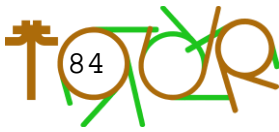
*(ATOM stands up.)*

**QUARK**

NOT SYNCHROTRONS.  
CIRCLE.  
ACCELERATOR. A WINDING LOOP.  
IT'S STRANGE.  
GODLY PARTICLES, WORLD'S RUN BY ONE.  
BOSON  
AND HIS GADGETS: ALL THESE ATOM SMASHERS.

*(ATOM distances.)*

I'M JUST BEING  
RANDOM.  
IT'S REALLY HARD TO NOT INFLUENCE  
YOUR FIELD.  
I'M FUNDAMENTAL.



*(QUARK twirls her finger around her head.)*

**QUARK** (cont.)

I COME AROUND,  
ATOM,  
TO ACCELERATE, SCATTER TOURS.  
NOWHERE BUT UP.  
BOTTOM.  
TOP.  
DOWN.  
STRANGE.  
CHARM.  
STANDARD MODEL.  
IT'S UP.  
BOTTOM.  
TOP.  
DOWN.  
STRANGE.  
CHARM.

*(JEPTOH enters. She happily addresses ATOM.)*

THE STANDARD MODEL.

*(ATOM pushes JEPTOH into QUARK.)*

*(JEPTOH collides into QUARK. She falls with QUARK.)*

**ATOM**

ACCELERATOR.

*(Directing out.)*

**QUARK**

EXCELLENCE.

**ATOM**

QUARK, ЛЕПТОН, BOSON.

**QUARK**

NOTHING BUT...

**ATOM**

ELEMENTARY.

DOWN, UP, BOTTOM, TOP, CHARM, STRANGE.

**QUARK**

THAT IS ME.

**ATOM**

QUARK, ЛЕПТОН, BOSON.

**QUARK**

NOTHING BUT...

**ATOM**

ELEMENTARY.

TAU, MUON, 'LECTRON.

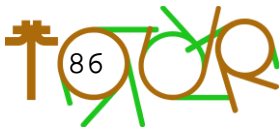
**QUARK**

ON HER MIND.

*(Motioning towards ЛЕПТОН.)*

**ATOM**

QUARK, ЛЕПТОН, BOSON.



**QUARK**

NOTHING BUT...

**ATOM**

ELEMENTARY.

GLUON, PHOTON, W, Z, HIGGS.

**QUARK**

I'M READY.

**ATOM**

QUARK, ЛЕПТОН, BOSON.

**QUARK**

ALL THINGS ARE...

**ATOM**

ELEMENTARY PARTS.

*(Leaving.)*

<b>23. BRING THE CONDUCTIVITY</b>
-----------------------------------

*(ЛЕПТОН helps QUARK up.)*

**ЛЕПТОН**

Я ПОДЪЕМ ТЫ. (ya pod"jóm ty.)

I CARRY INTRINSIC, CURRENT NEWS,  
SOON BINDING.

YOU'LL SET BOSON ON A COLLISION  
COURSE WITH WORK.

HOLD FERMION, FOR HE'LL FEEL ELECTROWEAK.  
BRING THE CONDUCTIVITY.



## QUARK

IDEALS COME SO FAR.  
MATTERS,  
THEY COME TO ME.  
THANK YOU.

## ЛЕПТОН

YOU DOCTORATES...

*(QUARK points out the hypocrisy.)*

THERE IS NOTHING UNCONDUCTIVE AS  
SENTIMENTS.

*(Growing lighthearted.)*

SPARK 'NOTHER ANGLE BEYOND OUR UNDERSTANDING.  
MEANWHILE, FOR MOVEMENT OF THIS LAB,  
I SHALL  
BRING THE CONDUCTIVITY!

*(Moving about.)*

<h2>24. MASS CHARGE SPIN</h2>
-------------------------------

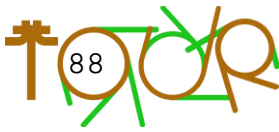
*(ATOM leads BOSON into the space.)*

*(BOSON stops in his tracks.)*

## BOSON

DID NOT EXPECT YOU'LL BE  
THE PROSPECTIVE TECHNICIAN TO  
MASS CHARGE SPIN.

*(QUARK and BOSON take two to tango.)*



**BOSON** (cont.)

UNDER MY LIGHT, SO YOU REALLY CAN'T  
MASS CHARGE SPIN IT.  
INFLUENCE SO MASSIVE,  
YOU LACK THE CHARGE,  
ONLY HALF SPIN,  
MASS CHARGE SPIN  
THE QUANTUM ENTANGLEMENT—

**ЛЕПТОН**

I WILL FLUX OUT WITH HER.  
MASS CHARGE SPIN THIS.

*(Coming between QUARK and BOSON.)*

*(BOSON loses his footing.)*

**BOSON**

ELEMENTARY...  
ELEMENTARY...  
ELEMENTARY...  
ELEMENTARY...  
THAT IS YOU, ЛЕПТОН.  
YOU SUPERVISOR.  
YOU OVERSEER.  
YOU ARE A TRAITOR.

*(ЛЕПТОН extends her hand to ATOM.)*

YOU ARE STILL OUR PRIDE.

*(ATOM comes to QUARK's defense.)*

*(BOSON submits.)*

**BOSON** (cont.)

ATOMIC NUMBERS.  
 ATOMIC NUMBERS.  
 ATOMIC NUMBERS.  
 THE WAY YOU LIKE IT.

*(ATOM quickly comes to BOSON's side.)*

MASS CHARGE SPIN OFF.  
 MASS CHARGE SPIN IN.  
 MASS CHARGE SPIN, YEAH...  
 MASS CHARGE SPIN YOUR WAY.

*(Opening up the Accelerator.)*

<p><b>25. HADRON</b></p>
--------------------------

*[The collider horizontally lies with no end or entrance in sight. This tunnel could fit people on their feet, let alone particles.]*

*(TECHNICIANs mass charge spin out.)*

**TECHNICIANs**

HADRON ON!

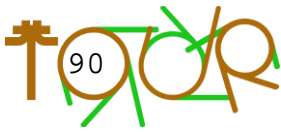
**TECHNICIANs**

HADRON ON!

**TECHNICIAN**

ACCELERATE!

*(ЛЕПТОН and QUARK run around.)*



*(BOSON disappointedly heads towards the collider.)*

*(ATOM roam about.)*

**TECHNICIAN**

ACCELERATE!

**TECHNICIAN**

ACCELERATE!

**TECHNICIAN**

ACCELERATE!

**TECHNICIAN**

ACCELERATE!

**TECHNICIAN**

ACCELERATE!

**TECHNICIAN**

ACCELERATE!

*(TECHNICIANS collide with one another.)*

*(ЛЕПТОН and QUARK stop by the collider.)*

**ЛЕПТОН**

ACCELERATE!

ACCELERATE!

# ЛЕПТОН (cont.)

ACCELERATE!  
ACCELERATE!  
ACCELERATE!  
ACCELERATE!

*(Tapping QUARK.)*

## QUARK

ACCELERATE!

## ЛЕПТОН

## TECHNICIANs

ACCELERATE!

## ATOM

ALL'S ATOM SMASHING!

## TECHNICIAN

LARGE HADRON COLLIDER!

## TECHNICIAN

LARGE HADRON COLLIDER!

## TECHNICIAN

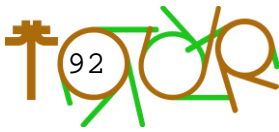
LARGE HADRON COLLIDER!

## TECHNICIAN

LARGE HADRON COLLIDER!

## TECHNICIAN

LARGE HADRON COLLIDER!



**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**ЛЕПТОН**

ACCELERATE!

ACCELERATE!

ACCELERATE!

**ЛЕПТОН**

ACCELERATE!

ACCELERATE!

ACCELERATE!

ACCELERATE!

ACCELERATE!

**TECHNICIANS**

HADRON.

HADRON.

LARGE HADRON.

**ATOM**

POSITRON? 'LECTRON?

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**QUARK**

THIRTY, ЛЕПТОН.

'LECTRON VOLTS.

WE CAN SHOOT TWINS.

PROTON BEAMS.

**ЛЕПТОН**

YOU BRING YOUR LAWS

OF PHYSICS

TO FORM YOUR OWN THEORIES.

**ATOM**

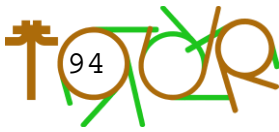
THEORIES!

**ЛЕПТОН**

HADRON ON.

HADRON ON.

ACCELERATE.



## TECHNICIANs

HADRON ON?!  
ACCELERATE.  
HADRON ON.  
ACCELERATE.  
ACCELERATE.

*(QUARK, ЛЕПТОН, and TECHNICIANs get closer together.)*

ACCELERATE.  
ACCELERATE.  
ACCELERATE.  
ACCELERATE.

## ЛЕПТОН

LARGE  
HARDRON  
COL-

## ЛЕПТОН

LID-  
ING!  
PARTICLES!

## TECHNICIANs

ACCELERATE  
TWIN PROTON BEAMS.

*(Expanding.)*

*(ЛЕПТОН grabs ahold of ATOM.)*

*(QUARK, ЛЕПТОН, ATOM, and TECHNICIANs clump together.)*

## QUARK

WHO MAKES THE UNIVERSE?



**JEPHO**

**ATOM**

**TECHNICIANS**

QUARK!

*(TECHNICIANS accidentally push out ATOM to rally around QUARK.)*

<b>26. FUSION</b>
-------------------

*(QUARK, JEPHO, and TECHNICIANS converse.)*

*(ATOM looks on.)*

**ATOM**

WHERE IS THE FUSION? EFFUSION.  
JUST CONFUSION. DIFFUSION, WHERE'S IT?

*(Looking upon BOSON.)*

DON'T GO NUCLEAR.  
IT IS CLEAR.

*(Heading to BOSON.)*

BOSON.  
WE HAVE THE VISION. REVISIT.  
IRON IT OUT. OXYGEN. CARBON.  
WE'RE IN THE CLEAR.

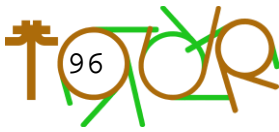
*(BOSON try to distance from ATOM.)*

REFUSION.

*(Grabbing ahold of BOSON.)*

FUSION WITH ME.

*(BOSON and ATOM fusion dance.)*



**ATOM** (cont.)

JUST FUSION.

*(JEPTON head to BOSON and ATOM. She splits  
BOSON and ATOM.)*

LET US GO NUCLEAR FUSION.

*(JEPTON directs BOSON to QUARK. She  
accompanies ATOM out.)*

<b>27. SYNCHROTRON: MAGNET-GUIDED</b>
---------------------------------------

*(Time freezes as BOSON slowly heads to QUARK  
and TECHNICIANs. He looks on at the collider.  
He grows overly sentimental.)*

*(TECHNICIANs frozenly remain unsurprised.)*

**BOSON**

THE SYNCHROTRON...

*(Feeling both fervent and displeased.)*

YOUR LIVES HAVE ACCELERATED

BELOW MY THOUGHTS.

'LOW MY WILDEST DREAMS...

I CANNOT STRESS THIS ENOUGH.

WELCOME TO THE ORIENTATION, QUARK...

DON'T TOUCH ANYTHING AT ALL, YOU HEAR ME? SYNC UP.

*(Addressing TECHNICIANs.)*

SYNCHROTRON.

{Overview: BOSON gives QUARK a tour around the Accelerator. QUARK takes control of this tour and makes it known that she knows all the mechanics that this laboratory has to offer. TECHNICIANS grow fond of her. BOSON is too alienating for the lab to move forward.}

## 28. HYPERCHARGE

{Overview: BOSON angrily puts QUARK in hypercharge and believes that the stress of leadership will get to her. ЛЕНТОH has evidently grown wary. QUARK easily manages her way through. ЛЕНТОH is no longer necessary for QUARK. She is seemingly hurt at being unhelpful and not looked up to by ATOM as QUARK had.}

## 29. ISOSPIN

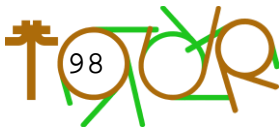
{Overview: BOSON meets with QUARK to offer anything to get her to quit the Accelerator. ЛЕНТОH still comes around to her defense. ATOM grows suspicious of QUARK's rise. BOSON increasingly accepts that he is not fit to lead the Accelerator.}

## 30. SUBATOMIC

{Overview: On a break, ATOM has a one-on-one with QUARK. They are in this world to make this world, together. TECHNICIANS agree that the subatomics make the atomics make the molecules make the grains make the world.}

## 31. MESON

{Overview: BOSON gives news that ЛЕНТОH has locked herself in the collider. She recircuited the Accelerator. BOSON offers his resignation and hands the role of the director of the Accelerator to QUARK. QUARK is ready to find ЛЕНТОH.}



## 32. PION

{Overview: QUARK openly forgives ATOM for all the mistreatments that they have done to her. She also apologizes for her own mistreatments. ATOM accepts the apology and wishes to find ЛЕПТОН, too.}

### 33. ELECTRON

*(QUARK heads to the collider. She makes an opening in the collider.)*

*(TECHNICIANS levelly dance about.)*

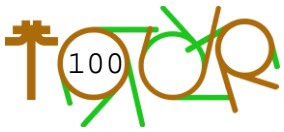
*(QUARK finally enters the collider. She takes it all in.)*

*(JEPTON runs across, parallel to the collider. She seems to be searching.)*

*[A sudden flash of light fills the insides of the collider.]*

*(TECHNICIANS scatter away.)*

*(QUARK feels the impact. A remarkably colourful áo dài - a garment worn by the musical writer's Vietnamese culture and currently the only thing he is imagining - instantly covers her, like Fairy Godmother did to Cinderella. She collapses, dead.)*



**33a. ELECTRON (reprise)**

*(ЛЕПТОН rushes away, without noticing QUARK.)*

## 34. FISSION

*(BOSON slyly enters.)*

*(Curving around to the opening of the collider.)*

*(Entering the collider.)*

*(Examining QUARK.)*

*(Dismayingly turning his head.)*

*(ATOM hides themself in the collider. They hold onto the operator's control, like a weapon.)*

*(BOSON drags ATOM out.)*

*(Growing disappointed.)*

*(ATOM grows instable. They may laugh or cry, but they go insane.)*

*(BOSON seizes the operator's control.)*

*(ATOM tries to crawl away into the collider.)*

*(In the collider, BOSON smashes ATOM with the operator's control. BOSON splits ATOM.)*

### 35. PHOTONIC PARITY

*(TECHNICIANs march in. They each discretely hold a horseshoe magnet. They encircle BOSON.)*

*(BOSON directs TECHNICIANs to stand down.)*

*(TECHNICIANs whip out their magnets. They point their magnets towards BOSON, like a circular firing squad.)*

*(BOSON loses control of his body.)*



**36. BARYON**

*(JEPTOH makes her presence known from within the opening of the collider. She fearfully inspects an unrecognizable QUARK. She pushes away QUARK. She drags out ATOM's corpse.)*

*(BOSON mutely pleads to JEPTOH to stop TECHNICIANs.)*

*(JEPTOH directs TECHNICIANs to cock.)*

*(TECHNICIANs cock their magnets.)*

*(JEPTOH directs TECHNICIANs to twist.)*

*(TECHNICIANs twist their magnets.)*

*(BOSON's neck twists. He dies.)*

37. DECAY
-----------

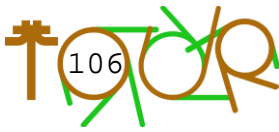
*[A darkness suddenly swallows everything but the opening of the collider.]*

*(ЛЕПТОН drag ATOM back into the collider.)*

*(TECHNICIANS rush away to escape from the darkness. Those who get caught in the darkness stop in their tracks and perhaps, die. They regrettably drag BOSON into the collider. They drop two magnets by ЛЕПТОН.)*

*(ЛЕПТОН looks on at the darkness dwelling outside. She holds a magnet in each hand. She looks at ATOM. She looks at the space. She directs the magnets towards her head. She falls back, dead.)*

# ACT III



[Quantum World]

(QUARK is suited as a particle that is rainbow-like and colourful.)

(PARTICLES flow out from the opening of the collider. They shoulder QUARK. They gently set QUARK on her feet.)

(BOSON is suited as a particle that is godly and bright.)

(PARTICLES carry out BOSON from the opening of the collider.)

[The space brightens.]

(BOSON pridefully gets off of TECHNICIANS.)

(JEPTON is suited as a particle that is dull and colourless.)

(PARTICLES carry out JEPTON from the opening of the collider. They set her on her feet.)

(JEPTON joyfully thanks TECHNICIANS.)

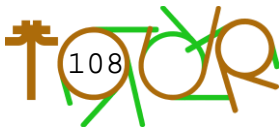
(ATOM is suited as a particle that is massive. They shyly enter from the opening of the collider.)

(PARTICLES follow ATOM. They orbit ATOM.)

## 38. SUPERSYMMETRY

{Overview: Time is stasis. No matter what the matters are, the supersymmetric particles are free to do what they please, beyond the Standard Model and beyond our understanding. Importantly, every particle is beyond half spin. QUARK, ЛЕПТОН, BOSON, ATOM, and particles bring their lasting movements and notes before vanishing under the fabric of spacetime: they exit close to the start of the universal tour.}

*[Blackout.]*



### 39. KNOT (bow)

*(BOSON arrives, in front of marching PARTICLEs.)*

*[Lights up.]*

*(BOSON bows.)*

*(ЛЕПТОН arrives, orbiting PARTICLEs. She bows.)*

*(QUARK arrives with PARTICLEs orbiting her. She bows.)*

*(ATOM arrives with PARTICLEs orbiting them. They bow.)*

*(PARTICLEs merge together away from QUARK, ЛЕПТОН, BOSON, and ATOM. They bow.)*

*(QUARK, ЛЕПТОН, BOSON, and ATOM fuse. They bow.)*

*(Optionally, PARTICLEs orbit ORCHESTRA.)*

*(Optionally, QUARK, ЛЕПТОН, BOSON, and ATOM pull out CREW.)*

*[Close circuit.]*











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