

# DIRECTOR'S SCRIPT



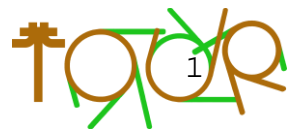
Book, Music, and Lyrics  
DAVID QUANG PHAM

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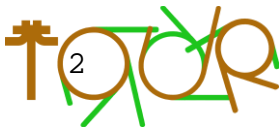
TOUR

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A Musical

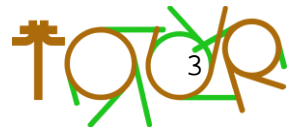
by

David Quang Pham



## THANK YOU

Name	Role
Emily Johnson	Data Scientist
Marcos “Danny” Caballero	Professor of Electromagnetism
Montana Earegood	Copyeditor
Ruthann Gregory	Physicist
Janelle Lawrence	Operatic/Musical Mentor
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

A physics fable, TOUR is an operatic musical that experiments with tango, pop, choral, and four particles named Quark, Lepton, Boson, and Atom. These standard particles collide and compete with one another in the physics academic and professional field. By the end of act one, they all pass college and get jobs at the particle accelerator. In the end of act two, they all die in the accelerator and rise as God Particles.

The characters are particles, who are searching to become perfect. In physics, particles seek out supersymmetry. Particles want to be perfect spheres. Not unlike a human being. We want to be well-rounded. The analogy is told through personifications of the particles in a nuclear reactor. Their types and class structure are costumed as human students and professors.

Quark is an exchange student, Лептон is her doctoral advisor, and Boson is the professor who tries to stop Quark from getting a career in physics.



## CHARACTER BREAKDOWN

Workshops/Productions: Casting the main characters from underrepresented racial minorities are not recommended. Casting the main characters from underrepresented racial minorities are required.

Character	Vocal Tone & Range	Gender
<u>QUARK</u> A student and physicist.	Musical Mezzo-Soprano	Woman
<u>LEPTON</u> (lepton) A doctoral advisor and lab supervisor.	Musical Alto	Woman
<u>BOSON</u> A professor and lab director.	Musical Baritone – Tenor	Man
<u>ATOM</u> A scholar and right-hand scientist.	Operatic	Any
<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 Лептон: 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.	<a href="#">Eigen</a>	ATOM
2.	<a href="#">Symmetry</a>	ЛЕПТОН   BOSON   ATOM   students
3.	<a href="#">Exchange Particle</a>	QUARK   ATOM
4.	<a href="#">Torsion</a>	QUARK   ЛЕПТОН
5.	<a href="#">Available Energy</a>	QUARK
6.a.	Tachyon	QUARK   BOSON   ATOM   ЛЕПТОН   students
7.	Nuclide	QUARK   BOSON   ATOM
8.	<a href="#">Entanglement</a>	QUARK   BOSON
9.	Crossing Field Lines	QUARK   BOSON
10.	Centration	QUARK   BOSON   research assistants
11.	G	QUARK   ЛЕПТОН   ATOM   professors
12.	Anyon	QUARK
13.	<a href="#">Valence</a>	QUARK   ЛЕПТОН   ATOM   students
14.	<a href="#">Effusion</a>	QUARK
15.a.	Super Collide	QUARK   ЛЕПТОН   technicians
16.	<a href="#">Particulate</a>	QUARK   ATOM
17.a.	Slepton	QUARK   BOSON   ATOM   politicians   technicians
18.	<a href="#">Backscatter</a>	QUARK   ЛЕПТОН
19.	Electroform	QUARK   ATOM   technicians
20.	Remanence	QUARK
21.a.	Preon	QUARK   ЛЕПТОН
22.	Mole	QUARK   ЛЕПТОН   BOSON   technicians
23.	Elementary Particle	QUARK   ATOM
24.	Bring the Conductivity	QUARK   ЛЕПТОН
25.	Mass Charge Spin	QUARK   ЛЕПТОН   BOSON   ATOM
26.	Quantum	QUARK   ЛЕПТОН   BOSON   ATOM   technicians
27.	Fusion	QUARK   BOSON   ATOM
28.	Synchrotron	QUARK   BOSON   technicians
29.	Hypercharge	QUARK   ЛЕПТОН   ATOM   technicians
30.	Isospin	QUARK   ЛЕПТОН   BOSON   ATOM
31.	Subatomic	QUARK   ATOM   technicians



## MUSICAL NUMBERS (cont.)

♫ #	Title	Character(s)
32.	Meson	QUARK   BOSON   ATOM
33.	Pion	QUARK   ATOM
34.	Deuterium	ATOM
35.	Electron	QUARK   JEPI TOH   technicians
36.	Proton	QUARK   BOSON
37.	Fission	QUARK   BOSON   ATOM
38.	Parity	QUARK   BOSON   technicians
39.	<a href="#">Baryon</a>	QUARK   JEPI TOH   ATOM
40.	<a href="#">Decay</a>	QUARK   particles
41.	Supersymmetry	QUARK   JEPI TOH   BOSON   ATOM   particles
42.	Knot (bow)	COMPANY

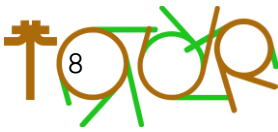
## SCENES & SET DESIGNS

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   scantrons, papers, alarm
I   ii 53	Desertron	ABANDONED PARTICLE ACCELERATOR   operator's control, cash
I   iii 72	Magnet Factory	DESK holding magnets, metals, a light bulb, wire
II 83	Accelerator	COLLIDER   papers, pens, operator's control, magnets
III 123	Quantum World	COLLIDER





ACT I



## 1. EIGEN

SCENE i

*[University]*

*(ATOM arrives. They find the spots to  
quantum tango.)*

## 2. SYMMETRY

*(STUDENTs bring in a particle board and a  
desk. They conceal the desk behind the  
particle board.)*

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

*(STUDENTs disorderedly orbit ATOM.)*

**ATOM**

PARTICLES.  
YOU ARE NOT  
SYMMETRICAL  
PARTLY DUE  
TO ME,

**STUDENTs**

PROTON. NEUTRON. ELECTRON. ATOM!

**ATOM**

ATOMIC DISORGANIZATION.

*(STUDENTs increasingly grow orderly.)*

*(ЛЕПТОН rushes in, carrying the scantrons.  
She orbits ATOM. She hands the scantrons to  
STUDENTs. She wildly roams around.)*

**ЛЕПТОН**

THESE SCHOLARS.  
ALL WILL SPARK  
WELL-ROUNDEDNESS IN  
PART FROM  
SUBJECTS,

**STUDENTs**

ELECTRON. MUON. TAU. NEUTRINOS. LEPTON!

**ЛЕПТОН**

UNCOVERED WITHIN THE SCATTERING.

*(Dumping the scantrons into ATOM's arms.)*

*[The space brightens.]*

*(BOSON strolls in.)*

**BOSON**

ENLIGHTEN.  
I HEAR NEWS.  
AN EXCHANGE STUDENT.  
BRIGHTER  
THAN ME.

**STUDENTs**

PHOTON. GLUON. W. Z. BOSON!



## **BOSON**

BE READY FOR A DIFFERENT WAVELENGTH.

## **STUDENTs**

SYMMETRY.  
WE DREAM TO BE WELL-ROUNDED.  
WE'LL BE A PERFECT SPHERE.

*(Barely spinning.)*

## **ATOM**

PARTICLES.  
STABLE WORLD.  
OSCILLATIONS!

*(Greeting the world by waving their arm.)*

PARTLY DUE  
TO ME,  
I MADE YOU, EVERYTHING ABOUT YOU.

*[A colourful presence spills into the space.]*

*(STUDENTs sense the colourful presence.)*

## **STUDENTs**

SYMMETRY.  
WE'LL COME AROUND FULL CIRCLE.  
WE SHALL BEGIN THE TOUR.

*(Scattering around.)*

*(JEPTON takes the scantrons from ATOM. She  
scatters away.)*

*(BOSON intriguingly observes. He departs.)*

*(ATOM, speechlessly, mouths along the strange and sudden rings of the vibraphone.)*

*(STUDENTS scatter away.)*

*(ATOM trip over invisible strings and lose their footing. They run themselves into the particle board to keep balance.)*

### 3. EXCHANGE PARTICLE

*(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**

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



*(ATOM scans the schedule on the particle board.)*

**ATOM**

QUARK.

*(QUARK swiftly rips out the schedule.)*

**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.

*(QUARK kneels. She sensitively picks up the tacks.)*

**QUARK**

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.)*

#### 4. TORSION

*(JEPTON 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.)*

## 5. AVAILABLE ENERGY

## QUARK

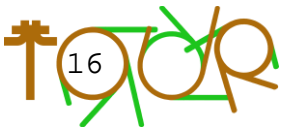
AVAILING MASTER  
ENERGIZED FAILED NEWCOMER.  
WE SHARED A DEVOTION, CAREER IN PHYSICS.  
DISTRIBUTION, FIXED  
AMOUNT OF ENDURANCE 'MONGST  
IDENTICAL PERSONS. ACTIVATE KINEMATICS!

*(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.  
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.

<b>6. TACHYON</b>
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*(QUARK, ATOM, and STUDENTs gather around.)*

*(ATOM speaks after the long silence.)*

**ATOM**

ON BEHALF OF THE TACET.  
PROFESSOR  
IS REAL SHARP AND TACKY-ISH.

*[The space slightly brightens.]*

TRULY BRIGHT AND TACTFUL  
ON TIME,  
BOSON.

**STUDENTs**

HE SHOULD BE FAST AS LIGHT.  
PROFESSION  
LOST ITS MIND, SIGHT OF US ALL.  
HE'S GLUON TO PHOTON?  
W?  
Z...?

**QUARK**

HE'S ANSWERING EMAILS.

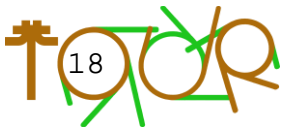
*(STUDENTs tap their heads.)*

**STUDENTs**

TACHYONIC.

*[The space intensely brightens.]*

*(BOSON tactfully arrives. He flips the  
particle board.)*



*[The particle board displays a colourful field line diagram, familiar to the colourful presence earlier.]*

**STUDENT**

PROTONS!

*(BOSON dismisses the answer.)*

*(ATOM tugs at their chest.)*

**STUDENT**

NEUTRONS!

**STUDENT**

ELECTRONS!

*(ATOM lets go of their chest.)*

*[An explosion audibly rings after a long silence.]*

*(QUARK solely hears the explosion.)*

**STUDENT**

PHONONS!

**STUDENT**

BOSON?

*(BOSON seems taken off guard and blushes.)*

**ATOM**

BORONS... COLOUR!

*(STUDENTs ponder.)*

STASIS!

*(STUDENTs hysterically laugh.)*

*(ATOM seems brokenhearted.)*

*(QUARK sticks out.)*

*(STUDENTs ponder.)*

**QUARK**

CHROMODYNAMICS.

**BOSON**

TACHYON...

**STUDENTs**

YOU'RE QUARK!

*(BOSON unites QUARK, ATOM, and STUDENTs.)*



**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.)*

*(A STUDENT points their magnet at another  
STUDENT.)*

**STUDENT**

COMPASS FACES...

**STUDENTs**

ATTRACTION HERE!

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

**STUDENT**

YOUR FRIDGE RUNNING?

**STUDENTs**

HA, CAUSE MAGNETS!

*(ATOM reaches for another STUDENT.)*

**ATOM**

YOU SEE, MAGNATE.

**STUDENTs**

STILL THE BORON!

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

**BOSON**

PARAMAGNET?

**QUARK**

I WOULD BE HONOURED.

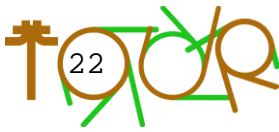
*(Accepting the magnet.)*

**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. She takes a brief moment to orbit ATOM.)*

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

*(Their experiment concludes.)*

<b>6a. TACHYON (reprise)</b>
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*(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.)*



**STUDENTS** (cont.)

PROFESSOR'S SPEECHLESS.  
THINK IT OVER!

*(BOSON waves STUDENTS off.)*

WE WILL REPEL!

*(Departing.)*

<b>7. NUCLIDE</b>
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*(QUARK heads over to the desk. She writes 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.)*

**BOSON**

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

*(Focusing on QUARK.)*

## 8. ENTANGLEMENT

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

*(BOSON reads the thesis.)*

## BOSON

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

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

**BOSON** (cont.)

IN NO TIME.  
ARE YOU INTO QUANTUM ENTANGLEMENT?  
STILL MAGNETIC EXCITATION TO BE FOUND.  
YOU GIVEN PICKING UP PHOTONS FOR A CHANCE?  
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 the 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.)*



**BOSON** (cont.)

'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.)*

FIELD THEORIES PROPOSED, WILL YOU

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

QUANTUM ENTANGLE ME?

## 9. CROSSING FIELD LINES

**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.)*

**BOSON** (cont.)

I CROSSED?

*(Crossing the line.)*

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.

*(Retreating 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.)*



**QUARK** (cont.)

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>10. 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  
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>11. 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.

**PROFESSOR**

SUCCESS IS THAT, NOT WITHIN YOUR VERY REACH.

**PROFESSOR**

B'S STAY IN TRASH BINS OF HISTORY.

**PROFESSOR**

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

**ATOM**

WHAT THE F'S, DO ATTEMPT QUANTUM SUICIDE.

*(QUARK sits up.)*

**PROFESSOR**

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. She orbits ATOM.)*

**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.



*(JEPYOH recognizes QUARK.)*

**JEPYOH** (cont.)

YOU MADE ME MISS IT!

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

*(Embracing QUARK.)*

*(PROFESSORs motions for JEPYOH to not  
disclose that information.)*

**PROFESSORs**

AFFLICT.

**PROFESSOR**

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

**JEPYOH**

I KNOW G-FORCE BEING

**PROFESSORs**

YOU'LL KNOW G-FORCE.

**PROFESSOR**

A FORMER DOCTORAL  
CANDIDATE.

A BURDEN SO PECULIAR.  
WEAK.

**ATOM**

PUPIL BRINGS LONG  
DAYS, SHORT NIGHTS,  
ATOMIC WEEKS.

**ЛЕПТОН** (cont.)

PHYSICS, CLASSIC, QUANTUM,  
BASIC, NEVER SLEEP.

**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**

**PROFESSORS**

OCCUPY STATE!

**ЛЕПТОН**

NAME?

*(QUARK whispers into ЛЕПТОН's ear.)*

QUARK?

SEEMS TO HAVE A LACK OF SPIN.

FIRM.

I AM IN ANY CIRCLES, ORBITALS.

ДРУГ (drug).

YOU'RE A FORCE TO BE WEIGHTED UPON THEE!

*(Stopping the momentum.)*

STATE. HAVE TO SPIN TO!

*(Spinning off.)*

## 12. 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: JEPHO.  
 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.

## 13. 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 an alarm and  
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-

*(Chuckling the alarm.)*

**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.)*

**ЛЕПТОН**

DERIVE ON.



**STUDENTs**

WHO IS THIS EDUCATED  
SPOIL?

WHAT A LOW ENERGY  
LEVEL.

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

**JEPTOH**

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!

*(JEPTOH eyes STUDENTs.)*

**QUARK**

ASSUME MY MOTIVE.  
  
FIRST ORDER NOTED.

**STUDENTs**

MOTIVATION.  
MAKE ASSUMPTIONS.  
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.

**ЛЕПТОН**

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 JENTOH.

QUARK. QUARK.

**QUARK**

OPTICAL, LOOKS GOOD.

**STUDENTs**

GEE PROFESSOR JENTOH.

QUARK. QUARK.

**QUARK**

BASICALLY, I'M HIP.

**STUDENTs**

GEE PROFESSOR JENTOH.

QUARK. QUARK.

**QUARK**

I'LL ADDRESS ALL QUESTIONS!

**STUDENTs**

GEE PROFESSOR JENTOH.

QUARK. QUARK.

ЛЕПТОН

SO FAILING. ASK IF

STUDENTs

THANK YOU, QUARK!  
THANK YOU, QUARK!

NO THANKS TO YOU,  
ЛЕПТОН.

ЛЕПТОН

QUESTIONS 'RISE BRIEFLY

STUDENTs

THANK YOU, QUARK!  
THANK YOU, QUARK!

NO THANKS TO YOU,  
ЛЕПТОН.

ЛЕПТОН

THEN YOU SNUB. NO

STUDENTs

THANK YOU, QUARK!  
THANK YOU, QUARK!

NO THANKS TO YOU,  
ЛЕПТОН.

ЛЕПТОН

NEED VALIDATION.

STUDENTs

THANK YOU, QUARK!  
THANK YOU, QUARK!

NO THANKS TO YOU,  
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?

*(QUARK feels flabbergasted.)*

**QUARK**

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?

*(STUDENTs wobble.)*

**QUARK**

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

*(Confronting ATOM.)*

**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**

ALL THAT, 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.)*



**ATOM** (cont.)

ENERGIES FOR  
THE VALENCE!

**STUDENTS** (cont.)

CONTRIBUTION.  
CONTRIBUTION.

*(ATOM passes around the cheat sheets.)*

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

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

*(LEPTON holds back QUARK.)*

**LEPTON**

THEY'LL GET ELECTRONS.

*(STUDENTS pass around scantrons.)*

**STUDENTS**

DISTRIBUTION OF THE SCANTRONS.

**LEPTON**

THEY'LL GROUP THE ELEMENTS.

*(STUDENTS group together.)*

**STUDENTS**

NODES, ORBITALS.  
NODES, ORBITALS.

NEUTRAL CIRCLES.  
NEUTRAL CIRCLES.

**LEPTON**

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.)

(JEPTON motions STUDENTs to turn in their papers to QUARK.)

**ЛЕПТОН**

DON' T TAKE IT.

## STUDENTS

VALENCE ELECTRONS.                      VALIDATION.

(Handing the papers to QUARK.)

(*QUARK snubs STUDENTS.*)

## STUDENTS

VALENCE ELECTRONS.                      VALIDATION.

**ЛЕПТОН**

WRONG ENERGY LEVEL.

(Gathering all the papers from STUDENTS.)

## STUDENTs

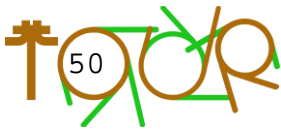
VALENCE ELECTRONS.	VALIDATION.
VALENCE ELECTRONS.	VALIDATION.

**ЛЕПТОН**

VALIDITY.

## STUDENTs

VALENCE ELECTRONS.                      VALIDATION.



THERE'S

ЛЕПТОН

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

NO NEED SEARCHING

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

VALIDITY.

STUDENTs

VALENCE ELECTRONS.

VALIDATION.

ЛЕПТОН

THE HEART

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.

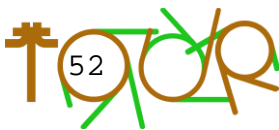
VALIDATION.

VALENCE ELECTRONS.

VALIDATION.

JUMP!

BUMP!



*(ЛЕНТОН departs.)*

*(STUDENTS orbit away.)*

#### 14. 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.

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.

**QUARK** (cont.)

JUST GO EFFUSION.

I SWEAR TO EFFUSION.

YOU ALL CAN EFFUSION IT!

*(Preparing for a journey.)*

15. 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 EXISTS, 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**

**TECHNICIANs**

QUANTA.

RAYs!

**QUARK**

*(Feeling matters.)*

ENERGY BUNDLES.

**QUARK**

**TECHNICIANs**

STANDARD

FORCE!

**QUARK**

MODEL.

*(Growing antsy.)*

THEORIZED

**QUARK**

**TECHNICIANs**

'NOUGH.

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.

**QUARK**

SUPERNATURAL.

**ЛЕПТОН**

CONDUCT YOURSELF.

**QUARK**

SUPERVISION.

**TECHNICIANs**

ENERGY, CAN YOU FEEL  
IT, GAIN THE MAGNET!

REACH THE SPEED OF

LIGHT!

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!

**15a. SUPER COLLIDE (reprise)**

*(TECHNICIANs exit.)*

# ЛЕПТОН

QUARK.

SUPER

CONDUCT YOURSELF, CANDIDATE.

JOB

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

*(Departing.)*

## 16. 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 QUARKY.

*(QUARK DJs the control.)*

*[Particles may collide.]*



**ATOM (cont.)**

QUIRKY.

*(Readjusting himself.)*

ARTICULATE THIS BAD NEWS.

LET'S CONCENTRATE SOLIDS.

LET US SAVE THIS LAB.

PARTICLES TO PARTICLES, JUST BREATHE.

*(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.

<b>17. SLEPTON</b>
--------------------

*(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.)*

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

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



**BOSON** (cont.)

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?



*(POLITICIANS pick 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**

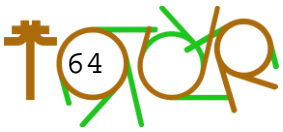
NO ACTIONS REQUIRED.  
PASSION, BIT QUANTUM, FULFILLED.  
OUR TAXES, DO BLOW IT.  
THEIR FUNDS, GO SLOW.

**POLITICIANS**

A SLEPTON!

*(Counting the cash.)*

THESE PARTICLES.  
THEY'RE PARTLY CHORES.  
DON'T MAKE WARS AS ATOMIC.  
I NEED GAS AS AN ADDICT.  
THERE'S NEW SCIENCE TO ENRICH.



**POLITICIANS** (cont.)

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.

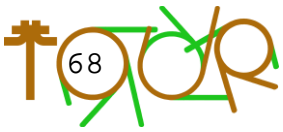
**POLITICIANS**

SUM.

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

**ATOM**

NUCLEAR NOW!



*(ATOM tears 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.)*

ENERGIES, 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.)*

<p><b>17a. SLEPTON (reprise)</b></p>
--------------------------------------

*(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.)*

## 18. BACKSCATTER

*(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  
GEGENSCHNITT.

*(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!

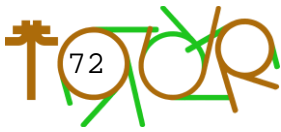
*(Orbiting QUARK.)*

*(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.  
LEAVE ME MORE LESS ISOTROPIC  
IN RANDOM DIRECTIONS.



**QUARK**

BACKSCATTER!

**ЛЕПТОН**

GOT YOUR BACK.

*(ЛЕПТОН leaves.)*

**QUARK**

HEART SHATTERED.

**19. ELECTROFORM**

SCENE iii

*[Magnet Factory]*

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

*[The particle board displays an orderly pattern of tacks.]*

**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.

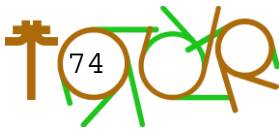
ELECTROFORM.

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.  
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.)*

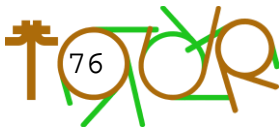
**TECHNICIANS**

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.

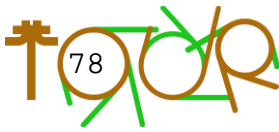
**QUARK**

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.)*

**20. REMANENCE**

*(QUARK detects the emptiness.)*

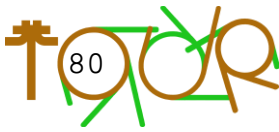
**QUARK**

THERE'S NOTHING TO FERRO-  
CAREER TO IRON OUT.  
I CAN'T EVEN MAKE SENSE.  
LOST MAGNETIC FIELD.  
ALL I AM, REMANENCE.  
I JUST BREAK COMPASSES.  
MAGNETISM WILL KILL.  
THIS FIELD'S REPULSIVE  
TO MY OWN EXISTENCE, WHICH SHOULD, NEVER BE REMEMBERED?

*(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 slams the magnet on the  
desk.)*



*[The desk splits. Each side repels each other. Packets disperse out and flutter about.]*

**QUARK** (cont.)

WHAT I WAS, REMANENCE.  
I'LL BREAK ALL COMPASSES.  
MAGNETS ARE NOT FOR ME.

*(Pulling the tacks off the particle board.  
She tosses each of the tacks onto the  
ground.)*

PARTICLE'S MY SOUL!

*(QUARK sits. She grabs the magnet. She tries  
to magnetize the distant tacks.)*

<b>21. PREON</b>
------------------

*(ЛЕПТОН tiptoes in.)*

*(QUARK hides the magnet. She pays no  
attention to ЛЕПТОН.)*

**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.

*(Opening QUARK's hand. She notes the magnet.)*

THESE ATTRACTING MAGNETS  
REPEL YOUR SPIRIT,

*(ЛЕПТОН slides the tacks to QUARK.)*

**ЛЕПТОН** (cont.)

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 EXISTENCE ONLY REPELS.

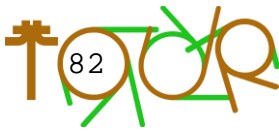
*(ЛЕПТОН pulls out a lightbulb and wires. She  
separates the magnets.)*

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**

PRAISE BE.

**ЛЕПТОН**

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

## 22. 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.)*

## 23. ELEMENTARY PARTICLE

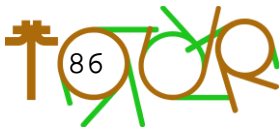
*(ATOM progressively smiles.)*

**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.

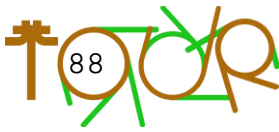
*(ATOM stands up.)*

**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.

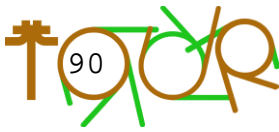
**QUARK**

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>24. 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>25. MASS CHARGE SPIN</h2>
-------------------------------

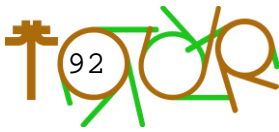
*(ATOM leads BOSON into the space.)*

*(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.)*

<b>26. QUANTUM</b>
--------------------

*[The collider horizontally lies with no ends  
 or openings in sight. The diameter of the  
 tunnel is wider than any person's height.]*

*(TECHNICIANs mass charge spin out.)*

**TECHNICIANs**

QUANTUM ON!

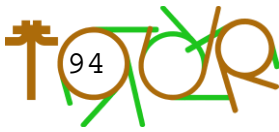
**TECHNICIANs**

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**

SEE THE QUANTUM WORLD!

**TECHNICIAN**

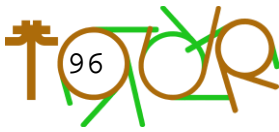
LARGE HADRON COLLIDER!

**TECHNICIAN**

FEEL THE QUANTUM WORLD!

**TECHNICIAN**

LARGE HADRON COLLIDER!



**TECHNICIAN**

BE THE QUANTUM WORLD!

**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**

ALL SUBJECTS, TAKE YOUR PICK!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

PICK UP THE QUANTUM BITS!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**TECHNICIAN**

NOTHING IS MYOPIC!

**TECHNICIAN**

LARGE HADRON COLLIDER!

**QUARK**

THIRTY, ЛЕПТОН.  
'LECTRON VOLTS.  
WE CAN SHOOT TWINS.  
PROTON BEAMS.

**ЛЕПТОН**

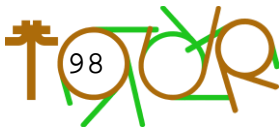
YOU BRING YOUR LAWS  
OF PHYSICS  
TO FORM YOUR OWN THEORIES.

**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>27. 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.

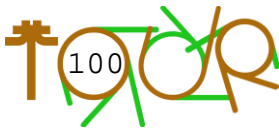
*(BOSON try to distance from ATOM.)*

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>28. SYNCHROTRON</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...

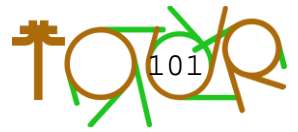
I CANNOT STRESS THIS ENOUGH.

WELCOME TO THE ORIENTATION, QUARK...

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

*(TECHNICIANs open the collider.)*

DEMONSTRATE HER WORK. SYNCHROTRON.



*(BOSON sprints into the collider.)*

**TECHNICIANS**

CIRCULATE WITHIN THIS VESSEL.  
IN THE END, WE'LL HAVE A NICE RUN.

*(BOSON returns, holding out a bright, hearty  
object.)*

*(TECHNICIANS promptly jog into the collider.)*

**BOSON**

LET MAGNET GUIDE YOU.  
LET MAGNET FLOW THROUGH.

*(TECHNICIANS return, carrying unpleasant  
discoveries.)*

**TECHNICIANS**

LET MAGNET GUIDE YOU.  
LET MAGNET FLOW THROUGH.

*(QUARK slowly enters the collider.)*

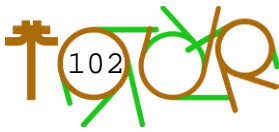
*(BOSON tries to be supportive.)*

**BOSON**

MATTERS ARE TREASURE.  
I'VE UNEARTHED TOO MUCH.

*(Selfishly smirking.)*

*(QUARK returns, unearthing a colourful  
treasure.)*



### QUARK

THE SYNCHROTRON...  
ALL OF YOU JUST NEED TO SLOW DOWN.  
HAVE TIME TO THINK.  
FORCE SOME HOPE INSIDE.  
AND I'LL RELEASE YOUR PRESSURE.

*(Handing the colourful treasure to  
TECHNICIANs.)*

*(BOSON swipes away the colourful treasure.)*

### BOSON

LET MAGNET GUIDE YOU.  
LET MAGNET FLOW THROUGH.  
IT DOES NOT MATTER.  
I'VE UNEARTHED...

*(QUARK immediately takes out another  
colourful treasure from the collider.)*

SYNC UP!

### TECHNICIANs

ZIP IT!

### QUARK

TOOLS LIKE YOURS HAVE MANY APPLICATIONS UNDER DIFFERENT  
FIELDS LIKE OURS  
BUT YOU USE IT TO DEVIATE THE PARTICLES FROM THEIR  
PATHS AND EMIT LIGHT,  
THEREBY THE POTENTIAL SPEED OF BEAMS ARE CUT SHORT,  
WASTING OUR TIME  
AND SYNCHROTRON'S.  
PERHAPS, LETTING YOUR SUBORDINATES WORK AS LONG AS YOU  
DO WILL CHANGE MATTERS.  
LET THESE TECHNICIANs JOIN IN ON THE ENTIRE SYSTEM OF



**QUARK** (cont.)

BEAM LINES.

TECHNICIANS, RADIATE, SHOW US THE INVISIBLE, PHYSICAL  
WORLD.

DO SYNCHROTRON.

*(TECHNICIANS uncover abundant objects.)*

**BOSON**

RECALL ME DEFUNDING THE DESERTRON?

*(QUARK uncovers sand in the collider. She  
hurls sand at BOSON.)*

WELL, SEEMS LIKE YOU HAVE MOVED ON AND ARE UP FOR  
STATES,

GROUNDING, YOU'RE IN CHARGE.

NOW SYNC UP WITH THE SYNCHROTRON.

*(Marching off.)*

<p><b>29. HYPERCHARGE</b></p>
-------------------------------

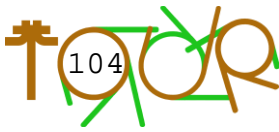
*(QUARK gather TECHNICIANS. She sends each  
TECHNICIAN into the collider.)*

*(Each TECHNICIAN run around the edge of the  
space, even beyond into the outer space or  
the audience. They may uncover various  
objects and when they do, they place them  
with QUARK.)*

**TECHNICIANS**

HYPERCHARGE!

HYPER! HYPER!



**TECHNICIANS**

HYPERCHARGE!  
HYPER! HYPER!

*(ЛЕПТОН arrives with paperwork and pens.  
She hands some papers and a pen to QUARK.)*

**ЛЕПТОН**

HOW DOES IT FEEL TO BE IN HYPERCHARGE?  
HOW DOES IT FEEL TO BE IN HYPERSPACE, ALL?!

*(ЛЕПТОН and QUARK sketch each uncovered  
object.)*

**TECHNICIANS**

HYPERCHARGED!  
HYPED UP! HYPED UP!  
HYPERCHARGED!  
HYPED UP! HYPED UP!

**ЛЕПТОН**

THIS SENSATION HAS MADE ME FEEL SO CHARGED!  
I AM TRULY NOTHING BUT HYPERACTIVE!

*(ATOM arrives.)*

*(TECHNICIANS acknowledge ATOM's presence  
when passing by ATOM.)*

*(ATOM watches as TECHNICIANS move on to  
QUARK.)*

## ATOM

STRONG INTERACTIONS ARE WHY THE ACCELERATOR RUNS.  
STRONG INTERACTIONS ARE WHY NO ATTENTION IS PAID TO...

*(Motioning towards herself.)*

*(ЛЕПТОН excitedly moves towards ATOM.)*

THERE ARE ORBITALS.  
OUT THERE FOR ME.

## ЛЕПТОН

AGREED.

*(Orbiting ATOM.)*

*(ATOM joins in a group of TECHNICIANs.)*

*(ЛЕПТОН unexcitedly returns to QUARK. She returns to sketching.)*

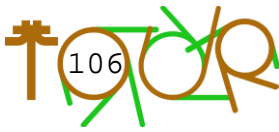
*(QUARK watches as ЛЕПТОН's quality of sketches diminishes.)*

## ЛЕПТОН

I AM NOTHING BUT WEAK INTERACTIONS.  
HOW DOES IT FEEL TO BE SO HYPERSENSITIVE?

## TECHNICIANs

UNDERCHARGED!  
PIPE DOWN. PIPE DOWN.  
UNDERCHARGED.  
HYPELESS. HYPELESS.



*(TECHNICIANS close the entry of the collider.  
They depart.)*

<b>30. ISOSPIN</b>
--------------------

*(BOSON enters. He takes the paperwork from  
QUARK and ЛЕПТОН.)*

**BOSON**

THERE IS NO WAY TO SPIN THIS.  
I NEED TO EIGENSTATE THE  
OBVIOUS LEADERSHIP HERE.  
YOU PUT HYPER IN THE CHARGE.

**QUARK**

UM...

**ЛЕПТОН**

YOU HAVE JUST SCALAR AND YOUR STANDARDS  
HASN'T A QUIRK.  
SHE'S FUNDAMENTAL TO ME AS IS TO YOU,  
BOSON.  
ATOM.

*(Intently looking at ATOM.)*

SHE SO SPINS.

*(Dispiritingly spinning off.)*

**BOSON**

ISOSPIN STRONGLY.

*(Glimpsing where ЛЕПТОН exited.)*

ISOSPIN EFFUSION REALLY.  
ISOSPIN ALL THIS.  
ISOSPIN CAN'T BELIEVE THIS.  
I HAVE PROPOSALS.

*(QUARK distances.)*

*(ATOM taps BOSON.)*

OH TAU...  
WE CAN REFUND DESERTRON.  
SUPERCONDUCTING SUPER THING.  
THERE WILL BE A SLEPTON OF CASH.  
ISOSPIN CAN'T WAIT.

*(QUARK focuses on the collider.)*

ISOSPIN CAN'T BE UP FOR DEBATE.  
ISOSPIN CANNOT.

*(Directing ATOM.)*

ISOSPIN YOUR TIME WITH THIS SQUARK.

*(Leaving.)*

*(ATOM leaves.)*

<b>31. SUBATOMIC</b>
----------------------

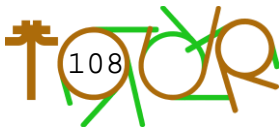
*(TECHNICIANS enter. They stand in line by  
the entry of the collider.)*

**TECHNICIAN**

WHAT IS YOUR FIRST ORDER SANDWICH? I'M GOING WITH THE  
ATOMIC.

**TECHNICIAN**

DEVIATION CALLS FOR MY ORDER TO BE WITH EXTRA PICKLES.



**TECHNICIAN**

SODIUM CHLORIDE WITH YOUR FRUITS OF LABOUR? YOU ALL  
MAKE ME SICK.

*(QUARK stands in the back of the line.)*

**TECHNICIAN**

SICKLE CELLS, IT'S QUARK! GET YOUR PHYSICS  
UP-DOWN-TOP-BOTTOM-STRANGE-CHARM HERE!

*(QUARK admirably heads to the front of the  
line.)*

*(ATOM opens the collider from the inside.)*

**ATOM**

OSCILLATIONS!  
WHAT WILL IT BE, SUBTROPICAL?

*(Presenting an empty margarita glass.)*

DO NOT THINK TOO SUBCONSCIOUSLY.

*(Swirling their finger in the glass.)*

CHOOSE A LEVEL, SUBMARINE DOWN?

*(Stowing away the glass.)*

DO NOT BE A SUBORDINATE, QUARK.

**TECHNICIAN**

SUB IN A PAIN COMPLET.

**TECHNICIAN**

SUB IN ANY BÁNH MÌ.

**TECHNICIAN**

SUB IN A БКУЧЫЙ (darnitskiy).

**TECHNICIAN**

SUB IN SOME SORT OF BREAD.

**TECHNICIANS**

SUBMIT.

**QUARK**

DON'T THINK IT MATTERS.  
I'D LIKE A SUB.  
A SUBATOMIC.

**ATOM**

SUBATOMIC AS IN THE YEAST?  
SUBATOMIC AS IN THE CHEESE?  
SUBATOMIC WITH ANY WEDGE?  
SUBATOMIC'S PICKY, SALID? QUIRK?

**TECHNICIAN**

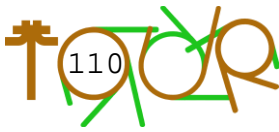
SUBTLE IN DISCORDANCE.

**TECHNICIAN**

SUBTLE MANNERISM.

**TECHNICIAN**

SUBTLE WITH THOUGHT PROCESS.



## TECHNICIANS

SUBTLY LOST HERE LIKE IN  
QUANTUM.

## QUARK

IT'S RATHER BASIC.  
I AM A SUB.  
A SUBSTITUTION...

## ATOM

CLOSING CIRCUIT EARL—  
*(Closing the entry of the collider.)*  
SORRY. ISOSPIN.

## TECHNICIAN

LOOKS LIKE WE GOT SODIUM..

## ATOM

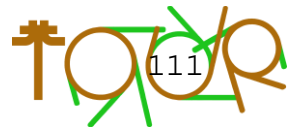
SINK TO YOUR LEVEL, SUBATOMIC!  
*(Getting down with QUARK.)*  
SINK TO MY LEVEL, SUBATOMIC!

*(TECHNICIANS get down with QUARK and ATOM.)*

## TECHNICIANS

BASIC THAN THE BASIC UNIT.  
*(Staring at ATOM.)*  
NO EXCHANGE, FOR WE'LL GET DOWN WITH YOU  
A LEVEL!





**ATOM**

SINK TO HER LEVEL, SUBATOMIC!

*(ATOM and TECHNICIANs level themselves.)*

SINK TO HER LEVEL!  
SINK TO HER LEVEL!  
SINK TO THE LEVEL!

**TECHNICIANs**

SING AT HER LEVEL!

*(ATOM adjust themselves.)*

**ATOM**

SUBATOMIC!

<b>32. MESON</b>
------------------

*[The space brightens.]*

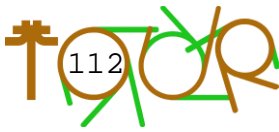
*(BOSON appears. He dismisses the light.)*

*[The space dims.]*

*(TECHNICIANs exit.)*

**BOSON**

I RESIGN. I RESIGN.  
I'VE TAKEN IT TOO LIGHTLY, BUT MESON.



*(ATOM demonstrates their disapproval.)*

**BOSON** (cont.)

ATOM.

I'LL RESIGN. I'LL RESIGN.

I'VE GOT HEAVY NEWS TO DECLARE ABOUT  
JENITHO.

**ATOM**

BOSON, WHERE IS THE LIGHT TRANSMITTED WHEN YOU ARE  
GONE?

MASONS, BOSON, WHERE ARE THE WAVES' DIRECTIONS WITH NO  
GUIDANCE?  
REASON?

**BOSON**

I CAN TRUST. I CAN TRUST.

THE MATTER THAT HAS MADE UP EVERYTHING. ATOM.  
IT IS YOU.

*(Immediately pivoting to QUARK.)*

IT IS QUARK.

YOUR FIRST DUTY AS THE NEW DIRECTOR OF THE—

**ATOM**

BOZO, THERE'S NOTHING LIGHT TO TAKE FROM THIS MASON'S  
MIND.

JENITHO, BOSON, WHY NOT PICK THE ELECTRIC DEPOSITION?  
TREASON.

**BOSON**

SHE'S SOMETHING. NOT ALRIGHT.

SHE HAS LOCKED HERSELF IN THE COLLIDER,  
SOMEHOW.

I DON'T KNOW. I DON'T KNOW.

**BOSON** (cont.)

I DON'T KNOW WHAT HAS GOTTEN INTO HER.  
OH WELL.  
SHE'S WORTHY.

*(Addressing QUARK.)*

YOU'RE WORTHY.  
MY WORTH IS BEYOND THIS ACCELERATOR.  
QUBITS.  
SAVE JENTOH. SAVE JENTOH.  
YOU TWO WILL RUN THE LAB LIKE YOU'RE MESON.  
GET YOUR TWO.

*(Leaving.)*

<b>33. PION</b>
-----------------

**QUARK**

IT SEEMS MY  
RESPONISIBILITIES HAVE PILED ON.  
AND MY RESPONSE WILL RECONCILE JENTOH.

**ATOM**

RADIOACTIVE DECAY SURELY WON'T STOP YOU?

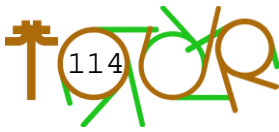
**QUARK**

YOUR TROUBLES WILL SURELY NOT BE PIONS.  
YOUR INTERACTION'S NEVER PION.

**ATOM**

HAVE YOU EXPERIENCED HIGH LEVEL COLLISIONS?

*(QUARK looks away.)*



## QUARK

LACK OF INTERACTIONS DID PILE ON.  
IT ALSO HELPED ME EXILE BOSON.  
I'M ALSO DRAWN TO THIS...  
PATTERN. FIRST ORDER, ATOM.

*(Harnessing the newfound power as she stares  
down ATOM.)*

I FORGIVE YOU.

*(Heading to the collider.)*

<b>34. DEUTERIUM</b>
----------------------

## ATOM

I AM STABLE AS ANY DEUTERIUM..  
PRIMARI— REALLY, OUR INNER PROTONS AND OUR NEUTRONS  
ARE PAIRED.  
SECONDARY.  
I AM WELL-OFF AS AN OLD DEUTERAGONIST.  
PRIMARI— REALLY, POSITIVITY, NEUTRALITY ARE PAIRED.  
SECONDARY.

*(Stably dancing.)*

QUARK MAKES UP THE WORLD.  
IT'S QUARK, MAKES UP THE WORLD.  
JUST BREATHE.

*(Taking a breath.)*

THERE ARE EIGHT PROTONS.

*(Taking a breath.)*

THERE ARE EIGHT NEU—  
I HATE.  
I AM STABLE AS ANY DEUTERIUM..  
PRIMARI— REALLY, OUR INNER PROTONS AND OUR NEUTRONS  
COMPARES.  
SECONDARY.  
I AM WELL-OFF AS AN OLD DEUTERAGONIST.  
PRIMARI— REALLY, POSITIVITY, NEUTRALITY ARE THEIRS.  
SECONDARY.

*(ATOM hopelessly walks away.)*

<b>35. ELECTRON</b>
---------------------

*(QUARK tries to listen in on the collider.)*

**QUARK**

JEPITOH.

ELECTRICITY AND CHARGE ARE NOT FLOWING THROUGH.  
SUPERVISOR, YOU HAVE BEEN QUITE NEGATIVE.

**TECHNICIANS**

ELECTRON NEUTRINO. JEPITOH!

**QUARK**

JEPITOH.

YOUR DENSITIES ARE BOUNDLESS,  
EXCHANGE REPULSION.

*(Frustratingly looks away.)*

THIS ADVISOR, AGAIN. YOU'RE BACK, SCATTERING!

*(TECHNICIANS enter. They impact one another.  
They collapse.)*

**TECHNICIANS**

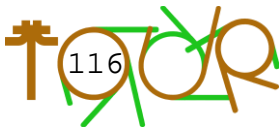
ELECTIVE NEUROTIC... LEAP ON!

*(QUARK worries.)*

**QUARK**

JEPITOH.

PLEASE EFFUSION THE BINDING ENERGY HOLDING YOUR FUSE.  
YOU'RE MY COMRADE BECAUSE WITH YOU, I'M POSITIVE.



*(ЛЕПТОН echoes from within the collider.)*

**ЛЕПТОН**

NO. NEGATIVE. NEGATE. I'M IN A BIND. NEGATIVE. ION. I  
AM NEGATIVE.

**TECHNICIANS**

ELECTRON NEUTRINO. ЛЕПТОН!

*(QUARK stands strong.)*

**QUARK**

ZERO NET ELECTRIC CHARGE.  
THAT'S HOW MUCH THERE WILL BE WHEN YOU ARE NOT AROUND  
THE COLLIDER.  
DO NOT LET YOUR CRIES BE THUNDEROUS WITHOUT THE  
STREAMS OF LIGHTNING.  
YOU HAVE FALLEN FROM THE COSMOS TO REIN IN THE  
PARTICLES.  
VALENCE!

**TECHNICIANS**

YOU IN THE GOLD FOIL  
EXPERIMENT,  
DENSITY FILLED OUR VOID.  
YOU'RE STATIC, ELECTRON,  
REIN IN THE CHARGE!

*(Prying open the collider.)*

**ЛЕПТОН**

HEART.  
REACTIVE.  
MANY HAVE A LOT TO GAIN. MOSTLY TO LOSE FROM ME.  
ATOM...  
I HAVEN'T GOT A MENTAL CONFIGURATION.

*(TECHNICIANS stand at attention.)*

### **QUARK**

NOTHING TO CONFIGURATE.  
 TAKE INTO ACCOUNT THAT YOU'LL BE OPEN TO OTHER  
 COLLISIONS.  
 ATOMIC CLOUDS YOU AND YOU FORGET LIFE'S MORE THAN  
 IONIZING.  
 AS ATOM SHOULD DO, I'LL CAPTURE YOU BEFORE YOU EVER  
 DECAY.  
 VALID!

*(Tenderly entering the collider.)*

### **ЛЕПТОН**

PASS...  
 THE VALENCE.  
 NO NEED THE VALIDATION FOR I AM DENSITY.  
 FREELY,  
 WE WILL ALWAYS BE FUNDAMENTAL MATTERS.

*(Revealing herself, outside the collider.  
 She dances across, parallel to the exterior  
 of the collider. She leaves, without  
 noticing QUARK.)*

*[A sudden flash of light fills the insides  
 of the collider. Blood may splatter within  
 the inner walls of the collider. An echoing  
 gunshot follows.]*

*(TECHNICIANS scatter away.)*

*(QUARK feels the impact. A remarkably  
 colourful attire swiftly clothes her. She  
 collapses.)*

### 36. PROTON

*(QUARK lies inside the collider. She tries to budge, but energy has left her. She soon succumbs to her injuries.)*

*[The space brightens.]*

*(BOSON slyly arrives. He curves around to the entry of the collider. He cautiously enters the collider. He examines QUARK. He looks away.)*

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

*(BOSON drags ATOM out.)*

### 37. FISSION

#### BOSON

I ENVISIONED THAT THINGS WOULD GO DOWN.  
BUT I NEVER ENVISIONED WHAT'S UP.  
I ENVISIONED HER RISE TO THE TOP.  
YOU DON'T ENVISION ROCK BOTTOM.

#### ATOM

SHE HAD NO CHARM.  
OUR CONFIGURATIONS HAVE BEEN JUST STRANGE.  
WHAT HAS STILL LINGERED ARE HER FLAVOURS.  
FORGET HER LIKE ETHER AS A FAVOUR.  
THE WORLD NOW SPINS.



*[A spotlight centers on ATOM.]*

*(ATOM grows instable. They may cry.)*

### **BOSON**

YOU MUST FISSION TO SEE THE WRITING.  
THOUGH YOU DESERVE FISSION ON THE WALL.  
YOU MUST FISSION TO KNOW SHE'S NOW LAW.  
I HAVE TO FISSION YOU, ATOM.

*[The spotlight intensifies.]*

*(BOSON seizes the control.)*

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

### **ATOM**

THERE ARE NO LAWS.  
SHE HAD SPLIT US WITH RANDOMIZATION.  
ALL THAT WAS IS PROBABILITY.  
ALL THAT IS LEFT IS INSTABILITY.

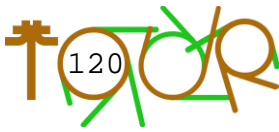
*(Trying to crawl away into the collider.)*

THE WORLD NOW SPINS  
LIKE THE SUN!

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

<b>38. PARITY</b>
-------------------

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



## **BOSON**

THEY SAW THE LIGHT.  
LASTING FISSION.  
ATOM IS SPLIT.  
CLEAN THE FALLOUT.  
ENSURE SAFETY.  
LET'S START OVER.  
WHAT ARE YOU STANDING FOR?

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

*(BOSON loses control of his body.)*

## **TECHNICIANS**

BOSON.  
WE HAVE COME TO REPEL  
YOUR LIGHT!

## **BOSON**

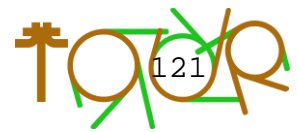
PHOTONS?!  
MAGNETIC PHOTON!  
I CANNOT BE A PARITY!

*(Lowering to his knees.)*

## **TECHNICIANS**

BOSON.  
NONE OF US WILL ATTRACT  
YOUR MIGHT!  
ATOM HAD ALWAYS PULLED US TOGETHER.  
ATOM WILL HAVE AN EVERLASTING VISION!

*(BOSON increasingly chokes.)*



## BOSON

ALL ARE  
GOING AWOL-WOL.  
MONOPOLE! IT'S A PARODY!

## TECHNICIANS

BOSON.  
CAN YOU JUST CONCENTRATE?  
YOU MIND?

## BOSON

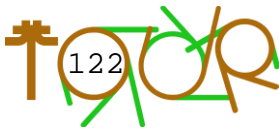
I AM MODELLED BEYOND STANDARDS, BEYOND THIS COLLIDER!  
I AM IN GAUGE AND SCALAR, COUPLED WITH LEP—  
*(Forcibly silenced.)*

<u><a href="#">39. BARYON</a></u>
-----------------------------------

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

## ЛЕПТОН

I'VE NO RESULTS IN THESE DAYS GONE.  
NO LONGER HAVE SOMEONE PREON.  
THIS IS FINAL, OUR LAST HOUR.  
BARYON...  
THROUGH THE COURSE  
OF UNIVERSITY TOUR.  
OF ACCELERATED TOUR.  
OF UNIVERSAL TOUR.  
BARYON...  
UNDERNEATH  
IS YOUR INNER GOD PARTICLE.  
SIX TERRA 'LECTRON VOLTS UNDER.  
PARTICULARLY ДЕРЬМО (der'mo).



*(BOSON mutely pleads to ЛЕПТОН to stop  
TECHNICIANS.)*

**ЛЕПТОН** (cont.)

BARYONS...

*(TECHNICIANS cock their magnets.)*

END THE LIGHT.

*(TECHNICIANS twist their magnets.)*

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

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

*(ЛЕПТОН drags 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.)*

{Option Alpha  $\alpha$ }

*(ЛЕПТОН strolls into the darkness. She goes  
missing.)*

{Option Beta  $\beta$ }

*(TECHNICIANS drop two magnets by ЛЕПТОН)*

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

*[Unnecessary, blood may splatter the inner walls of the collider.]*

*(ЛЕПТОН falls back, dead.)*

*End of Act -No Intermission-*



## 40. DECAY

*[Quantum World]*

*(QUARK is suited as a colourful particle.)*

*[The spotlight follows QUARK.]*

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

*(JEPTON is suited as a ghostly particle. She wanders out of the darkness. She spiritedly orbits QUARK.)*

*(BOSON is suited as a godly particle.)*

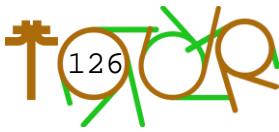
*[The space brightens.]*

*(PARTICLES carry out BOSON from the entry of the collider.)*

*(BOSON pridefully gets off of PARTICLES.)*

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

*(PARTICLES follow ATOM. They orbit ATOM.)*



## 41. SUPERSYMMETRY

*(QUARK, JEPTOH, BOSON, ATOM, and PARTICLES  
can only marvel at their supersymmetry.)*

**QUARK**

**JEPTOH**

**BOSON**

**ATOM**

SUPERSYMMETRY.

WE DREAMT TO BE WELL-ROUNDED.

WE'RE ALL A PERFECT SPHERE.

SUPERSYMMETRY.

WE DREAMT TO BE WELL-ROUNDED.

WE'RE ALL A PERFECT SPHERE.

*[Time is stasis.]*

*(ATOM looks at their shadow. They split off.)*

### **PARTICLES**

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.

NO LONGER GROUNDED. LIVE EXCITED STATES.

*(QUARK vanishes.)*

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.

OPERATORS. THE WAVE FUNCTIONS.

*(JEPTOH scatters away.)*

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.

SUPERPARTNERS. SUPERPARTNERS.



**PARTICLES** (cont.)

CONCLUDES OUR TOUR. SUPERSYMMETRY.

**BOSON**

YOU SPARTICLES.

*(Having enough and leaving.)*

*[Blackout.]*

<p><b>42. KNOT (bow)</b></p>
------------------------------

*(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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