

tHeARRY Nutter and the Fireballs of Glue

Eighth book in the trilogy

Dec. 17th, 2010

Introduction: <http://videokeman.com/queen/a-kind-of-magic-queen/>

tHeARRY:	Gian
HIGGSione:	Jeanne
hadRON WZley:	Ben
Romania:	Edmond
CY:	Emmanuel
Israel:	Ramy
SE/SI/UA:	Leif
Turkey:	Can
BR:	Agostino
India:	Rohini
Ticket Collector:	Urs
Tea Party:	James
Mars:	Nazila
LHCgrid:	Christophe
ELENerva McGonagall	Elena
DumbledoreINO:	John
FNALdemort:	Julien
AmuggLICE Muggle:	Edmond
ATmuggLAS	Leif
CMuggleS:	Johannes
MuggLHCb:	Nazila
GrapheNANIE	Nanie
GraphELLE	Michelle

Book 1: <http://www.youtube.com/watch?v=hQwtcnYK9JM>

Book 1: TN and the Physicist's Stone

[Interaction region 9 ³/₄, sign pointing to 'CERNwarts Express', much jostling with backs to audience, shouts, general commotion. tHeARRY, HIGGSione and hadRON push their way forwards.]

HIGGSione *[to tHeARRY]*: You are a new boy, aren't you? I have not seen you before at CERNwarts?

tHeARRY: Yes, it has always been my dream to work at CERNwarts Academy of Higgskraft and WZedry and learn to destroy the Dark Matter Wizards, so I want to study Beyond the Standard Magic.

hadRON WZley: The Standard Magic is good enough for me *[snuggles up to HIGGSione, who pushes him away]*. But who are all these other new students?

[Each country turns and speaks.]

Romania: Buna Ziva! I have been accepted as a candidate to join CERNwarts!

Cyprus: Kalispera! I have applied to join CERNwarts!

Israel: Shalom! I have applied to join CERNwarts!

Serbia: Dobre veche! I have applied to join CERNwarts!

Slovenia: Dobre veche! I have applied to join CERNwarts!

Turkey: I have applied to join CERNwarts!

Brazil: Boa noite! I want to be associated with CERNwarts!

Ukraine: Dobre veche! I want to be associated with CERNwarts!

India: Namaste! I want to be associated with CERNwarts!

Chorus: We all want to join CERNwarts!

Ticket Collector *[enters dressed as CERN security guard, tHeARRY, HIGGSione and hadRON leave the stage]*: Not so fast, we cannot let everybody join CERN, just like that. Are any of you Roma? *[Rejects Romania]* Sarko told me to send you away. *[To others]*: Are any of your sheep black? *[They all look down and shake their heads.]* Let me see your CERN membership accession reports. *[They all wave pieces of paper.]* It is time for my fact-finding mission to check your credentials. *[Reaches under their name-tags for their junk.]*

Chorus: Don't touch my junk!

Ticket Collector: In that case, put your 100ml of physics into these little plastic bags [*displays condoms labeled 'Vatican approved'*].

Chorus: Touch my junk! [*Holding their papers in front of their junk, Ticket Collector looks behind, smiles, and approves each of them.*]

Ticket Collector: Yes, you can! [*They board the 'CERNwarts Express'.*]

Tea Party [*swaggering, with cowboy hat and six-shooters*]: What about us?

Ticket Collector: No, you can't! There are so many Americans at CERNwarts already, and they do not pay their CERNwarts fees. Anyway, we just closed the part of the cafeteria for drinking tea.

Tea Party [*banging away*]: In that case I will try the Fermilab cafeteria! You have not heard the last of the good ol' US of A.

[*A monstrous apparition*]

Mars: What about us?

Book 2: <http://www.youtube.com/watch?v=9JbZss2esEM&feature=related>

Book 2: TN and the Unit of Secrets

[*Sign: 'Ministry of Theory: CERNwarts School of Higgscraft and WZedry', the students are met by Dumbledorino and ELENerva, who carries a whip.*]

LHCgrid: Welcome to the CERNwarts Theory Unit, where we teach the Standard Magic, Beyond the Standard Magic and Strange Theory.

hadRON: The Standard Magic is good enough for me [*snuggles up to HIGGSione again, who pushes him away again*]. I'm hungry, where are we all going to eat?

ELENerva: That's why we just opened an extension to the cafeteria [*gestures with her whip*].

tHeARRY: I have no time to eat, I want to study beyond the Standard Magic, so as to defeat the Dark Matter Wizards.

Dumbledorino: The CERNwarts administration is helping you: that is why they cut down all the trees out there [*gestures*], so that you can see the Dark Matter Wizards coming. At least, I cannot think of any other reason for cutting them down!

tHeARRY: How do we start our studies?

ELENerva: You must start with the Standard Magic before you move on to physics Beyond the Standard Magic, not to mention Strange Theory.

HIGGSione: I would prefer to study Strange Theory.

hadRON: What use is that?

HIGGSione *[suggestively]*: You can use Strange Theory to calculate the radiation from microscopic black holes....

hadRON *[looks down]*: My black hole isn't microscopic! Anyway, I am only interested in QCD.

HIGGSione: ... you can also use Strange Theory to calculate lots of loops in QCD perturbation theory.

hadRON: You've got a deal, lets loop the loop together.

Book 3: http://www.youtube.com/watch?v=jhTU7_mipB0

Book 3: TN and the Unconfined Prisoners of QCD

[Students are throwing paper airplanes at each other.]

LHCGrid: Order in class!

Dumbledorino: You must first study QCD jets in the Standard Magic, before you can go on to study physics Beyond the Standard Magic.

tHeARRY *[examining paper airplanes]*: These jets look very Standard Magical to me. Is there nothing Beyond the Standard Magical about them?

hadRON: Maybe we will see something Beyond the Standard Magic if we collide heavy ions?

tHeARRY: This event looks like physics Beyond the Standard Magic. See? There is a jet over here, but not over there. It looks like energy is missing. Maybe it is evidence for Dark Matter Wizards?

hadRON: I do not think so: it looks as if the other jet just got quenched.

HIGGSione: You can calculate the quenching using AdS/CFT correspondence from my Strange Theory.

hadRON: This means that we have made the quark-gluon plasma

All: Again!

hadRON: ... and the quarks and gluons are no longer confined as the prisoners of QCD.

tHeARRY: Finally we can escape to the next book.

Book
<http://www.youtube.com/watch?v=VFjyvDOnPdw&feature=related>

4:

Book 4: TN and the Goblet of Higgs

Dumbledore: You see this? This is a picture of the Goblet of Higgs. Your next task is to prevent the Dark Matter Wizard **FNALdemort** from stealing the Higgs boson from CERNwarts. If **FNALdemort** discovers it first, CERNwarts is doomed to become a synchrotron radiation laboratory or maybe a free-electron laser.

tHeARRY: How do I stop **FNALdemort**?

Dumbledore: You must recover all the Higgscruces, which give immortality to the discoverer of the Higgs boson.

HIGGSione: What do they look like?

tHeARRY: I guess that we will recognize a Higgscruce when we see one. Let's look through all the old data to see whether they tell us anything.

hadRON: Half of these hadronic jets seem to be missing: anyway, I do not see anything.

tHeARRY: You would not expect to find a Higgs boson in heavy-ion collisions. Let us look at electroweak data.

HIGGSione: These data look perfectly OK to me, no signs of any divergences.

tHeARRY: Exactly, that means there must be a Higgs boson so that the electroweak data give sensible results. Yes, look, this is the first Higgscruce: it must weigh less than 180 GeV. [*Attaches it.*]

hadRON: The next Higgscruce may be hidden in the old LEP data.

HIGGSione: I do not see it there, and I looked quite hard, all the way up to 114 GeV.

tHeARRY: Aha! That is the next Higgscruce: it must weigh between 114 and 180 GeV. [*Attaches it.*]

hadRON: So where is the next Higgscruce?

tHeARRY: It must be in **FNALdemort**'s lair, the dreaded TeVatron Collider.

HIGGSione: If **FNALdemort** finds it first, CERNwarts is doomed!

FNALdemort: Aha! I have the Higgs boson and CERNwarts in my power: you are all doomed! You see, here it is What happened? There is no Higgs between 158 GeV and 175 GeV.

tHeARRY: That is the last Higgscruce! [*Attaches it.*] See, there is hope still for CERNwarts. Now we know the Higgs must weigh between 114 GeV and 158 GeV. If we can only increase the integrated LHC luminosity by an order of magnitude!

Book 5: <http://www.youtube.com/watch?v=V8fjMXjGxug&feature=related>

Book 5: TN and the Order of Magnitude

tHeARRY: I have just got an owlmail from Wikileaks, saying that **FNALdemort** plans to continue looking for the Higgs boson for another three years.

HIGGSione: They will discover the Higgs! CERNwarts is doomed!

Dumbledoreino: No! The LHC experimental muggles must go back underground and take data for another year, to get an order of magnitude more data. We will run the LHC in 2012 as well. Two more years and an order of magnitude more data should be enough to find the Higgs. Send the LHC experimental muggles back underground!

[ELENERva cracks whip. Muggles cower, are driven back underground.]

All: January, February, March, April, May, June, July, August, September, October, November, December.

[Muggles try to escape. ELENERva pushes them back.]

All: January, February, March, April, May, June, July, August, September, October, November, December.

Dumbledoreino: OK, now they have been in their underground caverns even longer than the Chilean miners. Bring them up and we will see what they have.

[ELENERva pulls the experimental muggles to the surface in Chilean-style escape capsule, wearing sunglasses.]

Dumbledoreino: So, tell us what you have found.

muggLHCb: Just a load of B-S.

AmuggLICE: The quark-gluon plasma.

All [groaning]: Again!

ATmuggLAS: No sign of the Higgs boson.

CMuggleS: No sign of the Higgs boson, either.

HIGGSione: There is no Higgs: CERNwarts is doomed!

tHeARRY: Not so fast, if there is no Higgscrux, **FNALdemort** cannot doom CERNwarts by stealing it from us. Actually, a Higgscruxless model is far more interesting than finding a boring old Higgs boson.

hadRON: Maybe, but how can we finally defeat the Dark Matter Wizards?

Dumbledore: We must find the Dark Matter itself. Only in that way can we be sure that the Dark Matter Wizards will not doom CERNwarts.

Book 6: <http://www.youtube.com/watch?v=5mOxK6-kC0I&feature=related>

Book 6: TN and the Half-Energy Accelerator

hadRON: But how can we find the Dark Matter? We will not be able to see it?

HIGGSione: CERNwarts is doomed!

tHeARRY: We must double the energy of the half-energy accelerator.

[Everybody works hard to increase the LHC energy, dial shows 7 ... 8 ... 9 ... 10 ... 11 ... 12 ... 13 ... 13 ½ ... 14 TeV.]

Dumbledore: OK, all you experimental muggles, what have you found? Is CERNwarts saved?

ALICE muggle: The quark-gluon plasma viscosity has gone up again, just as expected from perturbative QCD.

All: No new physics, CERNwarts is doomed!

LHCb muggle: The Bs to mu mu branching ratio is the same as predicted by the Standard Magic.

All: No new physics, CERNwarts is doomed!

ATLAS muggle: Now we have found the Higgs boson with exactly the properties predicted by the Standard Magic.

All: No new physics, CERNwarts is doomed!

CMuggleS: We have not found any excess of missing-energy events. There is no evidence for Physics beyond the Standard Magic.

All: No new physics, CERNwarts is doomed!

Book 7: http://www.youtube.com/watch?v=anwh1z-3_5c&feature=related

Book 7: TN and the Quarkly Hallows

French cast members: Ah, non! We have been acting in Theory Xmas plays for 33 years! La retraite à 33 ans! We are retiring! Not another scene! No parties have ever had so many scenes. Nous sommes en greve! We are on strike!

Italian cast members: We too! Facciamo lo sciopero! We have already acted in 3 + 3 scenes! We demand a permanent job! We are climbing on the roof.

Dumbledore: There is only one way to save CERNwarts. We must beat FNALdemort in a match of NobelPrize-itch.

CMuggleS: See, I win with my near-side ridge!

ATLAS muggle: No, see, I win because I quench your jet entirely!

ALICE Muggle: Oh no you don't, I win with my elliptic flow! My fluid is almost perfect, look no viscosity!

tHeARRY: No, I win, because I predicted that physics would become completely classical.

Dumbledore: None of your results are good enough to win the Nobel Prize. The Dark Matter Wizards have won. CERNwarts is doomed!

GrapheNANIE: Excusez-nous!

GraphELLE: We were just sharpening our pencils

GrapheNANIE: ... and we picked the graphite up with sticky tape

GraphELLE: ... and we found relativistic fermionic excitations

GrapheNANIE: ... that will revolutionize the electronics industry!

Dumbledore: I declare you the winners of the NobelPrize-itch! CERNwarts is saved.

Another Kind Of Magic

Music: <http://videokeman.com/queen/a-kind-of-magic-queen/>

It's a kind of magic
It's a kind of magic
A kind of magic
One field one Higgs, one prize
One goal, one boson field that mass could be
It's a kind of magic

Two shafts of light that show the way
No Hcal peak can win this day
It's a kind of magic
The Higgs that weighs upon our mind
Has been teasing us all this time
It's a kind of magic
The waiting seems eternity
The day will dawn at LHC

[Passage of sign 'The End' followed by cast taking their bows.]

Is this a kind of magic?
It's a kind of magic
There can be only one
This search that lasts a thousand years
Will soon be done
This field that burns inside of me
I'm hearing secret harmonies
It's a kind of magic
The Higgs that weighs upon our mind
Has been teasing us all this time
It's a kind of magic
It's a kind of magic
This search that lasts a thousand years
Will soon be, will soon be, will soon be done
This is a kind of magic
There can be only one
This search that lasts a thousand years
Will soon be done
Magic – it's a kind of magic
It's a kind of magic
Magic, magic, magic, magic
It's magic
It's a kind of magic