Oh, Baryons  
(Oh Christmas Tree)

Steve Gubser

1.  
Oh baryons, we're glad you're here.  
Where would we be without you?  
But why are you so numerous?  
There's something strange about you.

A billionth of the thermal bath  
Would make you in the aftermath.

Oh baryons, oh baryons,  
Where would we be without you?

2.  
Did you appear from sphalerons?  
Or maybe from X-bosons?  
Oh baryons, you're dear to me,  
But why you're here I can't see.

I've calculated day and night,  
But cannot get the answer right.

Oh baryons, oh baryons,  
Where would we be without you?

3.  
Are you a tiny residue  
Of processes leptonic?  
Without you here my health would fail  
I'd need more than a tonic.

We trust in Sakharov and 't Hooft  
But maybe after them we goofed!

And baryons, might I inquire  
Will you in time expire?
GOD REST YE WEARY PHYSICISTS
Sarah Vaughan

1. God rest ye weary physicists
   Who toil with chalk to try
Connecting quarks to quantum fuzz
   To theories unify
Inflationary paradigms still leave them in the dark!

CHORUS
Oh, vibrating strings and cosmic joy, cosmic joy,
Oh, vibrating strings and cosmic joy!

2. In angels and the NSF
   They struggle to believe.
From protons both must be construed,
   But angels strive to please!
Symmetry and elegance not bureaucratic truths!

CHORUS...

3. They worry what would Albert say
   Of heterotic string,
They've got no proof, just gluon soup,
   And prayers that LIGO sings!
Ekpyrotic processes that postulate the past...

CHORUS....
The Coloured Universe.

A la Rimbaud’s *Vowels*
Jean-Pierre Hebert

- A black, E white, I red, U green, O blue.
- Standing on Rimbaud's shoulders
- I saw the color of vowels.
  
- Then squinting closer I found that
- 0-branes are small, 1 are long,
- 2 wide, 3 thick, 4 curved, 5-9 curled,
  
- And that D-branes are ultramarine,
- M are magenta, P purple,
- F, D and other strings yellow,
- Not cyan-green,
Theories Three

To be sung to the tune of We Three Kings of Orient are

The Hohenbergs

Theories three we carry afar
Space and Time both curving are
Big the Bang and loud the Clang
And Super the Nova Star!

Oh-mega was the density
Virtual was the gravity
Balance the universe? Lambda was the curse!
‘Till we called it Dark Energy!

Now it seems that Einstein was right.
Lambda should not have been his plight.
Dark the matter that particles scatter.
Understand it we might.

Oh-mega was the density
Virtual was the gravity
Balance the universe? Lambda was the curse!
‘Till we called it Dark Energy!
O Du Froehliche
Harald Pleiner

O how joyfully, O how blessedly, comes the glory of KITP
1) to a world of ignorance
   comes the shine of brilliance
praise it, praise it, physicists everywhere!

O how joyfully, O how blessedly, comes the glory of KITP
2) from the palm tree's pleasant shade
   on the ocean beach we wade
praise it, praise it, physicists everywhere!

O how joyfully, O how blessedly, comes the glory of KITP
3) theories don't last forever
   this Institute may vanish never
praise it, praise it, physicists everywhere!
THE MONTHS BEFORE CONSTRUCTION

Sue Alemdar, Julia Niessen and Maggie Rojas-Hersh

‘TWAS THE MID OF JULY 2000 AND 3
WHEN ALL THROUGH THE BUILDING OF KITP
THE PLANS HAD BEEN DRAWN (OR SO WE’D BEEN TOLD)
BUT THE LAND WAS STILL HARD AND MACHINERY COLD…

THE PHYSICISTS WERE NESTLED ALL SNUG IN THEIR ROOMS
WITH NARY A VISION OF UPCOMING DOOMS
DEBORAH IN HER OFFICE, DAVID’S IN HIS, TOO
CONSTRUCTION’S NO PROBLEM – THEY KNOW WHAT TO DO.

WHEN WHO TO OUR WONDERING EYES SHOULD APPEAR
BUT RAY IN HIS HARD HAT, WITH A BELT FULL OF GEAR
WITH HARRY BEHIND HIM, PLANS ROLLED UP SO TIGHT
THEY BOTH LOOKED OFFICIAL, BUT NO WORKERS WERE IN SIGHT!

WITH A HAMMER IN ONE HAND, AND WRENCH IN THE OTHER
WE WATCHED WITH AMAZEMENT – WHAT WOULD HE UNCOVER?
MORE RAPID THAN EAGLES HIS ENERGY CAME
AS HE TURNED TO ASSURE THEM, HE CALLED OUT SOME NAMES-

NOW GROSS, NOW HONE, NOW STORM AND NOW ZEE
ON BILDSTEN, ON FISHER AND JOE POLCHINSKI!
GO BACK TO YOUR OFFICES, BACK DOWN THE HALL
THE BEAM MAY BE SHORT, BUT IT SURELY WON’T FALL!

SO BACK TO THEIR OFFICES ALL OF THEM FLEW
KNOWING FULL WELL (THEY THOUGHT) WHAT OLD RAY WOULD DO!
HE HAS TRICKS UP HIS SLEEVE TO RESOLVE ANY MESS-
HOW HE PULLS IT TOGETHER IS ANYONE’S GUESS!

THEN OUT ON THE PATIO THERE AROSE SUCH A CLATTER
WE RAN FROM OUR SPACES TO SEE WHAT WAS THE MATTER
AWAY TO THE COMMONS ROOM WE FLEW IN A FLASH
TO WATCH COLUMNS FALL AND BE AWAY FROM THE CRASH!

THE SUN IN THE SKY PROVIDES WARM SB WEATHER
WHEN SHONE ON CONSTRUCTION PROVED ALL WAS “TOGETHER”
AT LEAST THAT’S WHAT SHE THOUGHT, OR SO DEBORAH SAID
BUT THE DAYS AND THE WEEKS CLIMBED SO SLOWLY AHEAD.
SHE SPEAKS NOT A WORD, BUT GOES STRAIGHT TO HER WORK
DEBORAH KEEPS THEM ON TASK, WITH NARY A SHIRK
ON EACH FRIDAY MORNING SHE’LL DASH OUT AT NINE
TO MEET WITH THE BIG WIGS, MAKING SURE ALL IS FINE.

WE’VE NOW PEERED OUT WINDOWS FOR SIX MONTHS OR SO
WATCHING AND WAITING FOR A BUILDING TO GROW
THERE’S SOME VISIBLE CHANGES, BUT SOME WEEKS THERE’S NOT
BY 6 MONTHS FROM NOW, WHAT WILL GROWN IN THIS SPOT?

WITH INJURIES FEW AND NO STEEL BEAMS TO CARRY
OUR FRIENDS HAVE BEEN HEALTHY (EXCEPT DEAR OLD HARRY)
WHO CHOSE THE WRONG HOLE IN WHICH HE SHOULD JUMP
A BACK OPERATION? NO, JUST A SMALL BUMP.

PROGRAMS AND CONFERENCES AGAIN WE’LL ENJOY
A PATIO COVER WE SOON WILL EMPLOY
TO VISIT WITH DAVID A PASSPORT YOU’LL NEED
HE’LL BE SO FAR AWAY, THIS ADVICE YOU SHOULD HEED!

6 MORE MONTHS IS THE “DEADLINE”, OR SO WE WERE TOLD
IF IT’S NOT DONE BY THEN MORE MONEY WE’LL HOLD
UNDUE COMPLICATIONS ARE A THING OF THE PAST
THE BUILDING WILL RISE! THE FOUNDATION WILL LAST!

DAVID SPRANG IN HIS LEXUS AND GAVE US A WHISTLE
AND AWAY HE FLEW LIKE THE DOWN OF A THISTLE
BUT WE HEARD HIM EXCLAIM AS HE DROVE OUT OF SIGHT –
“HAPPY END OF THE YEAR TO ALL – THAT’S POLITICALLY RIGHT!”
Kris Kringle's Last Minute Model Tinkering
------------------------------------------
(Melody: Rudolf the Red-Nosed Reindeer)

Marcus Berg

Kris had some gift frustration
Christmas study's one big mess
"They say they want inflation,
    all I've got is AdS."

Three of the local reindeer
Said "we've got a bright idea:
Throw in a D-bar somewhere,
    Lift the vacuum energy!"

Kris was happy but confused:
    "Stable, ho-ho-ho?"
"Sure it is," the reindeer mused,
    "Non-per-tur-ba-tive-ly so!"

Elves sang, the sleigh-bells jingled
    Reindeer setting steady pace
When noone looked, Kris Kringle
packed the A-word just in case.
Those were the days
Sung to the tune of the theme song to All in the Family

Tom Banks

Boy the way Ed Witten played
Strings that made the hit parade
All the D branes swung and swayed
Those Were The Days

And You Knew Who You Were Then
g Was Small and D Was 10
Mister We could use a Riemann surface expansion again

Didn't need de Sitter's space
SUSY breakers knew their place
Maldacena danced with grace
Those Were the Days

Everything was BPS
Didn't have this Anthropic mess
Sadly we must all confess
Those Were The Days
The time has come KITP says, to talks of many things
And look at all the many answers “String Theory” brings

But we’ll ask it to help -----if it could
With some simple facts about Hollywood

If String theory can explain every myth
Just how elegant is Anna Nicole-Smith

When police photographed Michael Jackson and said smile please
Did they finally take a mug shot that was worse than Nick Nolte’s

Can string theory with all its feats
Explain how there can be two Amanda Peets

One knows physics and is smart as a whip
The other’s many bad movies make you flip

Strings can make new universes on a brane
So can there be another world with Michael Jackson -AGAIN

And does anyone here really care about JLO and Ben
Can you stuff em in a black hole-so we won’t hear from them again

Gee sometimes I wish I were smart and keen,
Just a little bit like Brian Greene

We wish he finds that magical ball of String
That will neatly tie up the “theory of everything”

But as the gossip from Hollywood gets worse and worse
We have less and less time for the ELEGANT UNIVERSE
OH NEURAL CELL
(to the tune of 'Oh Tannenbaum')
Leonard Sander

Oh neural cell, oh neural cell,
How lovely are thy branches.
Oh neural cell, oh neural cell,
How lovely are thy branches.
We know you fire
In the brain,
But why you do
We can’t explain.
Oh neural cell, oh neural cell,
How lovely are thy branches.

Oh calcium, oh calcium,
Your reticulum’s endo-plastic.
Oh calcium, oh calcium,
Your reticulum’s endo-plastic.
We model every
Wave you make
What’s going on
For heaven’s sake?
Oh calcium, oh calcium,
Your reticulum’s endo-plastic.

Contagious germ, contagious germ,
We like to track your progress.
Contagious germ, contagious germ,
We like to track your progress.
An epidemic’s
Not so bad
If we can follow
Where it spread.
Contagious germ, contagious germ,
We like to track your progress.
Oh NIH, Oh NIH,
Your grants are so much bigger.
Oh NIH, Oh NIH,
Your grants are so much bigger.
For that is why
We do this stuff
Cause NSF
Won’t pay enough.
Oh NIH, Oh NIH,
Your grants are so much bigger.
You Can’t Get a String with a Gun
(You can’t get a man with a gun)
Anon.

He’s quick on the trigger
With theories you can figure,
At QCD he is number one,
But those strings keep slip-sliddin’
No experiment’s decidin’.
No, you can’t get a string with a gun.

There’s Joe’s branes providin’
And Brian’s branes collidin’
In dimensions of 10 plus 1.
It’s been along time since Newton
But those super stars keep shootin’
Though you can’t get a string with a gun.

With a gun
With a gun
You can’t get a string with a gun.

David’s in the saddle.
He’ll fight this stringy battle
And ride off in the settin’ sun.
But make no bones about it,
It takes no brains to shout it

You can do in a man with an anthropic plan,
But you can’t prove a string with a gun!
Away in CA
(Away in the Manager)
Eberhard Bodenschatz

Away in CA, no students to probe,
The physicists come from all over the globe.
They listen and talk at the K I T P
about Patterns in Physics and Biology.

The talks are exciting, the discussions are wild.
The food is good and the climate is mild.
We talk about patterns in cells, heart, and mind.
And the staff at the KITP is so kind.

Watching dolphins while thinking about waves in the brain,
makes physics so joyous and exciting again.
Bless NSF, NIH and Nancy's-Fund
for giving us so much excitement and fun.
Beatles Physics Medley

By the KITP Graduate Fellows and Affiliates
Jennie Chen, Nick Halmagyi, Mark Jackson, Nick Jones,
Jeff Murugan, Hiranya Peiris, Amanda Weltman
KITP Holiday Party 2003

Hey Joe

Hey Joe, your book is great
You took a good thing and made it clearer
There's an error on page one-hundred and ten
That Lubos forgot to make it better

Hey Joe, you found D-branes
Even that smart guy couldn't beat you to it
But there's still that error on page one-hundred and ten
That Lubos missed to make it better

Let It Be String Theory

When I find myself in times of trouble
Mother Theory comes to me
Speaking words of wisdom,
Let it be, string theory.

And when the broken hearted people
Living in the world agree,
There'll be ten dimensions,
Let it be, string theory.
Ob-la-D Ob-la-Dbar

Sen had a conjecture ‘bout a tachyon
Barton was a guy at MIT
Ashok said to Barton branes annihilate
And Barton said this as he broke out into song:
Ob-la-D Ob-la-Dbar life goes on bra
Lala how the life goes on
Ob-la-D Ob-la-Dbar life goes on bra
Lala ‘bet they form a soliton

Just as we were happy with this circumstance
Stephon Alexander came along
Stephon made the branes collide and said “Hey Man!”
You know I think I’ve gone and found the inflaton
Ob-la-D Ob-la-Dbar life goes on bra
Lala how the life goes on
Obla-D Obla-Dbar life goes on bra
Finally a useful tachyon!

Lucy in the Sky with Causal Diamonds

Picture yourself, confused in a seminar,
With prof at the board, explains it he tries,
somebody calls you, you answer quite slowly,
and open your sleepy little eyes,
Stranger ideas than you ever have seen,
towering over your head,
look for the girl with the answer to all
and she's gone.

Lucy in the sky with causal diamonds ...
Imagine

Imagine all the D-branes,
It's easy if you know how,
A stack of them we live on,
On some Calabi-Yau,
Imagine all the people,
Made of open strings...

ooohhh-oooo-ooohooohooooohoh

You may say I'm a dreamer
But I just read the damn archives
I hope some day you'll fund us
And gravity will be quantized

**Back in the KKLT**

Flew in to the Stanford U SLAC
and then to Mumbai last night
On the way the LANL print was on my knee
Finally I saw the light
I'm back in the KKLT
Didn't have inflation from strings, boy
Til the KKLT

Anti D3's solving problems of all sorts
Start with IIB fine so far
Turn on certain fluxes like the Neveu-Schwarz
and maybe even some RR
I'm back in the KKLT
Didn't have inflation from strings, boy
Not til the KK, not til the KK, not til the KKLT

Well the anthropiles really knock me out
They leave the rest behind
And Andrei likes to yell and shout
He's always, always, always, always, always, always, always right
Didn't have inflation from strings, boy
Til the KKLT
All you Need is Ed

There's nothing you can do he hasn't done
Nothing you think he hasn't thunk
Nothing you can say but you can learn how to play the game
Not easy...

There's nothing you can know he doesn't know
Nothing you can show he hasn't shown
No equation you can use that isn’t already named ‘Witten’,
Not easy...

All you need is Ed, All you need is Ed
All you need is Ed, Ed, Ed is all you need