

Re: coordinates and equations.

Re: coordinates and equations.

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2008-12/msg00016.html>

- *From:* rbwinn <rbwinn3@xxxxxxxx>
 - *Date:* Sun, 30 Nov 2008 18:58:26 -0800 (PST)
-

On Nov 30, 7:33pm, PD <TheDraperFam...@xxxxxxxx> wrote:

On Nov 30, 7:12pm, rbwinn <rbwi...@xxxxxxxx> wrote:

On Nov 30, 2:45 pm, PD <TheDraperFam...@xxxxxxxx> wrote:

On Nov 29, 9:00 am, rbwinn <rbwi...@xxxxxxxx> wrote:

On Nov 28, 6:52 pm, PD
<TheDraperFam...@xxxxxxxx> wrote:

On Nov 28, 2:46 pm,
rbwinn
<rbwi...@xxxxxxxx> wrote:

On Nov 28,
12:55 pm,
PD
<TheDraperFam...@xxxxxxxx>
wrote:

On
Nov
28,

Re: coordinates and equations.

1:32
pm,
rbwinn
<rbwi...@xxxxxxxx>
wrote:

On
Nov
28,
9:20
am,
PD
<TheDraperFam...@xxxxxxxx>
wrote:

On
Nov
28,
9:21
am,
rbwinn
<rbwi...@xxxxxxxx>
wrote:

This
is
a
simple
way
to
think
of
coordinates
for
some
of
our
scientific
friends.
See,
there
is
an
x
axis

Re: coordinates and equations.

and
a
y
axis
and
a
z
axis.
So
if
we
have
an
equation
that
says

$$\begin{aligned} &x^2 \\ &+ \\ &y^2 \\ &+ \\ &z^2 \\ &- \\ &c^2t^2 \\ &= \\ &0 \end{aligned}$$

where
x,
y,
and
z
are
coordinates,
and
t
is
time
on
a
clock
in
S,
the
frame
of
reference,

Re: coordinates and equations.

and
c
is
the
speed
of
light,
then
if
you
substitute
numerical
values
into
the
equation,
what
you
end
up
with
is
a
sphere
with
a
radius
of
ct
with
its
center
at
the
origin
of
S.

Now
we
will
do
the
same
thing
with
another
set
of

Re: coordinates and equations.

Re: coordinates and equations.

coordinates
S'.

$$\begin{aligned} & (x')^2 \\ & + \\ & (y')^2 \\ & + \\ & (z')^2 \\ & - \\ & c^2(n')^2 \\ & = \\ & 0 \end{aligned}$$

where
n'
is
the
time
on
a
clock
in
S'.

That's
interesting,
Bobby,
but
if
you
use
t
as
a
variable
to
denote
what
a
clock
reads,
then
a
more
sensible

Re: coordinates and equations.

Re: coordinates and equations.

notation
is
t
for
the
time
read
on
a
clock
stationary
in
S,
and
t'
for
the
time
read
on
a
clock
stationary
in
S'.
If
you
prefer
to
use
n'
for
the
clock
reading
in
S',
I
suppose
that's
your
prerogative.
Would
you
care
to
use
f'
for
the
clock

Re: coordinates and equations.

Re: coordinates and equations.

reading
in
 S'' ,
and
 u'''
for
the
clock
reading
in
 S''' ?

Well,
you
are
getting
a
little
ahead
of
the
conversation,
PD.
Why
don't
we
just
let
individual
people
decide
what
variables
they
will
use,
since
I
am
the
only
person
who
uses
these
variables
anyway?

Re: coordinates and equations.

Re: coordinates and equations.

As
I
said,
Bobby,
it's
your
prerogative.
I
was
just
curious
what
you
were
intending
to
use
for
the
time
variable
as
measured
in
S",
S''',
S''''',
and
so
on.

Scientists
have
told
us
that
according
to
scientific
experiments,
light
is
traveling
at
 $c=300,000$
km/sec
according
to
a

Re: coordinates and equations.

clock
in
S'.
So
what
we
end
up
with
here
is
a
sphere
with
a
radius
of
 $c(n')$
with
its
center
at
the
origin
of
S'.
I
hope
this
will
help
some
of
our
scientific
friends
to
understand
how
light
propagates.
I
know
it
is
confusing
to
them
because
there
is

Re: coordinates and equations.

Re: coordinates and equations.

no
length
contraction
in
these
equations.

Certainly
there
is.
What
do
you
think
the
relationship
between
x
and
x'
is?

$$x' = x - vt$$

Did
you
think
that
length
contraction
would
mean
light
wouldn't
propagate
in
a
sphere
with
radius
c
x
time?

Re: coordinates and equations.

Re: coordinates and equations.

Maybe
it
would
help
to
learn
what
it
is
that
relativity
actually
says,
Bobby.–
Hide
quoted
text
–

Well,
according
to
Dr.
Albert
Einstein,
the
light
would
propagate
in
S'
as
an
oblate
spheroid
as
seen
from
S
because
of
the
length
contraction.

I'd
be

Re: coordinates and equations.

Re: coordinates and equations.

curious
where
you
think
he
says
that.
Einstein
I
believe
made
a
point
of
saying
that
light
travels
isotropically
at
c,
regardless
of
the
motion
of
the
source,
and
regardless
of
reference
frame,
which
would
seem
to
fly
counter
to
the
notion
that
light
would
propagate
in
an
oblate
spheroid.

Re: coordinates and equations.

Perhaps
it
would
help
if
you
had
just
an
eency
bit
better
grip
on
what
Dr.
Albert
Einstein
said.

Are
you
saying
that
Dr.
Albert
Einstein
was
wrong?
Robert
B.
Winn—
Hide
quoted
text
—

—
Show
quoted
text
—
Hide
quoted
text

Re: coordinates and equations.

Re: coordinates and equations.

–

–
Show
quoted
text

--
Hide
quoted
text

–

–
Show
quoted
text

–

Well, Dr.
Einstein
said that
light would
propagate
as an oblate
spheroid in
the moving
frame of
reference as
seen from
the frame of
reference at
rest.

I already asked you, Bobby,
where you think he says
that.

He said it in his book, Relativity, the Special
and General Theories.
Robert B. Winn

Re: coordinates and equations.

I don't believe that, Bobby, and I can't locate such a statement anywhere in my copy.

Would you care to check again? Or is checking facts not really necessary for you?

PD– Hide quoted text –

– Show quoted text –

Not necessary. Go ahead and believe whatever you want to believe.
Robert B. Winn

It's not really necessary for you to check facts?
I suppose this doesn't really surprise me, Bobby. It's apparent you just choose what you want to believe.
But Bobby, you see, in science it's not a matter of just choosing what you want to believe. Science moves beyond opinion and relies on evidence with some measure of objectivity. This may not interest you.

PD– Hide quoted text –

– Show quoted text –

So what does what Einstein said have to do with that? If something is true, it is true whether Einstein said it or not. Are you trying to say that whatever Einstein said is scientific scripture?
I don't really care what Einstein said in his book. His book was obviously wrong because he said there was a length contraction.
Robert B. Winn

.