

THE ELECTRIC CHARGES

explained to children and feeble-minded grown-ups like himself
by A. J. BAROSSO with the help of the following Disney characters:

LUDWIG VAN DRAKE professor emeritus on every known - and
unknown - subject.

DONALD DUCK choleric citizen of DUCKBURG - U.S.A.

DEWEY, HUEY, LOUIE his nephews and bright and exalted members
of the Duckburg's Junior Woodchucks TROOP.

Ludwig Van Drake and Donald Duck walk into the living room
of Donald's house where Dewey, Huey and Louie are doing their
homework sitting at the Table

Hi, boys!

D, H, L - Ludwig, you came, at last! We are deep in trouble
with the darned electric charges and unco Donald
Knows nothing about them!

Donald - Shuddup, you pestering kids! A guy cannot
know everything!

D, H, L - Yea! We know you don't!

Lud - Be quiet, young fellows and I will proceed to
expound the very humble topic you beseeched me
to elucidate. We will commence our exhaustive
exposition by defining the electron which contains

the unit

^{smallest}

The ~~unit~~ electric charge and precisely a negative charge.

D, H, L -

What's a negative charge, Ludwig?

Don.

~~Second~~ That I know! A negative charge is just the contrary of a positive one!

Lud.

~~Your statement is absolutely accurate, Donald,~~

D, H, L -

So explain us what's a positive charge ...

~~Don - now press~~ Well, a positive charge is just the contrary of a

Alright, wise-guys! I will never speak up again!

~~SNORT! this onlookers~~

Lud.

I deem it is preferable to start from the beginning.

~~Don believes him to be~~ From THE beginning when the earth was void and...

D, H, L -

Very funny, unca Donald! But now will you go out and fly a kite, PLEASE?

Lud.

The electric charge is the quantity of electricity contained in or on a body - The charge may be positive or negative - When the positive and negative charges are equal the body is neutral or not electrified.

The positive charge indicates the excess of positive electricity in the body and the positive electricity is the electricity predominating in a piece of glass which has been rubbed with wool or silk.

The negative charge indicates the excess of negative electricity in the body and the negative electricity is the electricity predominating in a piece of resin which has been electrified by rubbing it with wool.

The names positive and negative come from

~~at observing the~~ The analogy with the attitude of the poles of a natural magnet - corresponding poles repel each other showing a negative attitude and opposite poles attract each other showing a positive attitude - in the following experiments

A thin bar of resin rubbed with wool is placed on a vertical insulated pin that allows it to turn freely -

Another thin bar of resin is rubbed with wool and then it is brought near one of the ends of the first bar : the end turns away ; its action is negative -

On the contrary if a thin bar of glass rubbed with wool or silk is approached to the same end of the turning bar of resin, the end is attracted by the glass ; the action is positive -

The smallest positive charge of electricity is held by the positron or positive electron, discovered by Anderson in 1932, and has the same value of the smallest negative charge held by the negatron or electron -

The value of the smallest negative charge - 1.602×10^{-19} coulombs - was ascertained by Millikan in his 1909 experiment.

Don -

Wow ! How interesting ! What's a cool home ? A cold house ? And who were these Anderson and Millikan guys ? And ...

Lud.

Pipe down, Donald. Here is a nice coil of string so you can fly your kite higher !

D. H. L

Thank you very much, Ludwig ! Everything is perfectly clear ! Tomorrow we will ask you what a quatuordecillion is, it's all right, isn't it ?

Ludwig runs out of the living room after a morose Donald..

Ludwig - Wait for me, Donald ! I will help you with your kite now and tomorrow !

And that's all, folks !