What is quark?

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Abstract

Two energies, which are measured in opposite directions, and we consider them as quarks are actually two different kinetic energy of a single proton, the first in the direction of its movement, and the second in the opposite direction.
Quarks are actually locked (confinement) in proton, as is clear from the individual tables.

Introduction

u and d quarks in the QCD theory really mass much smaller than 1/3 the mass of a proton.

mass of a proton

$1.672621777(74)\times10^{-27}$ kg[1]

938.272046(21) MeV/c^2 [1]

Up quark: 2.3 MeV/c^2

Down quark: 4.8 MeV/c^2

c quark: 1275 MeV/c^2

s quark: 95 MeV/c^2

b quark: 4180 MeV/c^2

t quark: 173070 MeV/c^2

Why are discovered by quarks in pairs?

u,d

c,s

t,b

We show that each particle is accompanied by his twin.

A pair of quarks of one generation = one speed of proton

Introduction

The other side of asymptotic freedom - confinement. Since the strength of the interaction between color charges does not decrease with distance, it is assumed that the quarks and gluons can never be released from a hadron. This aspect of the theory of lattice QCD calculations confirmed, but not mathematically proven. Search this proof - one of the seven "millennium problems" declared Clay Mathematics Institute. Other prospects nonperturbative QCD - study phases of quark matter, including quark-glyunnuyu plasma.
Quarks aren't found on their own. They roam in pairs, and certain pairs always team up. The pairs are as follows, up and down, charm and strange, top and bottom.

Theory

Kinetic energy of proton $T_{kin\ id} = mc^2\ [ln\ |1-v/c| + (v/c) / (1-v/c)\ ]$ in direction of motion of proton, where v is velocity of proton and m is mass of proton[2].

Kinetic energy of proton $T_{kin\ ad} = mc^2\ [ln\ |1+v/c| - (v/c) / (1+v/c)\ ]$ against direction of motion of proton, where v is velocity of proton and m is mass of proton.

u,d quarks are in the proton at speed of proton from *v= 0,075c to v = 0,094686c :*

PROTON	Front of proton	Behind proton
v/c	$\left[ln\lvert 1-\frac{v}{c}\rvert+\frac{\frac{v}{c}}{1-\frac{v}{c}}\right]$ kinetic energy of proton in direction of motion of proton	$\left[ln\lvert 1+\frac{v}{c}\rvert-\frac{\frac{v}{c}}{1+\frac{v}{c}}\right]$ kinetic energy of proton against direction of motion of proton
0.68215556	1.00000000000000000000000254 proton : 938,27201323 MeV /c^2	0.1145513850359705191549799138 muon : 107,480358656 MeV/c^2
0,075	0.00311953961136922259672105451 *down quark:* 2.92697671 MeV /c^2	0.0025532197191610043413170483 *up quark:* 2.4MeV/c^2
0.094686	0.00511569184940226624325622138 *down quark:* 4.8MeV/c^2	0.0039715278483606256196473452 *up quark:* 3.72637 MeV /c^2

c,s quarks are in the proton at speed of proton from *v=0.713c to v=0.72585c :*

PROTON	Front of proton	Behind proton
v/c	$\left[ln\lvert 1-\frac{v}{c}\rvert+\frac{\frac{v}{c}}{1-\frac{v}{c}}\right]$ kinetic energy of proton in direction of motion of proton	$\left[ln\lvert 1+\frac{v}{c}\rvert-\frac{\frac{v}{c}}{1+\frac{v}{c}}\right]$ kinetic energy of proton against direction of motion of proton
0.68215556	1.00000000000000000000000254 proton : 938,27201323 MeV /c^2	0,1145513850359705191549799138 muon : 107,480358656 MeV/c^2
0.713	1,23604749426877325552441352943 c quark: 1160 MeV/c^2	0.1220173810465946482487035019 s quark: 114.485493763640 MeV/c^2

0.72585	1,3535582771630143437838209404184 c quark: 1270 MeV/c^2	0,12514431408438967945446885049 s quark: 117.41941 MeV/c^2

t quark is in the proton at speed of proton : *v=0,994637c for top quark 169 100MeV/c^2*

v=0,994766c for top quark 173 400MeV/c^2

PROTON	Front of proton	Behind proton
v/c	$\left[ln\|1-\frac{v}{c}\|+\frac{\frac{v}{c}}{1-\frac{v}{c}}\right]$ kinetic energy of proton in direction of motion of proton	$\left[ln\|1+\frac{v}{c}\|-\frac{\frac{v}{c}}{1+\frac{v}{c}}\right]$ kinetic energy of proton against direction of motion of proton
0.994637	180.22492157457995929571290 46 *top quark:* 169 100 MeV/c^2	0.19180643378644112290601029593 179.96660877927080426588 41 MeV/c^2
0.994766	184.80781431716241834344540 31 *top quark:* 173 400 MeV/c^2	0.19183868355887822897300444041 179.99686783818157713891 78 MeV /c^2

b quark is in the proton at speed of proton : *v=0,8665c for bottom quark 4.2 GeV*

PROTON	Front of proton	Behind proton
v/c	$\left[ln\|1-\frac{v}{c}\|+\frac{\frac{v}{c}}{1-\frac{v}{c}}\right]$ **kinetic energy of proton** **in direction of motion of proton**	$\left[ln\|1+\frac{v}{c}\|-\frac{\frac{v}{c}}{1+\frac{v}{c}}\right]$ **kinetic energy of proton** **against direction of motion of proton**
0.8665	4.4763138415921693024363 94 *bottom quark* 4 200 MeV/c^2	0.15982714099050308721766 9575 149.96133 MeV/c^2

Calculation of the kinetic energy T_{kin} of a body moving at the velocity of v

v/c	Vlcek ´s theory T_{kin}	Einstein ´s theory T_{kin}
0.1	0.0050 m c^2	0.0050 m c^2
0.2	0.0212 m c^2	0.0200 m c^2
0.3	0.0517 m c^2	0.0480 m c^2
0.4	0.1033 m c^2	0.0910 m c^2
0.5	0.1895 mc^2	0.1550 m c^2
0.6	0.3393 m c^2	0.2500 m c^2
0.7	0.6233 m c^2	0.4010 m c^2
0.8	1.2669 m c^2	0.6670 m c^2
0.9	3.4327 m c^2	1.2930 m c^2
0.99	47.294 m c^2	6.9200 m c^2
1.0	infinite	infinite

Direct measurement of the speed in the experiments Kirchner[3], [4], Perry, Chaffee [5]

for v / c = 0.08-0.27 can not yet prove the validity of Vlcek's theory[2] or Einstein's theory[6].

Conclusion

Quarks are actually locked (confinement) in proton, as is clear from the individual tables.

References

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