



A horizontal row of fifteen identical black squares. Each square contains a white 'X' symbol positioned in the center.



A horizontal row of twelve black squares, each containing a white 'X' symbol.

A horizontal row of fifteen black squares. Each square contains a white 'X' character, representing a binary value of 1. The squares are evenly spaced and extend across the width of the row.

× × × × × × × × × × × × × × × × × × ×

PDF/ePub ✕ ✕ ✕ ✕ ✕ ✕

[/ir.cosmicphilosophy.org/cp-violation](http://ir.cosmicphilosophy.org/cp-violation)

✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗ ✗

××××× :×××× ×× ×××××× ××××× ××××××××××

**X X X X X X X X X X X X X X X X X X X X**

# CosmicPhilosophy.org

× × × × × × × × ×

×××× ×××× ×××× ××× .×

×××××× ×××××× :CP 101 ××× .×.×

××××××××× ××××××× ××××× .×.×

«××××××××××× ×××××××××» ×××××××× .×.×

××××××× ××××××××× :××× ×××××× .×.×

××××××× ××××××××× :××× ×××××× ××××× .×.×

××××××××× ×××××××××××× ×××××××××× .×.×

××××××× .×.×

×××××××× .×

. X X X X

A horizontal row consisting of fifteen individual squares. Each square is black with a white 'X' character centered inside it. The squares are evenly spaced and extend across the width of the row.

× × × < × × × × × × × × × CP × × × > × × × × × CERN

A row of five black square boxes, each containing a large white 'X'. This visual cue typically indicates that the corresponding options in the list below have been disabled or are not applicable.



xxxxx xxxx xx - xxxx xx xxxx  
xx xxxx xx xxxx  
xxxxxx xx :xxxxxx xxxx  
xx xxxx xx xxxx xxxx xxxx xxxx xxxx xxxx xxxx .<<xxxxxx xxxx CP xxxx  
xx xxxx CERN xx LHCb xxxx xxxx  
xxxxxx xxxx  
.xxxxxx xxxx xxxx

██████████████████ ██████████ CERN ██████████ ██████████ ██████████ ██████████  
██████████████████ ██████████ ██████████ ██████████ ██████████ ██████████ ██████████ .████  
██████████████████ ██████████ ██████████ ██████████ ██████████ <████████> ██████████ ██████████ ██████████ ██████████ ██████████ ██████████  
██████████████████ ██████████ ██████████ ██████████ ██████████ ██████████ CP ██████████ ██████████ ██████████ ██████████

•

**CP 101**

xxxxxxxxxxxxxxxxxxxxxx C xxxxxxxxxxxx  
xxxxxxxxxxxxxxxxxxxxxx :xxxxxxxxxxxxxxxxxxxxxx  
xxxxxx P x (xxxxxxxxxxxxxxxxxxxxxx  
.xxxxxxxxxxxxxxxxxxxxxx

**LHCb**

.X .X X X X

A horizontal row consisting of 20 identical black squares. Each square contains a white 'X' character in its center. The squares are evenly spaced and extend across the width of the row.

The image consists of two rows of black squares. The top row has 20 squares, each containing a white 'X'. The bottom row has 5 squares, also each containing a white 'X', positioned directly beneath the 10th square from the left in the top row.



:(**LHCb** ×××× ××××××××) CERN ×××××××× ×××××  
××××× ×× ×××××× ×××××××× ×× CERN ×× LHCb ××××××‘  
×××× × «××× ×××× ×××××× ×× ×××××××× ××× ×× ×××××  
×× ×× ×××× ××‘ ×××× ×× ×××××× ×× ×××××××× ×× ×××××  
«.×××× ×××× ×××××× ×××××× ×××××× ×× ××××××××

*.CP violation is said to be “in baryons” as a category, not just in a specific transition*

xxxxxxxxxxxxxx «xxx‘CP xxx :«xxx‘ xxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxx .xxxxxxxxxxxxx

**LHCb**

• X • X X X X

A horizontal row of 20 identical black squares. Each square contains a white 'X' character in its center. The squares are evenly spaced and extend across the width of the row.

«. × × × × × × × × ×

1

• X X X X X X X X X

$1 - \square\square\square\square\square\square\square + 1 + \square\square\square\square\square\square\square \rightarrow \square\square\square\square\square\square\square$

xxxxxxxxxxxxxx>xxxxxxxxxxxx .xxxxxxxxxxxxxxx xxxxxxxx xx xxxx xxxxxxxx  
xxxxxxxxxxxxxx xxxxxxxxx xxxxxxxx xx xx xxxx xxxxxxxx-xxxx x<<xxxxxx xxxxxxxx xx xxxx xxxxxxxx  
.....xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

:x x x x x x x x x x x x x x

$$1 + \square\square\square\square\square\square\square\square + \square\square\square\square\square\square\square \rightarrow 1 + \square\square\square\square\square\square\square\square$$

xxxxxxxxxxxxxx (xxxxxxxxxxxx) <>xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx +xxxxxxxxxxxxxx .xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx -xxxxxxxxxxxxxx .xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx )  
xxxxxxxxxxxxxx <>xxxxxxxxxxxxxx .xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx .(xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx .xxxxxxxxxxxxxx :xxxxxxxxxxxxxx  
xxxxxxxxxxxxxx .xxxxxxxxxxxxxx

. X . X X X X

A horizontal sequence of 30 black squares, each containing a white 'X' character.

-××× ×××× ×× LHCb ×××××× ××××× ×××××××××××××××××××××××××××××××××××  
×××××××> ××××× ×× ××) ×××××× ×××××××××××××××××××××××××××××××××  
×× ××× ××××××××××××××××××××××××××××××××××××××××××××××××××××  
«××××××××× ×××××> ×× ×× ×××××××××××××××××××××××××××××××××××  
.××××××××× ×××××××××××××××××××××××××××××××××××××××××××××  
<×××××××> ××××××××× ××××××××××××××××××××××××××××××××××××××××××××  
××× .××× ×××× ×××××××××××××××××××××××××××××××××××××××××××××  
×××××××××××××××××××××××××××××××××××××××××××××××××××××××  
×××××××××××××××××××××××××××××××××××××××××××××××××××××  
××××××××××××××××××××××××××××××××××××××××××××××××××××  
××××××××××××××××××××××××××××××××××××××××××××××××××××  
.××× ××× ×××××××××××××××××××××××××××××××××××××××××××××

xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx <xxxxxx> xxxx xxxx xxxx xxxx xxxx xxxx (2025)  
xxxxxx xxxx (LHC) xxxx xxxx xxxx

xxxxx xxxx  
xx xx <xxxxxx xxxx xxxx> x xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx (xxxxx xxxx xxxx ATLAS CMS)  
xxxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx .xxxxx xxxx xxxx (xxxxxx) xxxx xxxx xxxx xxxx  
xxxxxx xxxx <xxxx> xxxx xxxx  
xxxxxx xxxx xxxx xxxx xxxx xxxx <xxxx>.xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
xxxxxx xxxx  
xxxxxx xxxx xxxx xxxx <xxxx> xxxx .xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

xx xx xx xx LHCb xx xx .xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx CP xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx <xx xx xx> xx xx xx

xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
.xx xx xx

.xx. xx xx

xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx

xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx <xx xx xx> xx xx CP xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx  
.xx xx xx xx xx xx

xx xx xx xx xx xx xx xx xx xx xx xx <xx xx xx>  
.xx xx xx

.x x x x

x x x x x x x x x

xxxxxxxxxxxx <xxxxxxxxxx xx CP xxxx> xxxx xxxx xxxx xxxx xxxx xxxx  
xxxxxx xx xxxx .xxxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
xxxxxx xx xxxx  
xx xxxx xx xxxx  
xxxxxx xxxx  
.xxxxxx xxxx xxxx xxxx <xxxxx xxxx>  
  
xx xx xxxx  
xxxxxx xxxx xxxx xxxx .xxxx xxxx xxxx - xxxx xxxx xxxx xxxx xxxx  
.xxxx xxxx  
  
xx xxxx xxxx xxxx xxxx LHCb xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
.xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx  
  
xxxx xxxx xxxx xxxx xxxx xxxx - xxxx xxxx xxxx xxxx xxxx xxxx  
xxxx xxxx xxxx xxxx xxxx xxxx <xxxx xxxx xxxx> xxxx xxxx xxxx  
xx xxxx xxxx xxxx (xxxx xxxx) xxxx xxxx xxxx xxxx xxxx - xxxx  
.xxxx xxxx CP xxxx xxxx

A horizontal row of twelve identical black squares. Each square contains a white 'X' symbol in its center. The squares are evenly spaced and extend across the width of the row.

A horizontal row of 15 black 'X' marks, each enclosed in a white square, representing a sequence of errors or strikes.

**X X X X X X X X X X X X X X X X X X X X X X**

××× ××××× CosmicPhilosophy.org  ×× ×××× 42 ×× ×××× ×××



[/ir.cosmicphilosophy.org/cp-violation](http://ir.cosmicphilosophy.org/cp-violation) :x x x x

A horizontal row containing fifteen black 'X' marks, evenly spaced.