↑ Non-Relativistic Momentum and Energy $\begin{array}{c|c} 3-4 \ \hline 2-1 & \text{the momentum is} \ \hline \end{array}$
In 3-d, the momentum is I maginea $2-d$
Imagine a particle moving back and forth $p_1 \equiv mV_x$
along a line. At any given time, it
has va velocity, V_x . The definition $p_1 \equiv mV_y$
of V_x is $\frac{dy}{dx} = \frac{dy}{dx}$
 $\frac{dy}{dx} = \frac{dy}{dx}$
 $\frac{x(t+2t)-x(t)}{t}$ $x(t)$ $p_2 \equiv mV_2$ ine a particle moving back and foll, $P_{\chi} \equiv mV_{\chi}$
a velocity, V_{χ} . At any given this it $P_{\chi} \equiv mV_{\chi}$
 V_{χ} is V_{χ} . $\frac{d\chi}{d\chi} = \frac{d\chi}{d\chi} = \lim_{\Delta t \to 0} \frac{\chi(t + \Delta t) - \chi(t)}{\Delta t}$ and the finetic
 $V_{\chi} = \frac{d\chi}{d\chi$ $-e^{i\theta}$ is $V_{\chi} = \frac{d\chi}{dt} = \lim_{\Delta t \to 0} \frac{\chi(t + \Delta t) - \chi(t)}{\Delta t}$
Usually we draw the th $\frac{1}{2}m(\frac{v_{\chi}^{2}}{t^{2}})$ $V_{\chi} = \frac{\partial \chi}{\partial t} = \lim_{\Delta t \to 0} \frac{\pi(t + \Delta t) - \pi(t)}{\Delta t}$ and the kinetic energy (
Usually we draw the $+\pi$
direction to the right. If a
anaticle is moving to the right while direction to the right. It a
particle is moving to the right Non-Relativistic Momentum and Energy 3-d
 x^2-1
 $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ $rac{1}{4}$ times length dividedby time and $V_{\mathcal{X}}>0.$
If it is moving to the left, If it is moring to the left, then Momentum has mass
Eines length divided by Gr
in its definition. In $\chi(t+\Delta t) < \chi(t)$ (for parifive Δt) in its definition. In and $v_x < 0$ If it is moving to the left, then
 $\gamma(t+\Delta t) < \chi/t$) (for partix Δt) in its definition.
and $V_{\chi} < 0$
There are two extremely χ and χ and χ are meter There are two extremely
important properties of
a particle that we can now define: leilogram
Its momentum, $p_x = mV_x$ Kinetic er \bigvee has units $x/t+xt$ $\le x/t$) (for positive st)
and $V_n < 0$
There are two extremely
important transformed by
important that we can not define:
 x also the Jork x and x
 $\le t$ and t and t $\le t$ $\le t$ $\le t$ $\le t$ $\le t$ $\le t$ $\le t$

↑ The eV (electron-Volt) The electron has charge $-e$
and $e=1.6\times10^{-18}e$. There and $e=1.6\times10^{-18}c$. There The SI unit of electric current is
the Ampere, coften just "amp") and and $e=$ 1.6x10-19 C. Men
are experimental facts, not definitions. The electron
and $e=1$.
are experimental to
To have +1 Amp
wire (1 Coslownb) $\frac{41}{\sqrt{1}}$ the abbreviation is A (not to be confused with the Angstrom which $\frac{1}{\sqrt{2}}$ de abbreviation $\frac{1}{\sqrt{2}}$. $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{$ 18 $\begin{array}{l}\n\text{Ass} & \text{the} \\
\text{de} & \text{debreviation} \\
\text{Hence} & \text{Hence} \\
\text{$ If I Amperi
for 1 second, The eV (electron $-16/t$) and e the definition for the two temporary and the set of th f lows through a wire
then 1 Corlomb of declines flowing the opposite electric charge has gone \mathcal{L} $\begin{array}{c|c} \n\text{with a wire} & \overline{1.6x/5}\\ \n\text{Coromb of} & \text{electrons} \\ \n\text{by.} & \text{directions} \n\end{array}$ For 1 second, then 1 colomb of electrons flowing the quatric charge has gone by.
electric charge has gone by. direction every securely $\frac{1}{2\sqrt{1-\frac{1}{2}(\frac{1}{2}-\frac{1}{2})}}$ spos
nd Unlike mass, charge can be positive it was unknown what was i s the Volt, abbreviated V. flowing through the wire at a rate Instages." The unit of voltages if the villages of the voltage of the voltage of $\frac{1}{2}$
Flowing through the wire at a rate In SI units, if 1 Coulomb goes Howing through the wire at a rate to I volt lower of voltage, this to I Volt Vower of
releases IT ofene*r*gy. I second, the
mic charge he
here and the Continues on known
ing through the Continues on known
ing through the Ampere what were defined
the wire at an
int extremely smit Wehowknow that extremely small Beingneghant if Jonel electron Goes to 1 Volt
lower of roltage, this requires chuchs of charge called electrons for the charges and this requires
are what is flowing and these comes of energy. This requires
are what is flowing and these comes op so often it has a name, to
charges are negative. $1.6x/0$ ⁻¹⁹J of energy. This amount comes up so often it has a name, they "electron-Volt" abbreviated eU, andindeed 1 e $V=$ e-1 V .