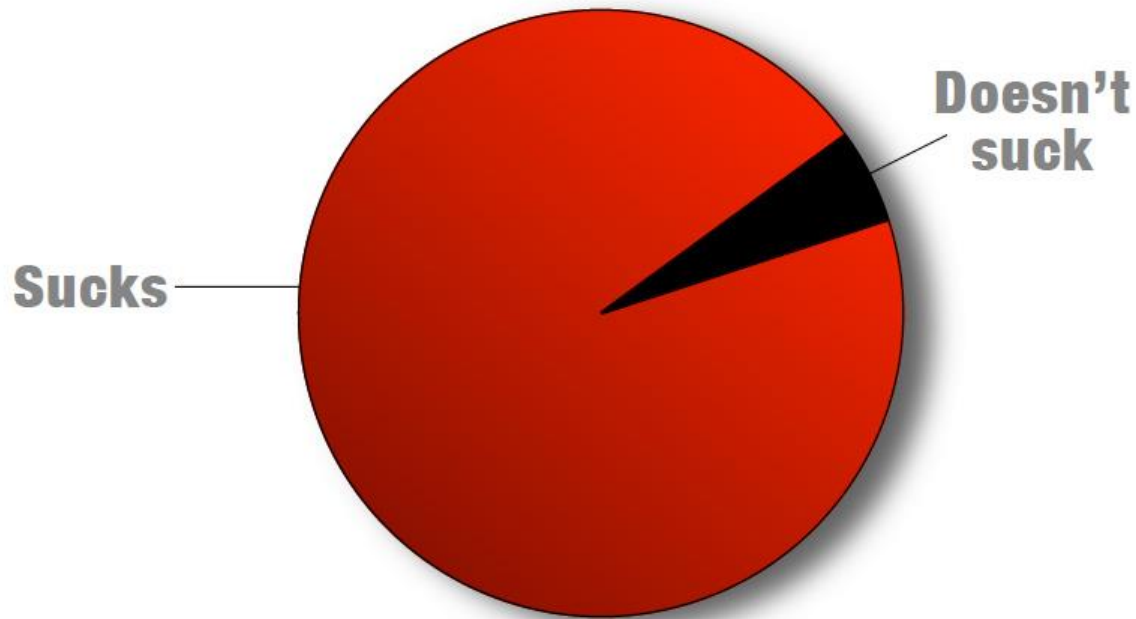


Tipps und Tricks für deinen Vortrag

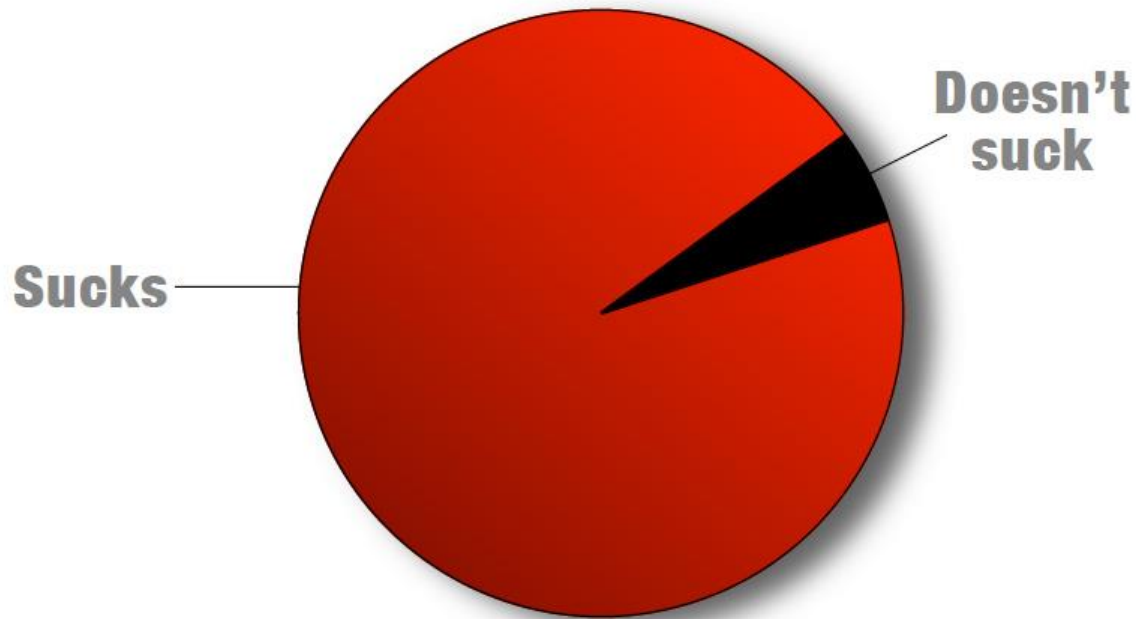




95% of presentations **SUCK**



95% of presentations **SUCK**



Systematic quasi-measurement

Anforderungen an den Detektor - Energieauflösung

□ Energieauflösung zur Ladungsbestimmung nötig

□ deponierte Energie $\sim Z^2$ (Bethe-Bloch)

$$\frac{\Delta E_{Z_2} - \Delta E_{Z_1}}{\Delta E_{Z_1}} = \frac{Z_2^2 - Z_1^2}{Z_2^2}$$

$$-\frac{dE}{dx} = K z^2 \frac{Z}{A \beta^2} \left[\ln \frac{2m_e c^2 \beta^2 \gamma^2 T_{max}}{I} - \beta^2 - \frac{\delta(\beta\gamma)}{2} \right]$$

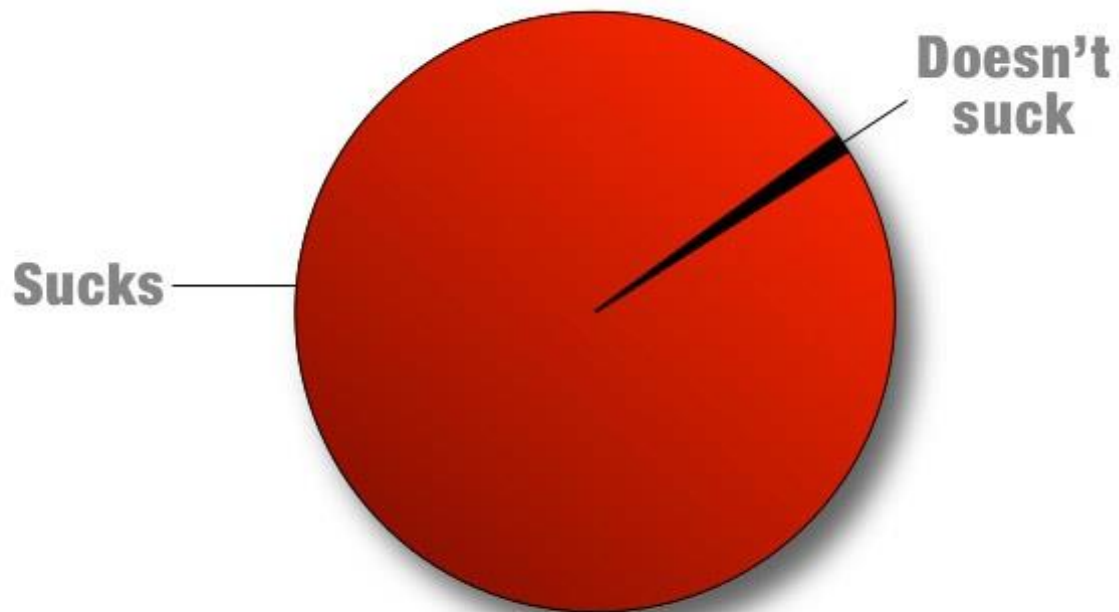
K $4\pi N_A r_e^2 m_e c^2$
 Z Atomic number of absorber
 A Atomic mass of absorber
 m_e Mass of an electron
 r_e Classical radius of an electron
 I Mean excitation energy
 T_{max} Maximum Kinetic energy which can be imparted to a free electron in one collision

□ zwischen $Z_1=80$ und $Z_2=81$ Separation von 0.025

□ Peaks sollen mindestens durch eine Halbwertsbreite getrennt sein:

$$\sigma_Z/Z = \frac{\text{FWHM}}{2\sqrt{2 \ln 2}} \approx 0.025/2.355 = 1.04\%$$

It's actually 99%





Was tun?

PLANEN!

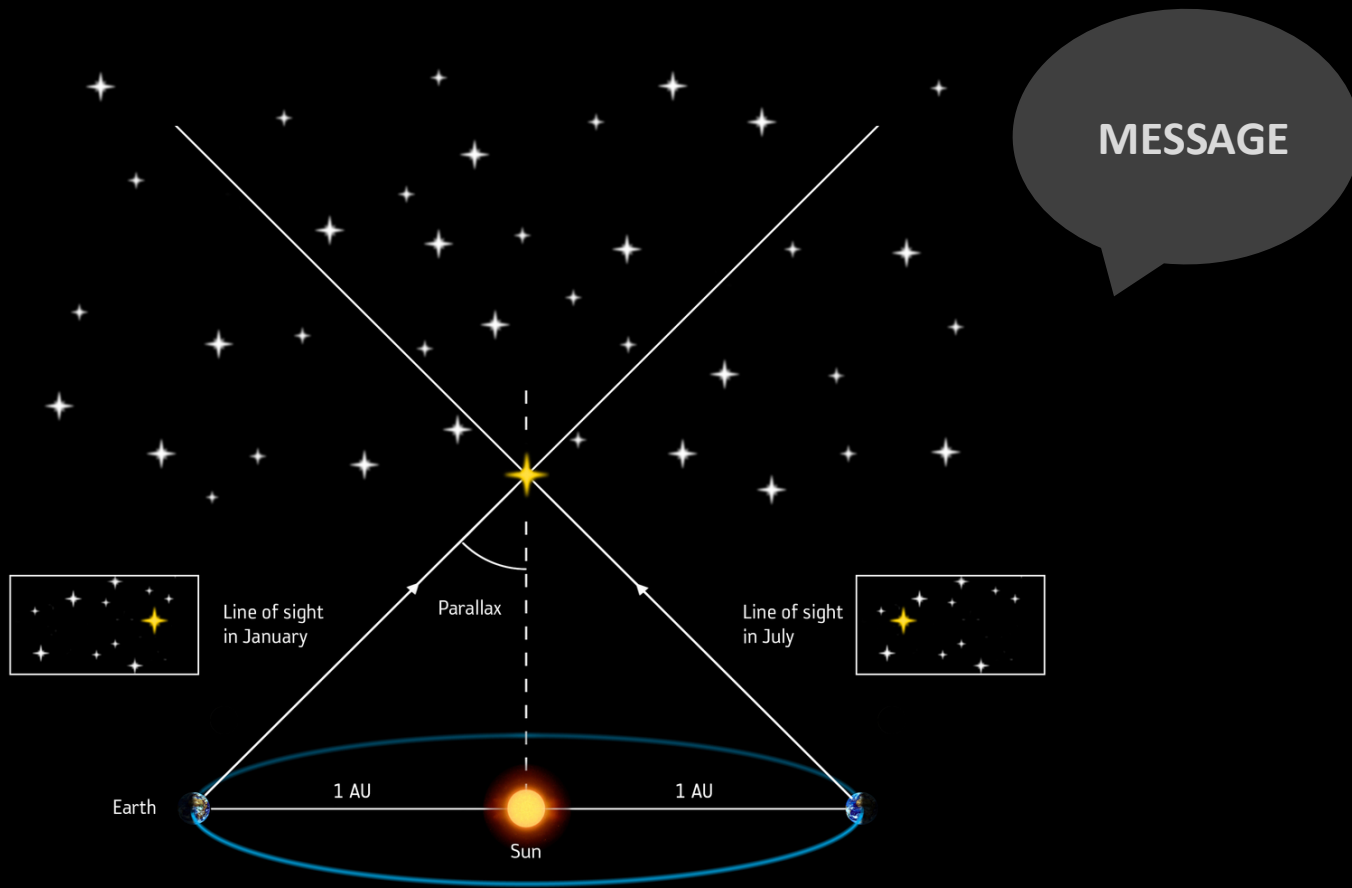
IDEEN





A simple, dark gray outline of a speech bubble is centered on a white background. The bubble has a rounded top and a pointed tail at the bottom. Inside the bubble, the word "MESSAGE" is written in a bold, black, sans-serif font, centered horizontally and vertically.

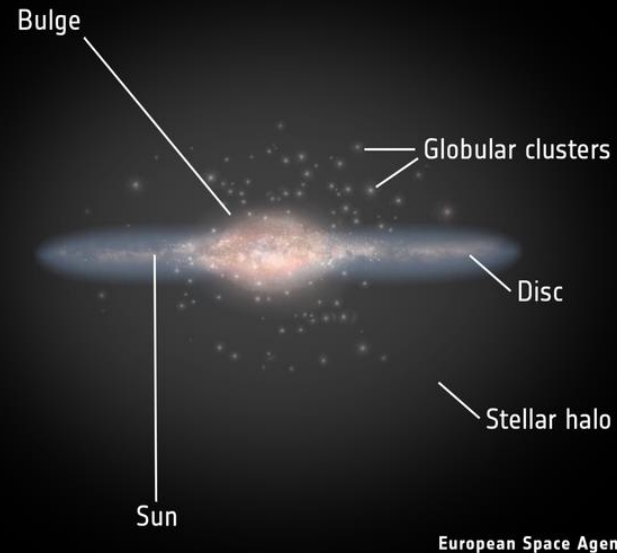
MESSAGE



Mit dem Zollstock im All

MESSAGE

Anatomie der Milchstraße

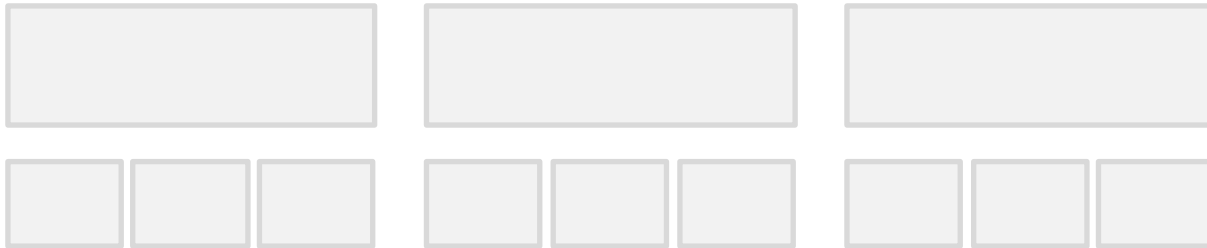


Kernbotschaft

Struktur!

Opener + Überblick

Kernbotschaften



Unterpunkte

Schluss

A row of smooth, dark grey stones is arranged in a line across a body of water. The stones are of varying sizes and are positioned from the foreground towards the background, creating a sense of depth. The water is calm, with subtle ripples around the stones. The word "STYLE" is written in a bold, white, sans-serif font, centered horizontally and positioned slightly above the middle of the frame.

STYLE

Überschrift

- ▶ Inhalt
- ▶ Noch mehr „Inhalt“
- ▶ Ein paar Infos passen noch drauf
- ▶ Dieser Satz hat fünf Wörter.
- ▶ Da kommt noch ein bullet point...
- ▶ Und noch einer...
- ▶ Ok, reicht.

Keep it clean.

Inhaltsverzeichnis?

Kosmische Strahlung - Inhalt

- **Quellen**
- **Wechselwirkung**
- **Schauer**
- **KASCADE**
- **AUGER**



Schauer

Auger

KASCADE

Wechselwirkung

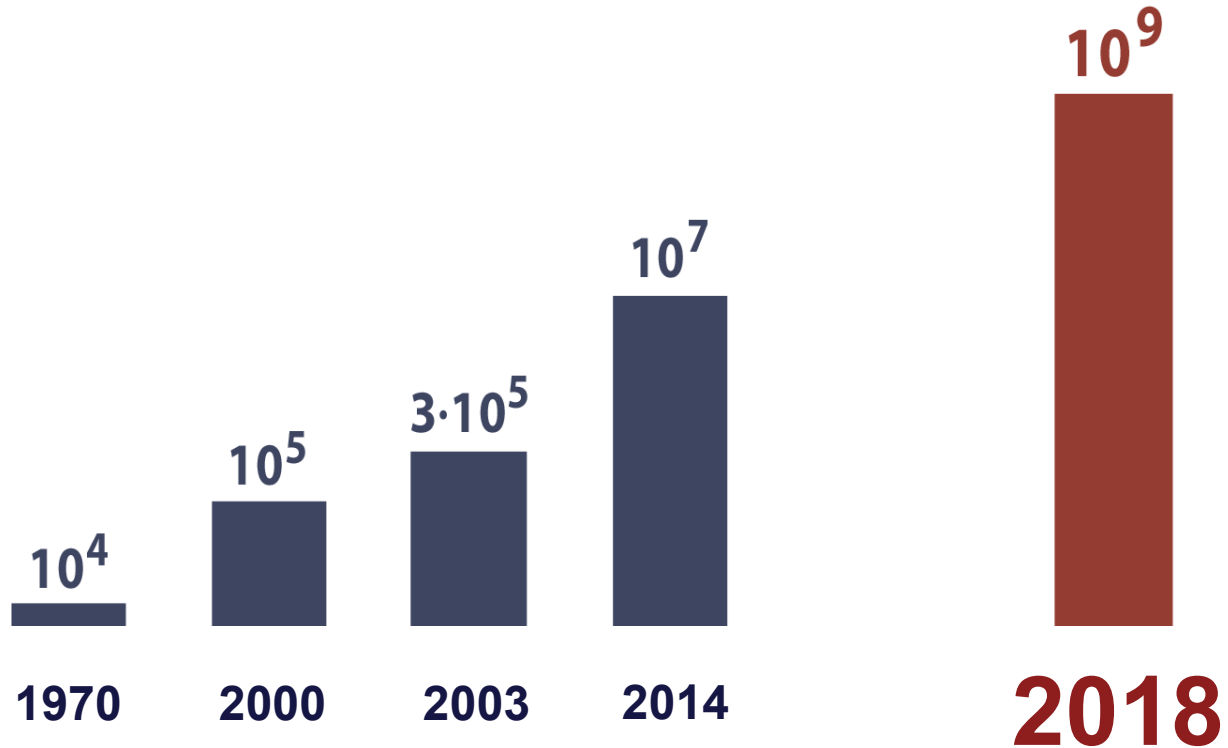
Quellen

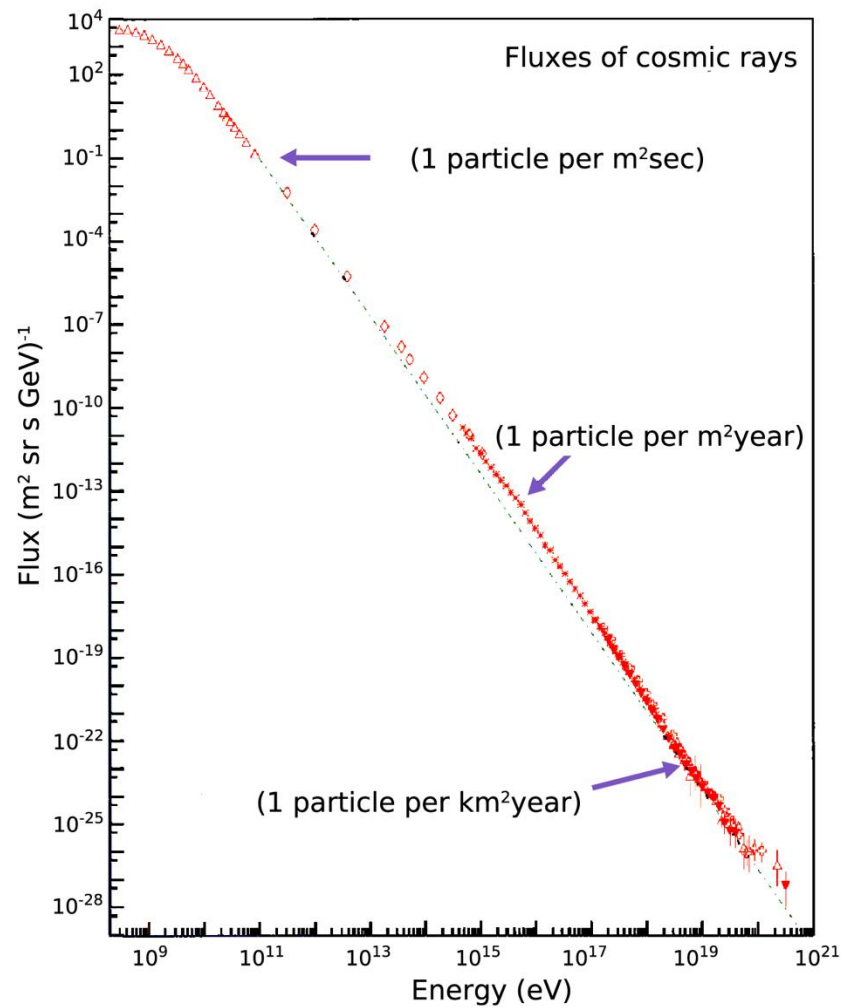
Daten und Grafiken

Neutronenfluss

- 1970: 10^4
- 2000: 10^5
- 2003: $3 \cdot 10^5$
- 2014: 10^7
- 2018: 10^9

Neutronenfluss





Auf die Größe kommt es an...

Fernglas notwendig...

Adleraugen?

Dieser Text ist zu klein...

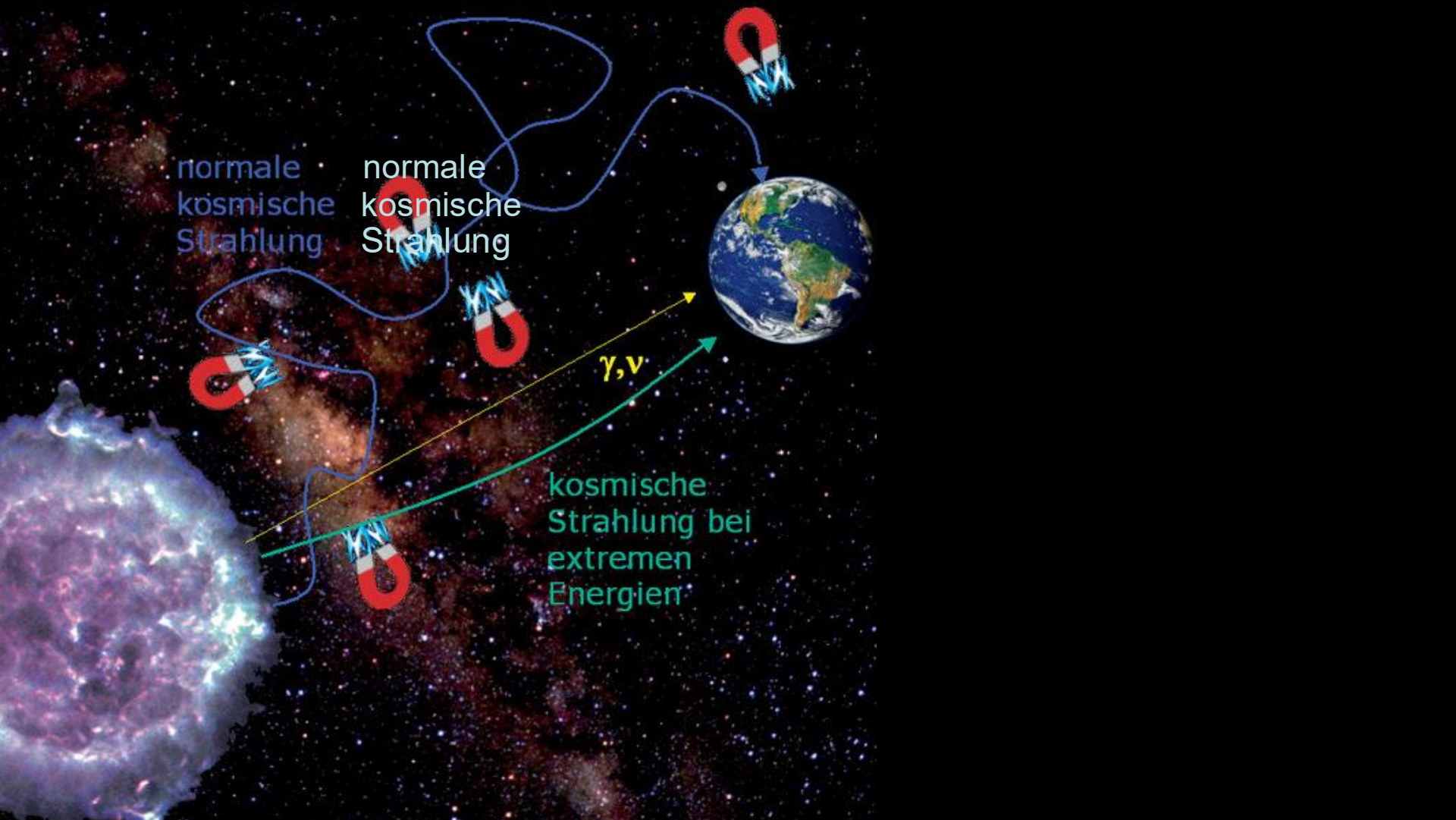
Mindestens 22 pt ...

Keine Serifen!

Inhalt darstellen

Kosmische Strahlung - Ankunftsrichtung

- Vermessung des Teilchenschauers ermöglicht es nicht, die Quelle eines Primärteilchens zu ermitteln.
- Magnetfelder im interstellaren Raum lenken die elektrisch geladenen Teilchen von ihren Bahnen ab und verschleiern somit jegliche Richtungsinformation.



normale
kosmische
Strahlung

normale
kosmische
Strahlung

γ, ν

kosmische
Strahlung bei
extremen
Energien

Rund um dem Vortrag...

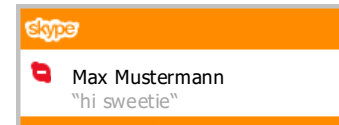
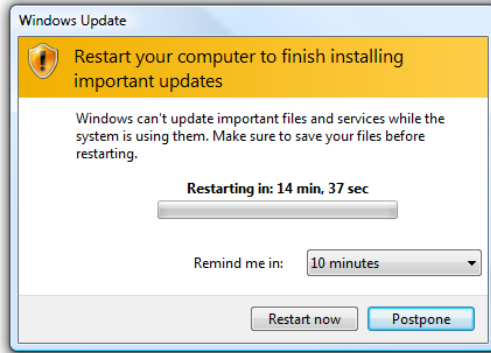
Wo?

Wann?

Für wen?

Suit up!





... aufwärmen



Newest Talks



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TRENDING



How bumble bees inspired a network of tiny museums



What I saw in the war



Plant fuels that could power a jet



What your doctor won't disclose



What if 3D printing was 100x faster?



The case for optimism

VIRUSES & VACCINES



Which is better: Soap or hand sanitizer?



How we must respond to the coronavirus pandemic



How health workers are responding to the COVID-19 pandemic



An ethical plan for ending the pandemic and restarting the economy



How to make pandemics optional, not inevitable



The quest for the coronavirus vaccine



JUST DO IT.