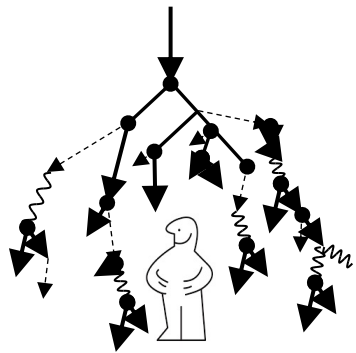


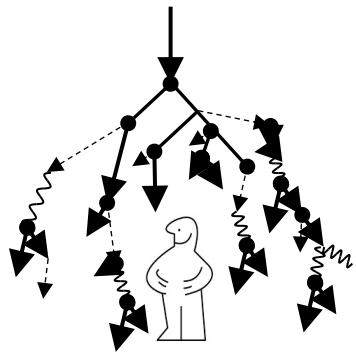
EEE Run Coordination Meeting

October 13^o, 2021



Welcome back!





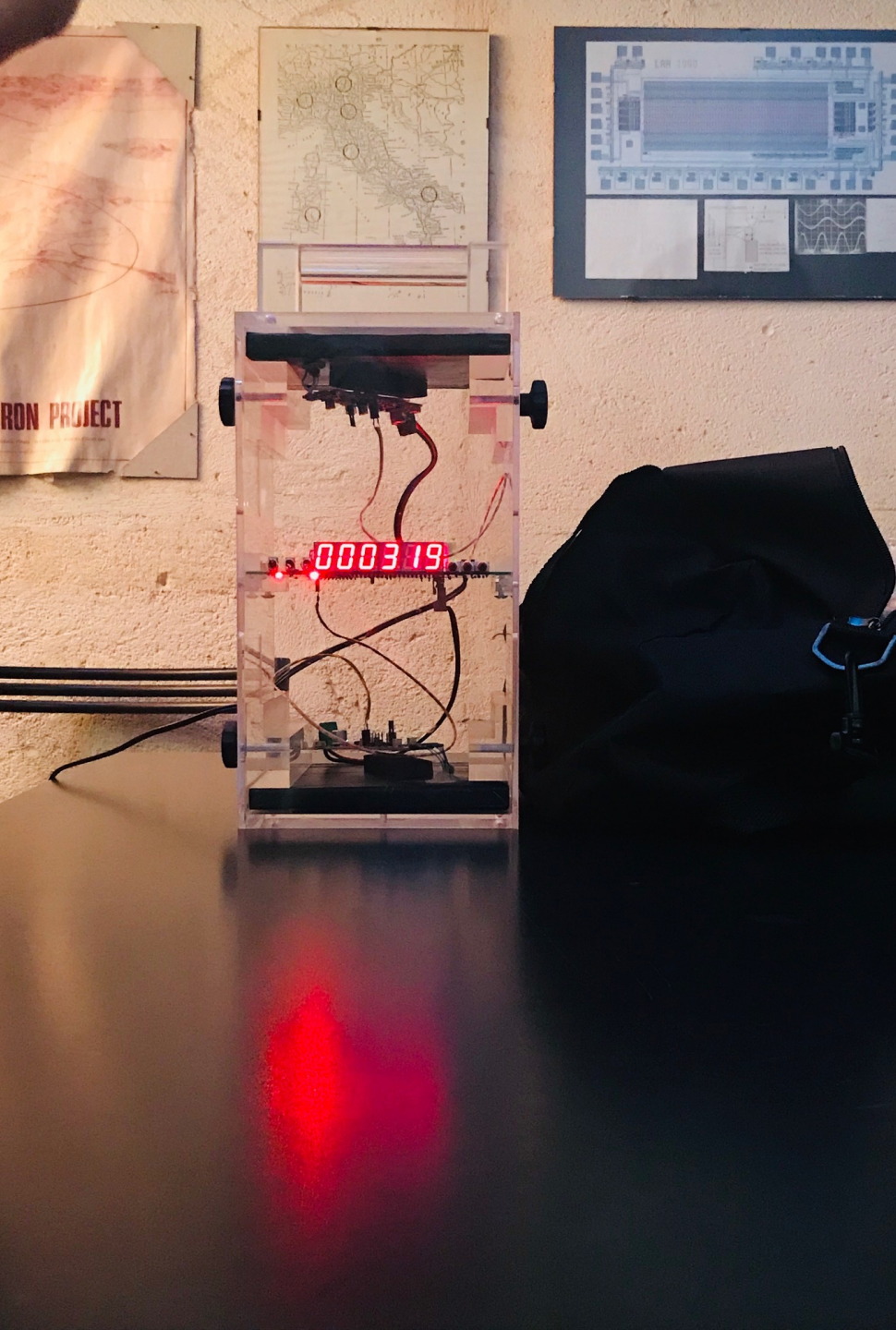
Welcome back!



PTCO: via mail in the next days

Run Coordination Meetings on a monthly base

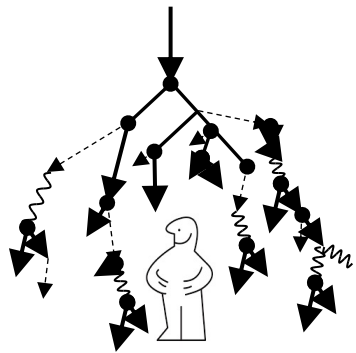
November 10°, 2021:
International Cosmic Day



Cosmic box

Congratulations again to the winners of the past edition of the Cosmic Box Contest!

- Licei Grassi, Chiabrera e Calasanzio (Savona e Carcare): *«Una comic box per studiare la dipendenza del flusso muonico dall'altitudine»*
- Liceo Pascal (Pomezia, RM): *«Cosmic Box Contest»*
- IIS Luca Pacioli (Sant'Anastasia, NA): *«Cosmic Box e Pausilypon»*
- Liceo Onesti (Fermo): *«Progetto per attività sperimentale-didattica con Cosmic Box»*
- Liceo Galilei Lanciano (CH): *«Progetto Cosmic Box»*
- Liceo Da Vinci (Trento): *«Progetto Cosmic Box»*
- Liceo Cavour (RM): *«Raggi cosmici a San Clemente»*

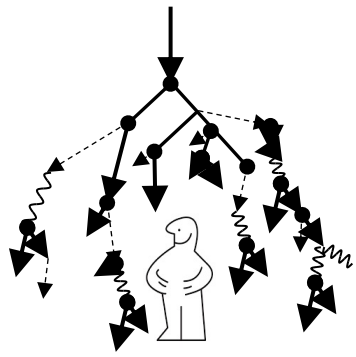


International Cosmic Day

ten years edition!



A large banner for the International Cosmic Day 10th anniversary. The background is a dark blue gradient with a view of Earth from space at the bottom. The text 'Discover Cosmic Rays' is in white. Below it, 'INTERNATIONAL COSMIC DAY' is written in large, bold letters, with 'INTERNATIONAL' in blue and 'COSMIC DAY' in pink. The date 'November 10 | 2021' is in white. A circular pink stamp with '10 YEARS International Cosmic Day' is on the right. A vertical credit line on the far right reads 'Image credit: DESY, Science Communication Lab'.



International Cosmic Day

ten years edition!

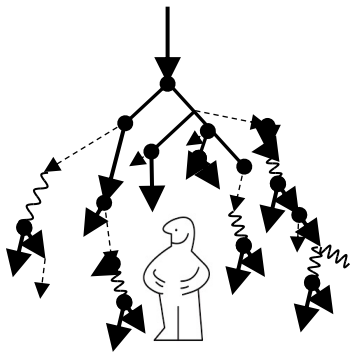


October 20°, 2021: the analysis proposed will be sent via mail

November 3°, 2021: the participating school will submit via email (segreteriaeee@cref.it) *i)* a presentation on the analysis realized and *ii)* the booklet (details on the latter will be sent via email with the instructions on the activity to be performed)

November 8°, 2021: the best works will be selected for a presentation during the ICD

A banner for the International Cosmic Day 10 Years Anniversary. The background is a dark blue gradient with a bright light source at the bottom, creating a lens flare effect. The text 'Discover Cosmic Rays' is in white. Below it, 'INTERNATIONAL COSMIC DAY' is written in large, bold letters, with 'INTERNATIONAL' in blue and 'COSMIC DAY' in pink. At the bottom left, 'November 10 | 2021' is written in white. On the right side, there is a circular pink stamp that says '10 YEARS International Cosmic Day'.



International Cosmic Day

ten years edition!



Discover Cosmic Rays

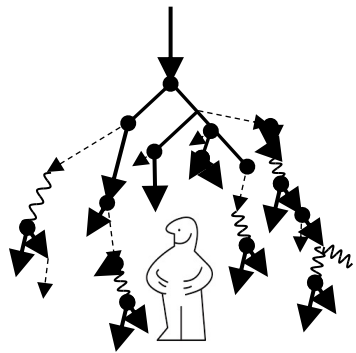
INTERNATIONAL COSMIC DAY

November 10 | 2021



Up for grabs
there is...a
Cosmic Box!

Image credit: DESY, Science Communication Lab



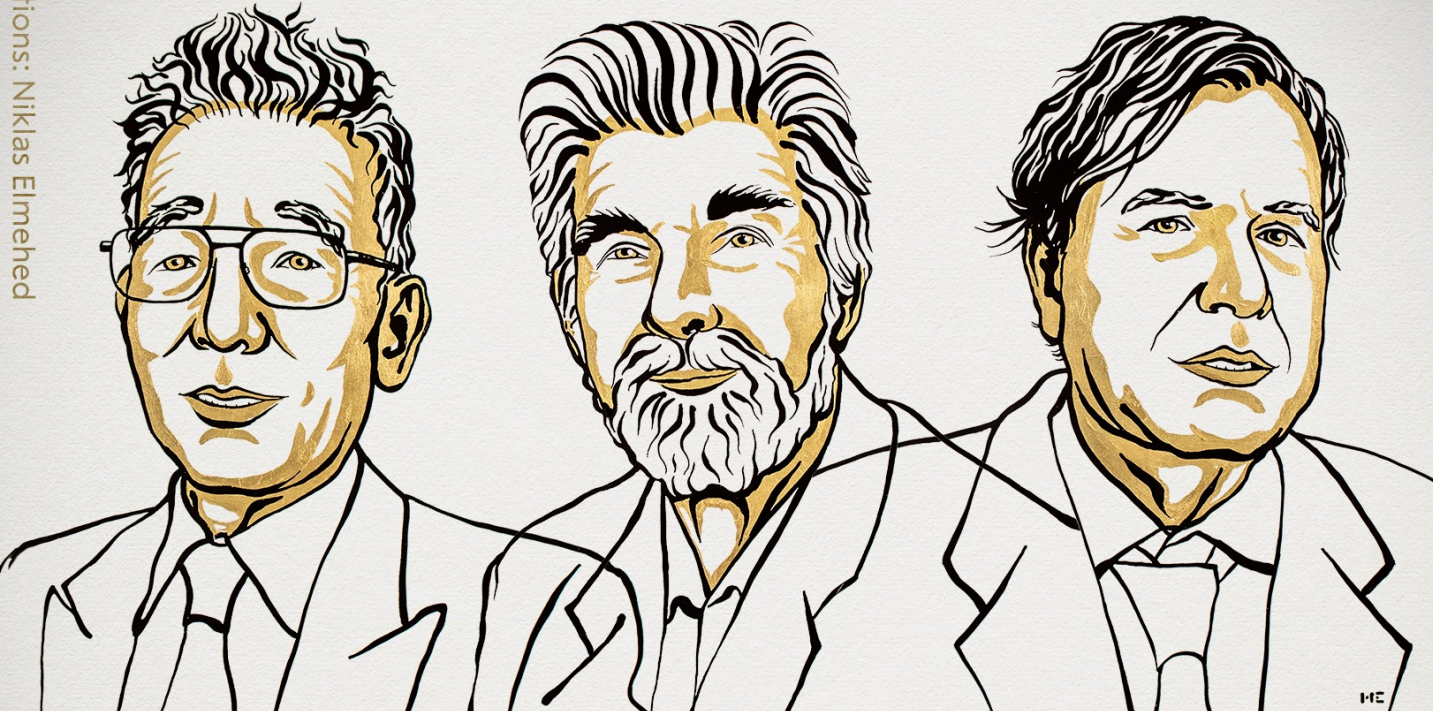
IT'S COMING ROME
CONGRATULAZIONI!
GIORGIO!

ISTITUTO FISICO
GIULIELMO MARCONI

FISICA

THE NOBEL PRIZE IN PHYSICS 2021

Illustrations: Niklas Elmehed



**Syukuro
Manabe**

“for the physical modelling
of Earth’s climate, quantifying
variability and reliably
predicting global warming”

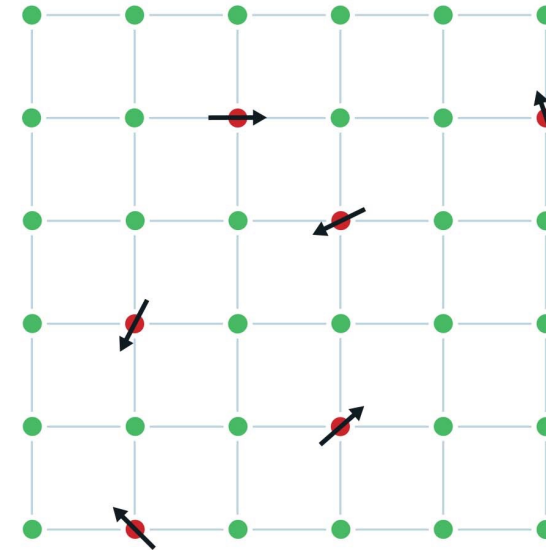
**Klaus
Hasselmann**

“for the discovery of the
interplay of disorder and
fluctuations in physical
systems from atomic
to planetary scales”

**Giorgio
Parisi**

THE ROYAL SWEDISH ACADEMY OF SCIENCES

Nobel!



Spin glass

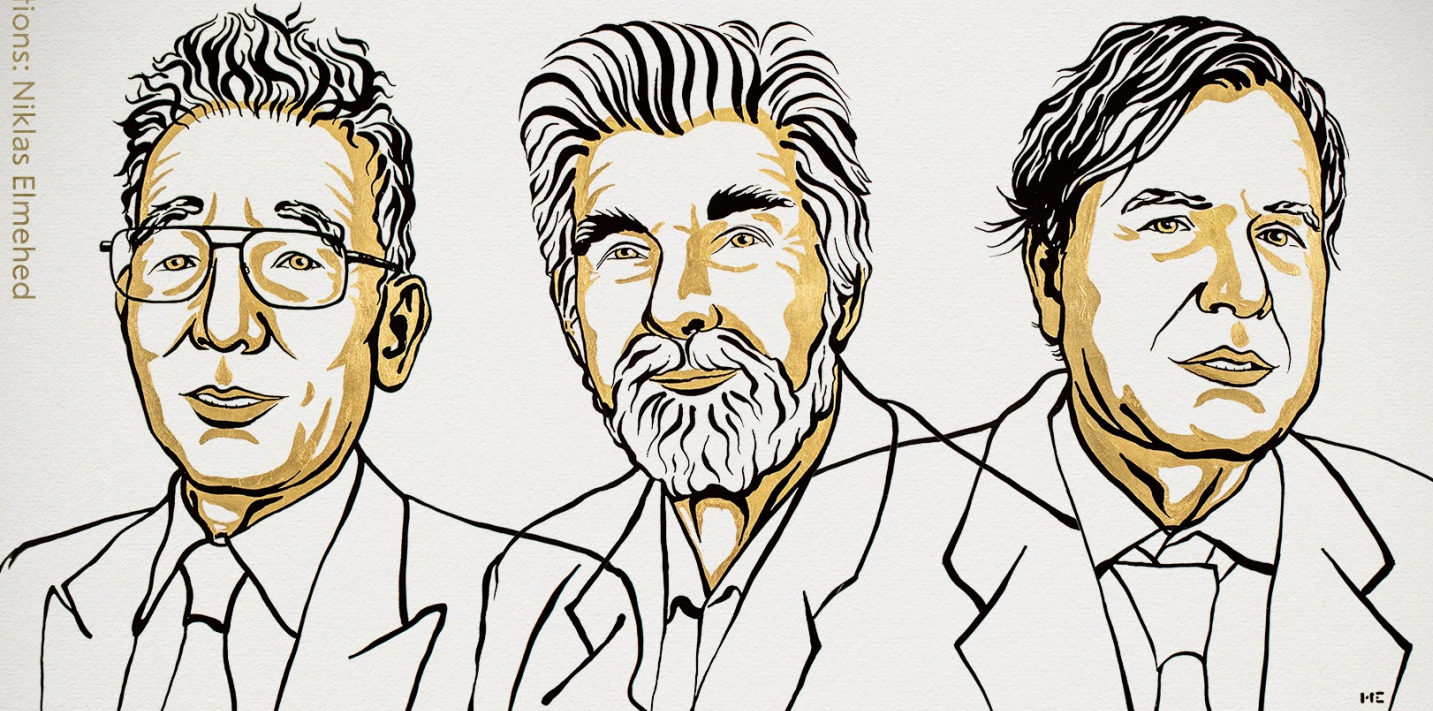
A spin glass is a metal alloy where iron atoms, for example, are randomly mixed into a grid of copper atoms. Each iron atom behaves like a small magnet, or spin, which is affected by the other magnets around it. However, in a spin glass they are frustrated and have difficulty choosing which direction to point. Using his studies of spin glass, Parisi developed a theory of disordered and random phenomena that covers many other complex systems.

- Iron
- Copper

©Johan Jarnestad/The Royal Swedish Academy of Sciences

THE NOBEL PRIZE IN PHYSICS 2021

Illustrations: Niklas Elmehed



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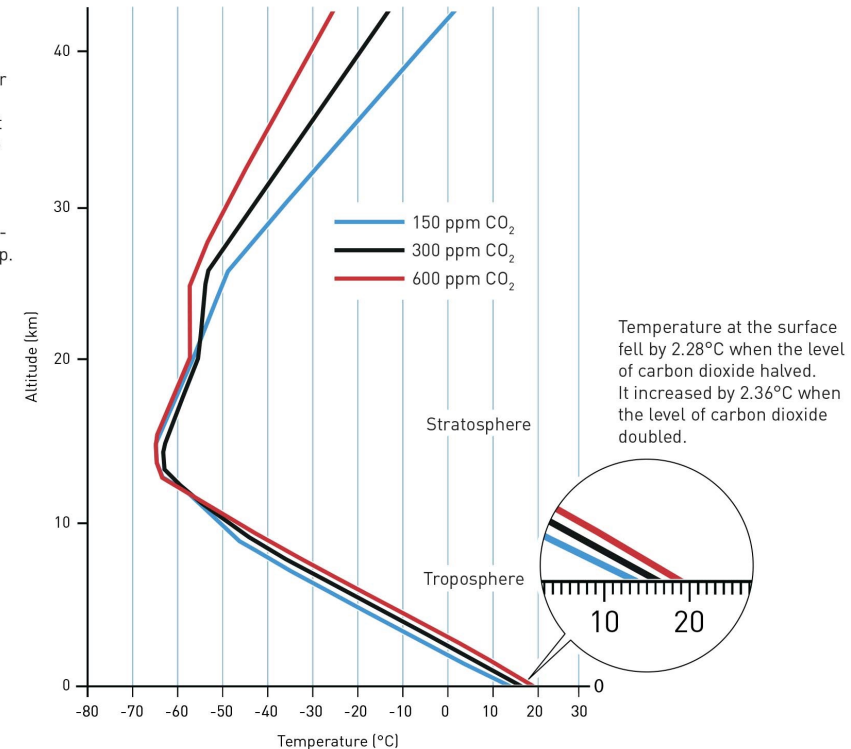
THE ROYAL SWEDISH ACADEMY OF SCIENCES

Nobel!



Carbon dioxide heats the atmosphere

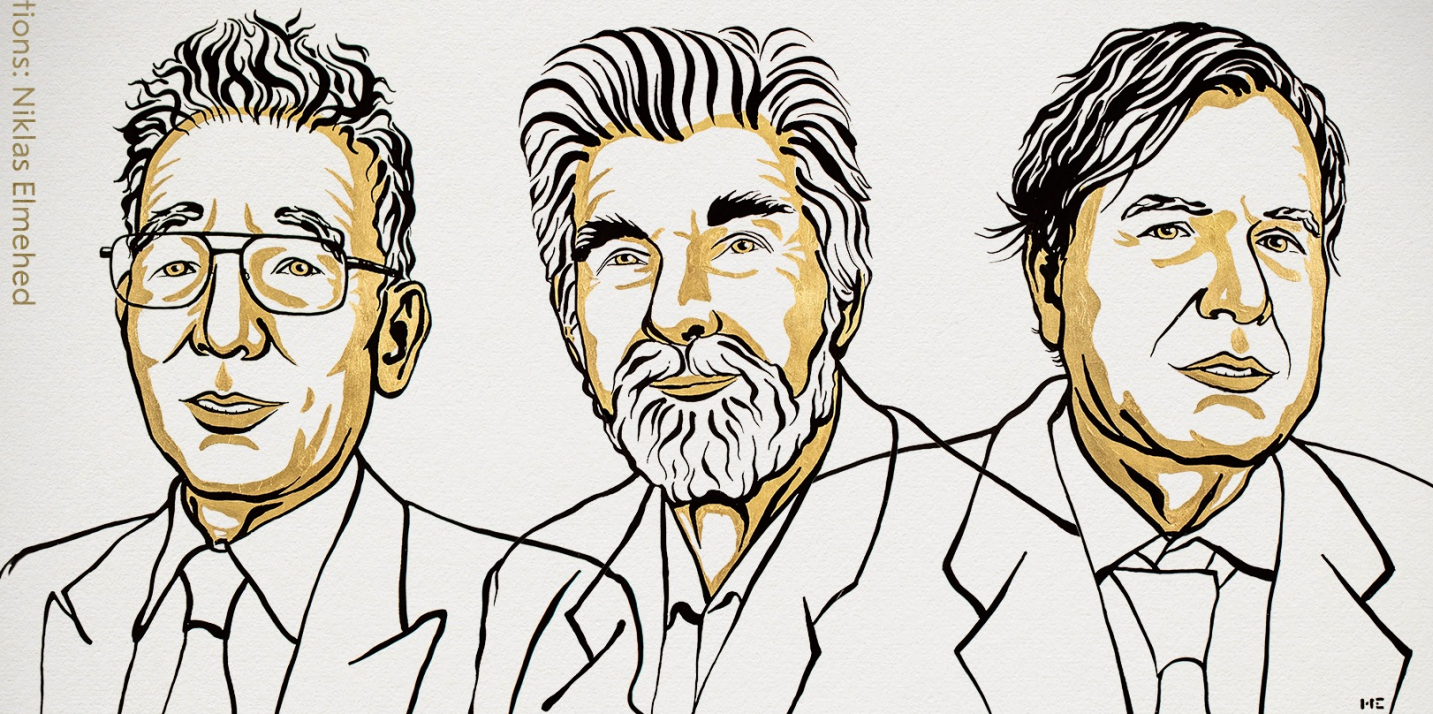
Increased levels of carbon dioxide lead to higher temperatures in the lower atmosphere, while the upper atmosphere gets colder. Manabe thus confirmed that the variation in temperature is due to increased levels of carbon dioxide; if it was caused by increased solar radiation, the entire atmosphere should have warmed up.



Source: Manabe and Wetherald (1967) Thermal equilibrium of the atmosphere with a given distribution of relative humidity, *Journal of the atmospheric sciences*, Vol. 24, Nr 3, May.

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THE NOBEL PRIZE IN PHYSICS 2021



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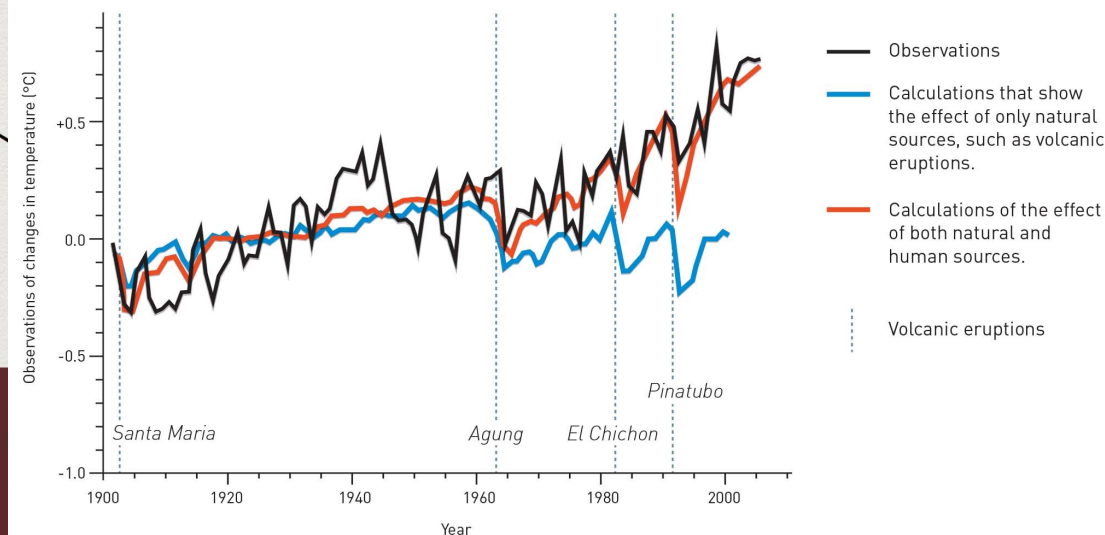
**Giorgio
Parisi**

Nobel!



Identifying fingerprints in the climate

Klaus Hasselmann developed methods for distinguishing between natural and human causes (fingerprints) of atmospheric heating. Comparison between changes in the mean temperature in relation to the average for 1901–1950 [°C].



Source: Hegert and Zweirs (2011) Use of models in detection & attribution of climate change, *WIREs Climate Change*.

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THE NOBEL PRIZE IN PHYSICS 2021



**Syukuro
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"for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming"

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Hasselmann**

"for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales"

**Giorgio
Parisi**

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Nobel!



"Sono decenni che la scienza ci ha avvertiti della crisi climatica. Sfortunatamente le azioni intraprese dai governi non sono state all'altezza della sfida e i risultati modesti. Sappiamo tutti che il medico pietoso fece la piaga purulenta, voi avete il dovere di non essere medici pietosi. Le scienze sono i fari, ma poi la responsabilità di non andare fuori strada è del guidatore, che deve anche tener conto che i fari hanno una portata limitata"

Dall'intervento del Prof. Giorgio Parisi alla Camera dei Deputati.



Let's get...grEEEn!

