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PHYSISCOPE

ZOOM AVANT
SUR LA PHYSIQUE
DE DEMAIN

Outreach activities in Geneva
O. Gaumer



In 2010

- **Masterclasses in particle physics**
 - 22 participants
- **Many public talk about particle physics in High school**
- **Nuit de la Science : 2 days of animation at the museum of science history**
 - 100 m2 stand for physics

In 2010

- **« Dessine moi un physicien »**
 - **Activity for 8-11 years old kids about the scientist's job**
 - **How do they see physicist**
 - **Visits at cern and at Physiscope**

$$V(r) = -\frac{1}{2m} \frac{d^2 H_{int}}{dt^2} = \hbar \Omega (|e\rangle \langle f| a + |f\rangle \langle e| a^\dagger)$$
$$H_{int}(t) = er \cdot \dot{E}(t) = -d \cdot \dot{E}(t)$$
$$H_{int} = \hbar \Omega (|e\rangle \langle f| a + |f\rangle \langle e| a^\dagger)$$
$$V(r) = \frac{1}{2} m \omega_0^2 r^2$$

In 2010

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$$V(r) = -\frac{1}{4\pi\epsilon_0} \frac{Ze^2}{r}$$

$$H_{int}(t) = er \cdot \vec{E}(t) = -d \cdot \vec{E}(t)$$

$$H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger)$$

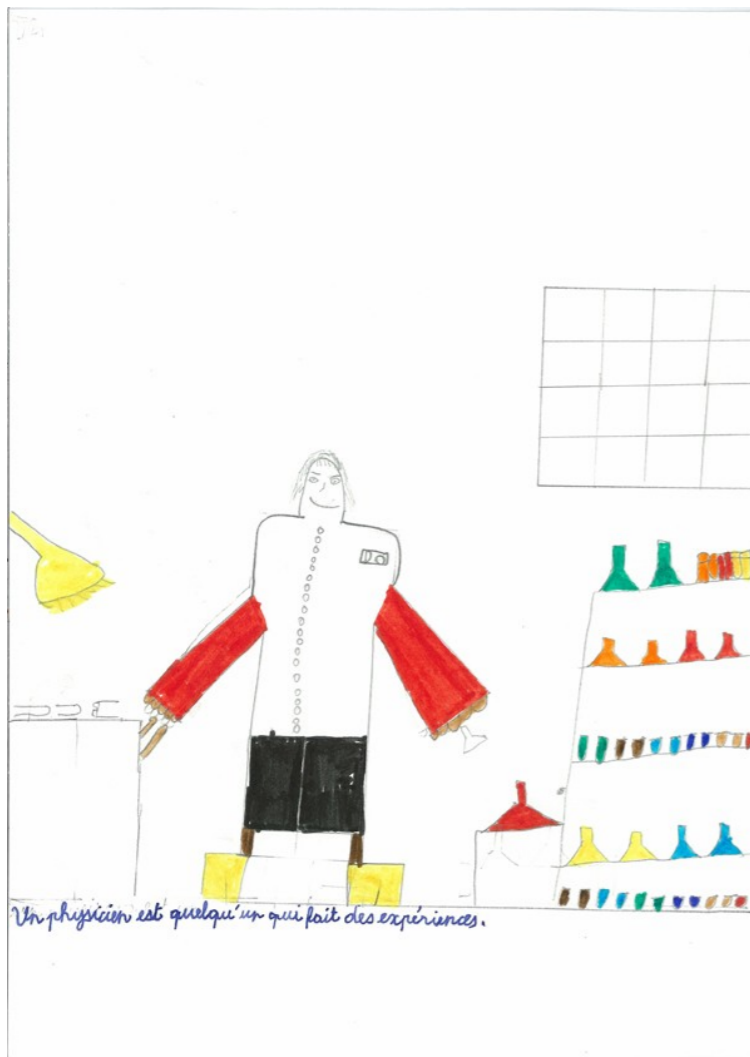
$$H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger)$$

$$V(r) = \frac{1}{2} m\omega_0^2 r^2$$

Before vs after

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09/03/2011

In 2011 - Superconductivity

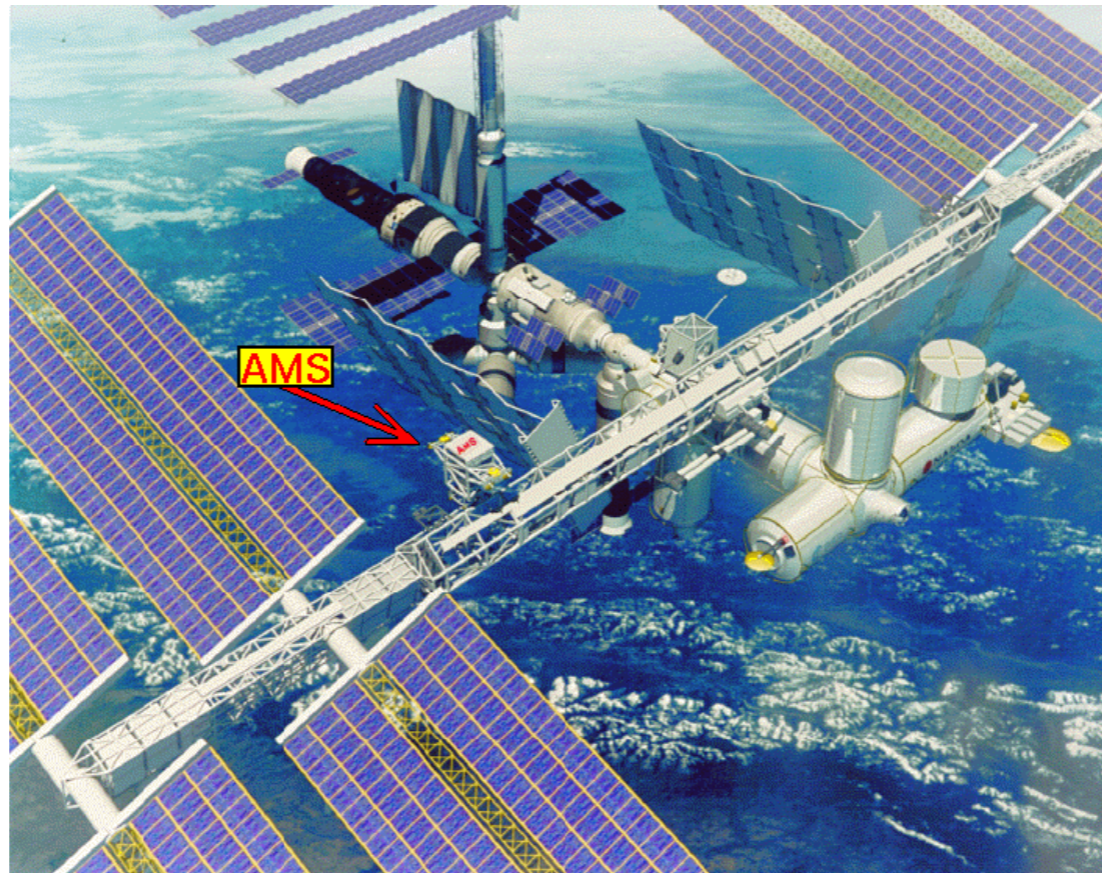
- **100th birthday of superconductivity**
 - **7th april press conference with UniGE and CERN**
 - **8th to 15th april open days at physiscope**
 - **During summer participation to the website « TSR decouverte », producing videos and experiments about superconductivity and its applications**
 - **September the 17th : family day**

$$V(r) = -\frac{1}{4\pi\epsilon_0} \frac{q_1 q_2}{r} \quad H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger) \quad H_{int}(t) = er\cdot\dot{E}(t) = -d\cdot\dot{E}(t) \quad H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger) \quad V(r) = \frac{1}{2}m\omega_0^2 r^2$$

In 2011 - AMS

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In 2011 - AMS

- **AMS launch**

- **The 19th of april**
- **Live web TV show, collaboration with RTS**
- **General public (400 people at TV)**
- **Will cover launch, and installation of AMS**
- **Possibility for the other institute to get the webcast and translate it**
- **Support from CERN**
- **VIP delegation will go to Florida for the launch**

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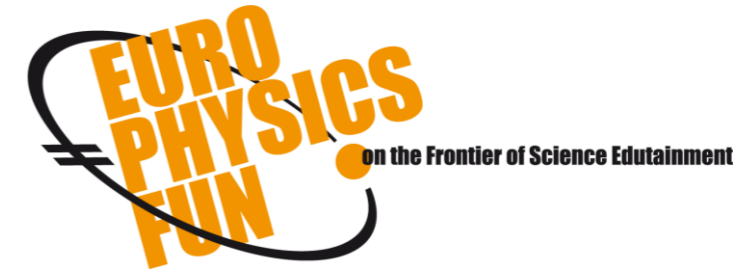
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In 2011 - Physiscope

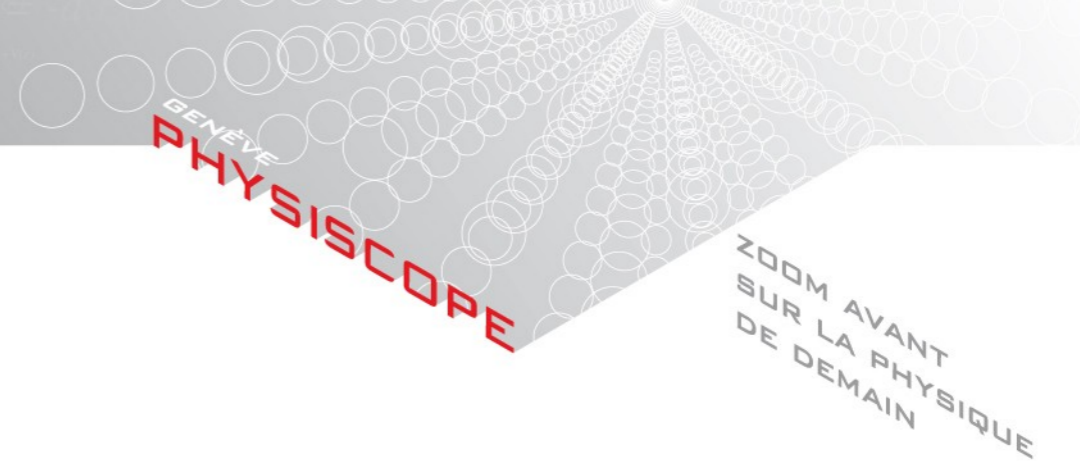
- **Every year new show, new topic**
- **This year a focus on superconductivity**
- **Always related to actual research**
 - **LHC and particle physics**
 - **Biophotonics**
 - **Superconductivity**
 - **.....**
 - **5000 visitors up to now**

In 2011 - EuroPhysicsFun

- **PhysiScope is now active in a European network**
- **Coordination of the network**
- **Wish to promote more modern physics**
- **400000 visitors per year are following a show from the network**
- **Discussions with CERN for support**



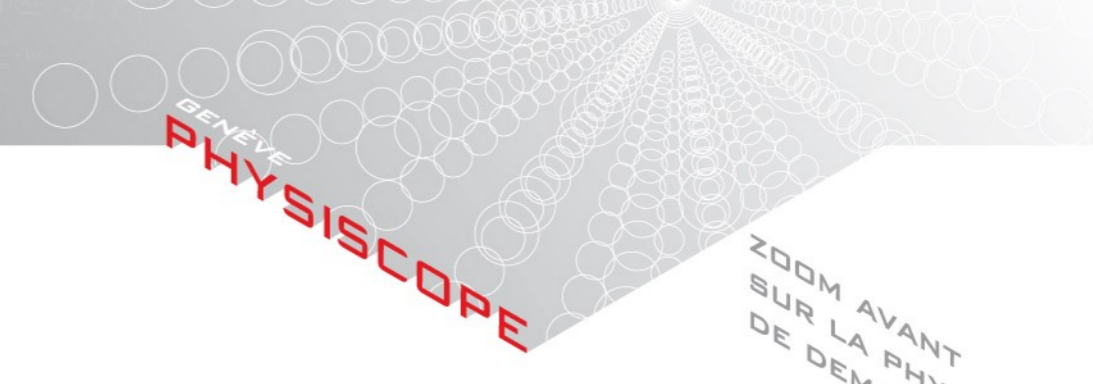
$$V(r) = -\frac{1}{4\pi\epsilon_0} \frac{Ze^2}{r} \quad H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger)$$
$$H_{int}(t) = e\mathbf{r}\cdot\mathbf{E}(t) = -d\cdot\mathbf{E}(t) \quad H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger)$$
$$H_{int} = \frac{1}{2}m\omega_0^2 r^2$$



In 2011 - Dans la peau d'un Chercheur

- **Collaboration between CERN and PhysiScope**
 - **30 classes from France and swotzerland are participating (600 kids)**
 - **8-11 years old**

$$V(r) = -\frac{1}{4\pi\epsilon_0} \frac{Ze^2}{r}$$
$$H_{int}(t) = er \cdot \dot{E}(t) = -d \cdot \dot{E}(t)$$
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What is in the box???



$$V(r) = -\frac{1}{r}, \quad H_{int} = \hbar\Omega (|e\rangle\langle f|a + |f\rangle\langle e|a^\dagger)$$
$$H_{int}(t) = er\cdot\vec{E}(t) = -d\cdot\vec{E}(t)$$
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What is in the box???

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What is in the box???

- **Steps :**
 - They discover the box
 - Write some hypothesis about what is inside
 - Prepare an experimental protocol
 - Do the experiment
 - Write a paper (submitted for approval)
 - Prepare a conference :
 - 24th june, with Michel Spiro
 - Talk and posters