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by the German Physical Society (DPG) and the German Aerospace Center (DLR)

School competition “Incredible Light Machine” – the winners!

In the school competition “Incredible Light Machine” [Die unglaubliche Licht-Maschine], kids from all over Germany were encouraged to submit videos of self-made “incredible machines”. The winner is the team “The Incredible Eight” from Luitpold-Gymnasium in Munich.

Bad Honnef / Cologne, July 28th 2015 – Sometimes it simply needs a little push to get things going. The German Aerospace Center (DLR) and the German Physical Society (DPG) have initiated a school competition in order to inspire teenagers for physics and technology in a hands-on fashion. In the school competition “Incredible Light Machine” [Die unglaubliche Licht-Maschine], kids from all over Germany were encouraged to submit videos of self-made “incredible machines”. The cast number of submitted movies and the creativity of the teams from 193 schools made it very difficult for the jury to name the winner. Finally, the team “The incredible Eight” from Luitpold-Gymnasium in Munich – six girls and two boys, who built a truly “incredible light machine” – came out on top.

Not an easy task

The scope was quite difficult: Among the constructions, also named „Rube-Goldberg-Machines“, items like dominoes, switches, teeter boards or other objects had to be arranged in such a way that they formed some kind of chain reaction. Then, a first impulse activates the “machine”. To avoid cheating, the video had to show the entire process of the chain reaction without a single cut. And, since the competition was proclaimed in occasion of the UN Year of Light, the topic “light” should matter.

The qualities of the videos and the displayed chain reactions have widely exceeded the organizers expectations: “We are highly delighted with so many submissions. Considering the sophisticated task, we didn’t expect that more than 800 pupils would participate in that project”, says Volker Kratzenberg-Annies, Management Representative for Young People (Vorstandsbeauftragter für Nachwuchsförderung). “The machines were often constructed and filmed for days. The technical quality and the physical effects of many contributions are remarkable. A big compliment also goes to all the teachers who splendidly motivated their school teams.”

“We are deeply impressed by the great response and creativity of all participants”, adds Arnulf Quadt, Member of the DPG Executive Board for Public Relations. “It’s nice to see how young people successfully work in self-organized teams, as it’s common in physics nowadays. We are particularly glad to realize, how many different relations

to the phenomenon of light and optics have been created within the International Year of Light, it's just amazing.”

Full of Ideas

The elaborate constructions of the “Incredible Machines” are using lots of conceivable objects from the household, school inventory or construction kit – and in one case even a big warehouse. Thereby, many teams surprised with utterly witty ideas: Sometime, countless schoolbooks – arranged like dominoes – are building a chain straight through the school building, another time a fuse is igniting sparklers to burn, who write the word “light” in the air. Beside technical capabilities and a skilful application of physical effects, the competition also required endurance and ambition: Again and again it had to be optimized, and sometimes the procedure just worked after the hundredth attempt. Likewise, the creativity of the pupils became apparent by the stories behind. Thus, the “Light-Machine” of the winning team is not just a succession of effects and procedures but telling a funny story at the same time which is dealing with a “Vampires-Defence-Construction”.

The winning team from Munich will be invited for the Day of Aerospace at the DLR in Cologne on September 20th 2015 and also for the “Highlights Show” of the DPG which is taking place on September 22nd 2015 in Jena. Moreover, all teams among the top ten obtain a big surprise package. The other teams will be receiving a little thank-you gift for their participation after the summer holidays.

The winning video:

http://www.dpg-physik.de/static/Luitpold-Gymnasium-Muenchen_Team-The_Incredible-Eight.mp4

The Deutsche Physikalische Gesellschaft e. V. (DPG), which was founded way back in 1845, is the oldest national and, with more than 62,000 members, also the largest physical society in the world. As a non-profit-making organisation it pursues no economic interests. The DPG promotes the transfer of knowledge within the scientific community through conferences, events and publications, and aims to open a window to physics for the curious. Its special focuses are on encouraging junior scientists and promoting equal opportunities. The DPG's head office is at Bad Honnef am Rhein. Its representative office in the capital is the Magnus-Haus Berlin. Website: www.dpg-physik.de