

**ANSWERS TO COMMENTS ON THE MANUSCRIPT [8]
("ADHESIVE TAPE", BELARUSIAN IYPT TEAM)**

Answers to reviewer 1:

Q1. The structure of this paper is non-existent. It is full of irrelevant stuff and extremely messy. I feel that the author is not serious and I would definitely not recommend it.

A1. I've tried to remove all irrelevant commentaries from the revised article.

Answers to reviewer 2:

Q1. Why the thickness of the glue should follow Gaussian distribution?

A1. It's not that it should follow exactly Gaussian distribution; it's that it follows some distribution, and we try to approximate it as a Gaussian distribution (the simplest one), and we get something close to the real situation. I've tried to rewrite this part of article in order to make it more understandable.

Q2 & 3. Why do you think there is no necessary condition to remove the tape (minimal angle and minimal force?). Did you always remove your tape in experiments, in each of the studied conditions? The conclusion: "there is no such thing as "force necessary to remove" is doubtful and should be explained.

A2 & 3. We had had an experiment, where we just had attached a piece of tape (without any load) to the lower side of the acrylic resin sheet and waited for some time. It took about 4 days to fell off. Certainly, it can be due to some chemical reactions between the glue and surface, or gases in the air; but we can't check if it is changes in chemical structure of glue or weight of the tape that is responsible for the tape to fell off. That is why it is impossible to name which force is necessary to remove a piece of adhesive tape under specific conditions. And if we can't define and measure some value shouldn't we just reject using it? I've added these explanations, as well as information about self-detaching experiment, to the revised article.

Q4. What is a slip-stick problem?

A4. Added a few sentences on this effect to the "Angle of peeling" chapter of the revised article, as well as a reference to an article with analysis of this problem.

Q5. Change the structure. Divide the paper into chapters.

A5. Done.

Q6. Discuss the influence of the angle of peeling.

A6. Expanded explanations about influence of angle of peeling.

Q7. Write two or three sentences describing the sources of the errors in the experiments.

A7. Done.

Q8. Please consider revising any parts of the text that are unspecific and do not clarify of what results are obtained and what conclusions are drawn.

A8. Done.

Answers to reviewer 3:

Q1. It's funny that the author can't for his dear life find out what "horizontal surface"

would mean, when a few sentences later he **tilts** his horizontal surface and lets the weight peel the tape off at different angles.

A1. That's the point: the problem states, that we should investigate removing of the tape from exactly **horizontal** ("at right angles to the vertical"); but for our experiments we had to tilt (make it not to be "at right angles to the vertical") the surface. That is why I had tried to justify replacing word "horizontal" with word "flat". Anyway, I had cut this part of the article to minimum.

Q2. *The author really concentrates too much on the "pressure-sensitive" tape. This should just mean you need to press the tape, and then it sticks. Nothing more. He discusses this for 2 pages, approximating the glue amounts by Gaussians and doing weird things with a ton of measurements, even after seeing the tape does not peel off any faster when it's pressed to death in Figure 2.*

A2. The matter is that most people try to press hard on any adhesives in order to "make it stick better". And several qualitative experiments had shown, that though in general it doesn't make any difference, you still can find adhesive tape, for which pressing hard will improve its characteristics. And I had considered question "whether it is necessary to press on the tape to make it stick better" as one of the most important. So, after studying reasons why some tapes respond to pressing, we had come out with a criterion, which helps to define which tapes should be pressed and which should not. I've put additional explanations on this question to the revised article.

Q3. *Nevertheless, the experiments afterwards are interesting. Still, I don't agree with his "there is no such thing as force necessary to remove" claim, which means the tape peels off at "any force". This just can't be true. A tape can hold something.*

A3. It can hold something for a limited amount of time. Experiments show, that tape can fall off even because of its own weight (under normal conditions it'll take at least several days, though). Certainly, tape can be detached due to some chemical reactions between the glue and surface, or gases in the air; but we can't check if it is changes in chemical structure of glue or weight of the tape that is responsible for the tape to fall off. That is why it is impossible to name which force is necessary to remove a piece of adhesive tape under specific conditions. And if we can't define and measure some value shouldn't we just reject using it? I've added these explanations, as well as information about self-detaching experiment, to the revised article.

Q4. *Small typos.*

A4. Tried to remove them. My English still experiences some difficulties.