

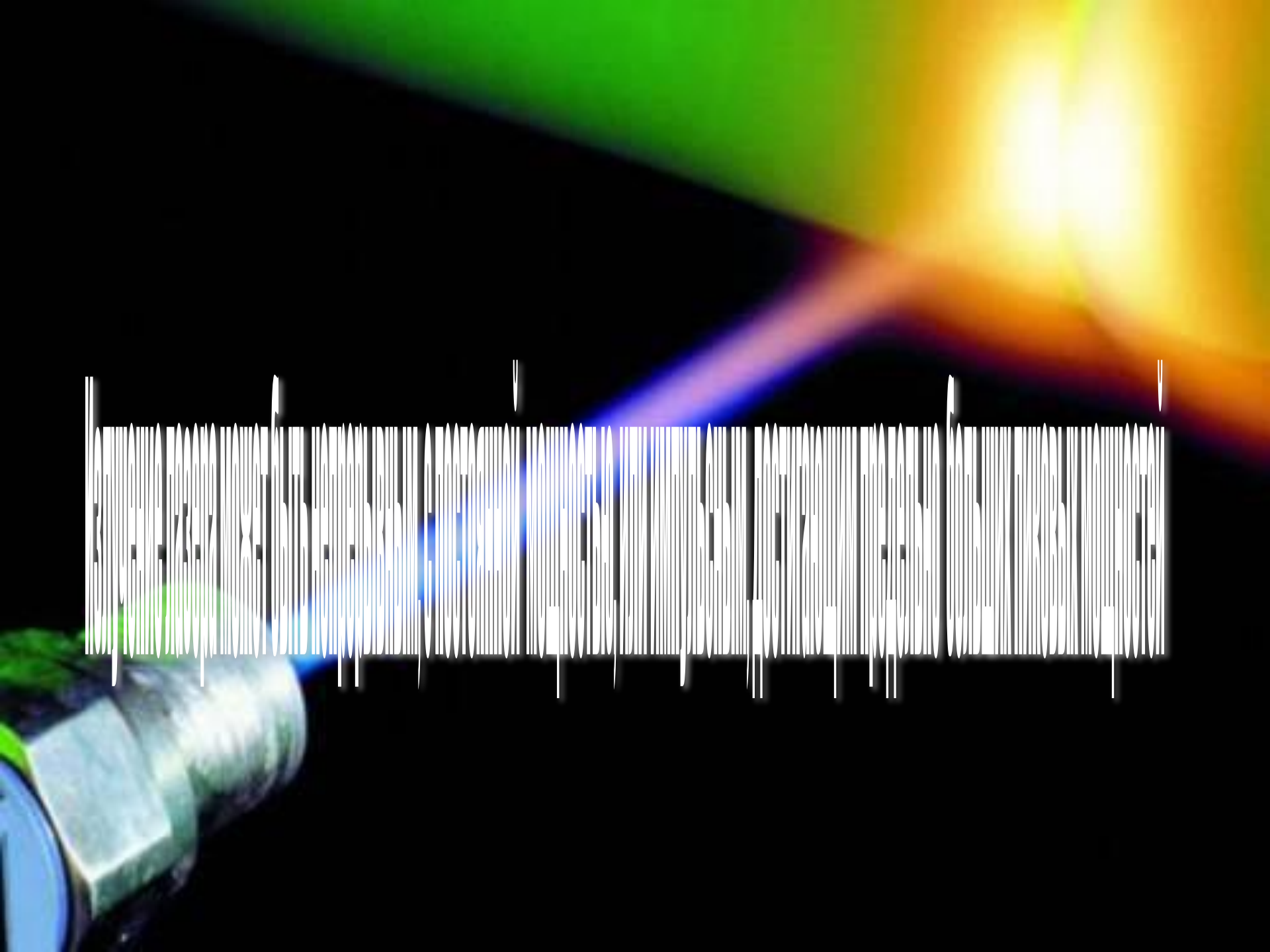
Лазер

МБОУ Чертковская сош № 2 учитель Дреев Н Ф

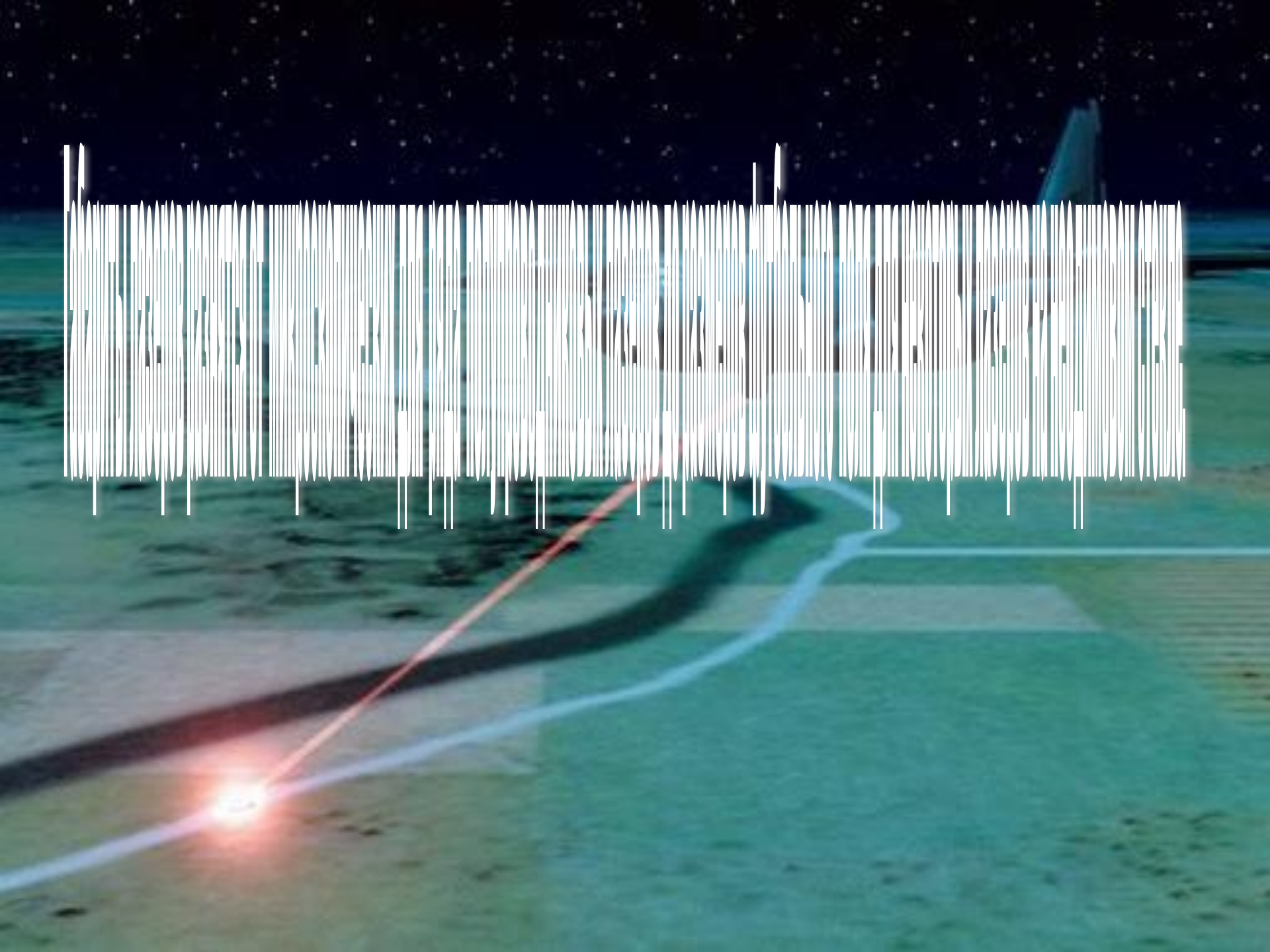
Чайкина Л., 11 "Б" класс

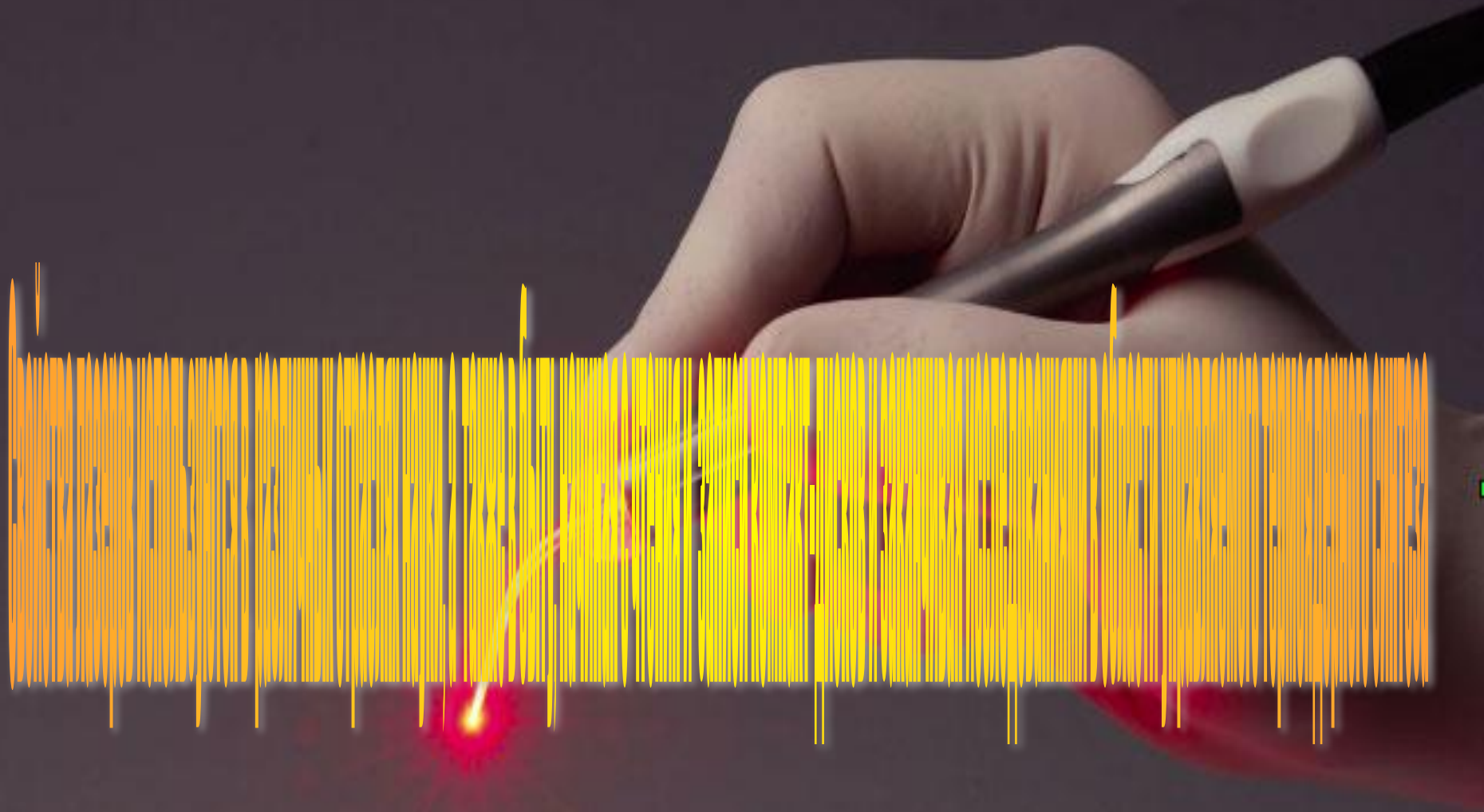










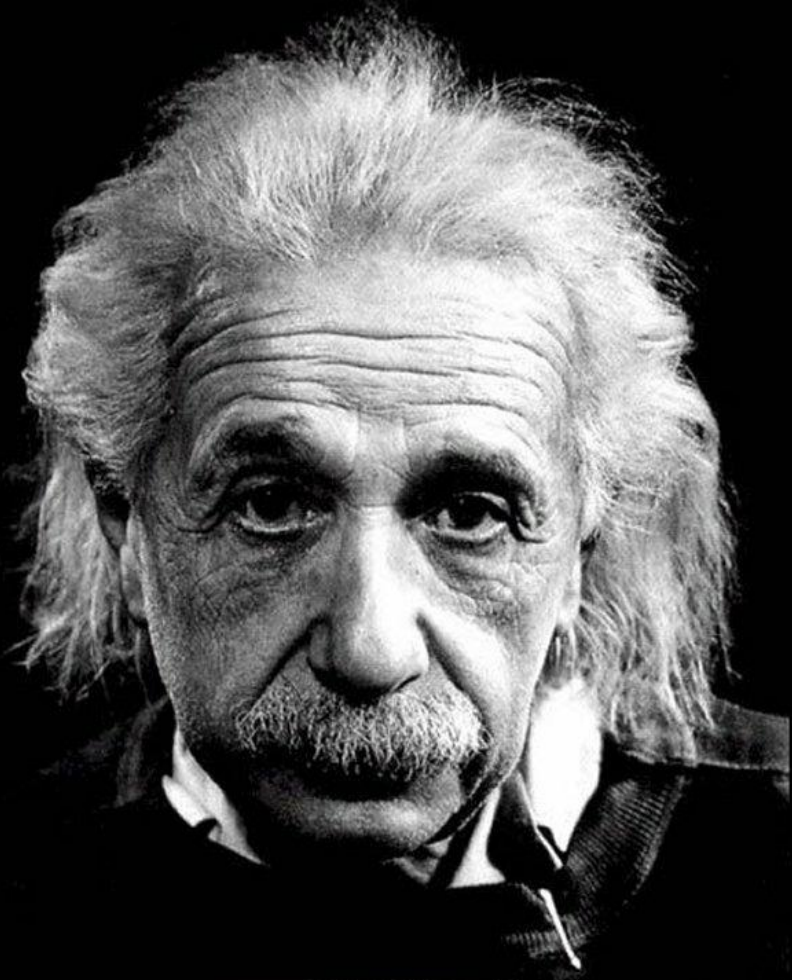


Лазер в лаборатории NASA



A blue laser beam is directed at a glass lens on a dark surface. The beam is bright and focused, creating a strong reflection on the lens and illuminating the surrounding area with a blue glow. The background is dark, making the blue light stand out prominently.

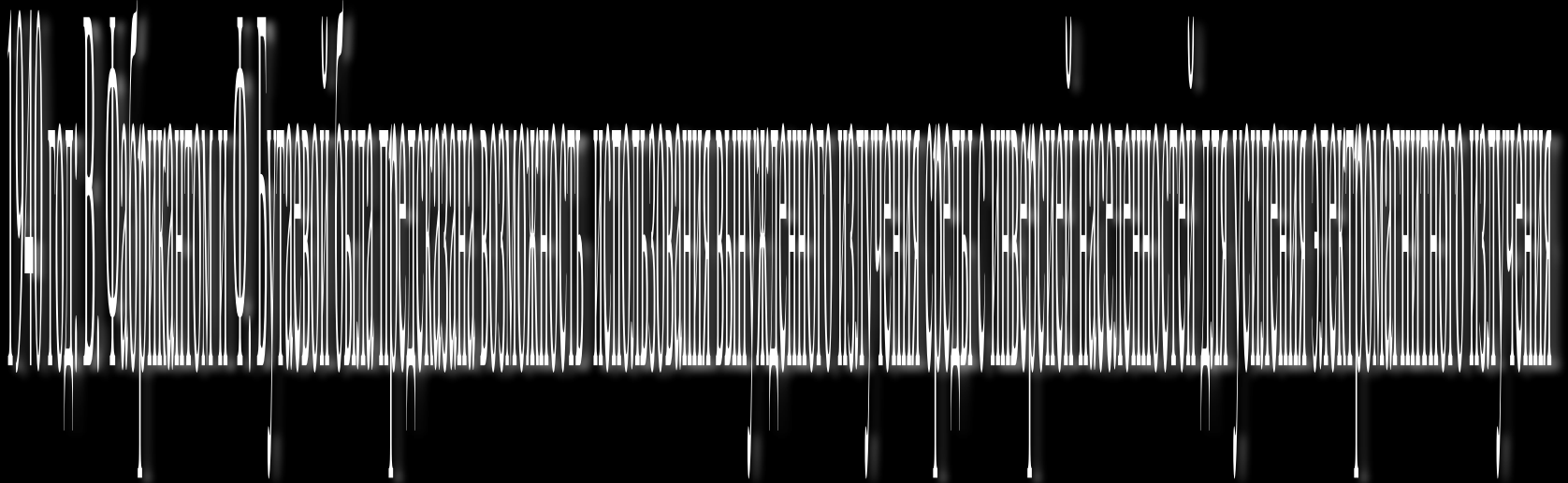
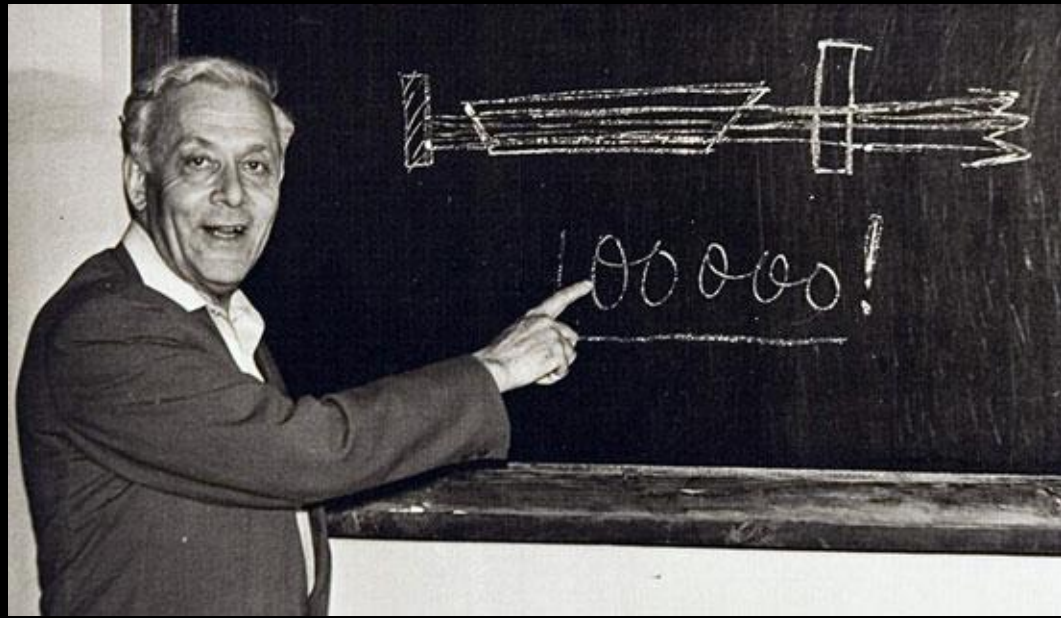
Основные даты для лазера

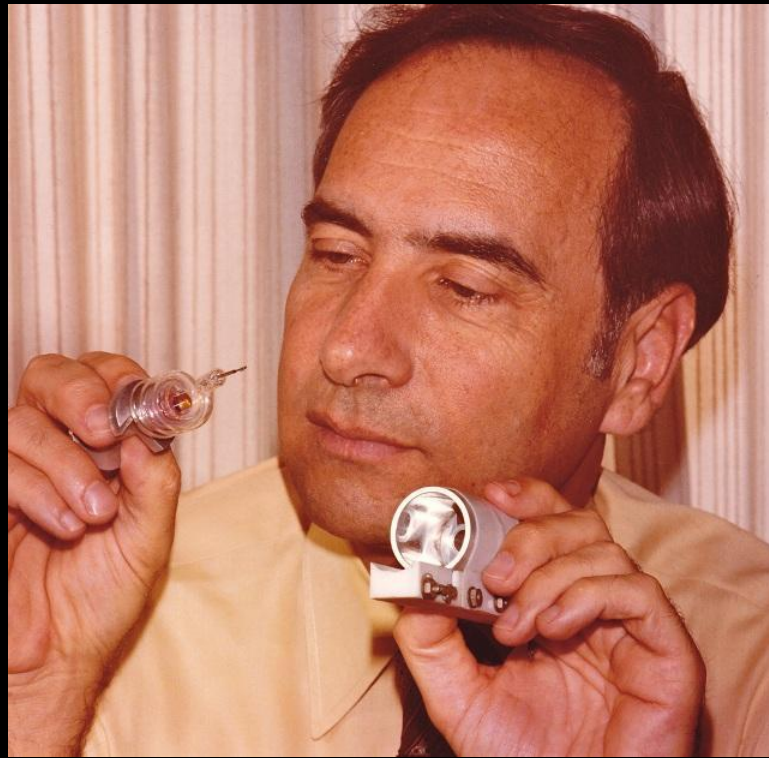


1916 год. А. Эйнштейн предсказывает существование явлений вынужденного излучения - осцилляций основы янтаря. Точный прогноз

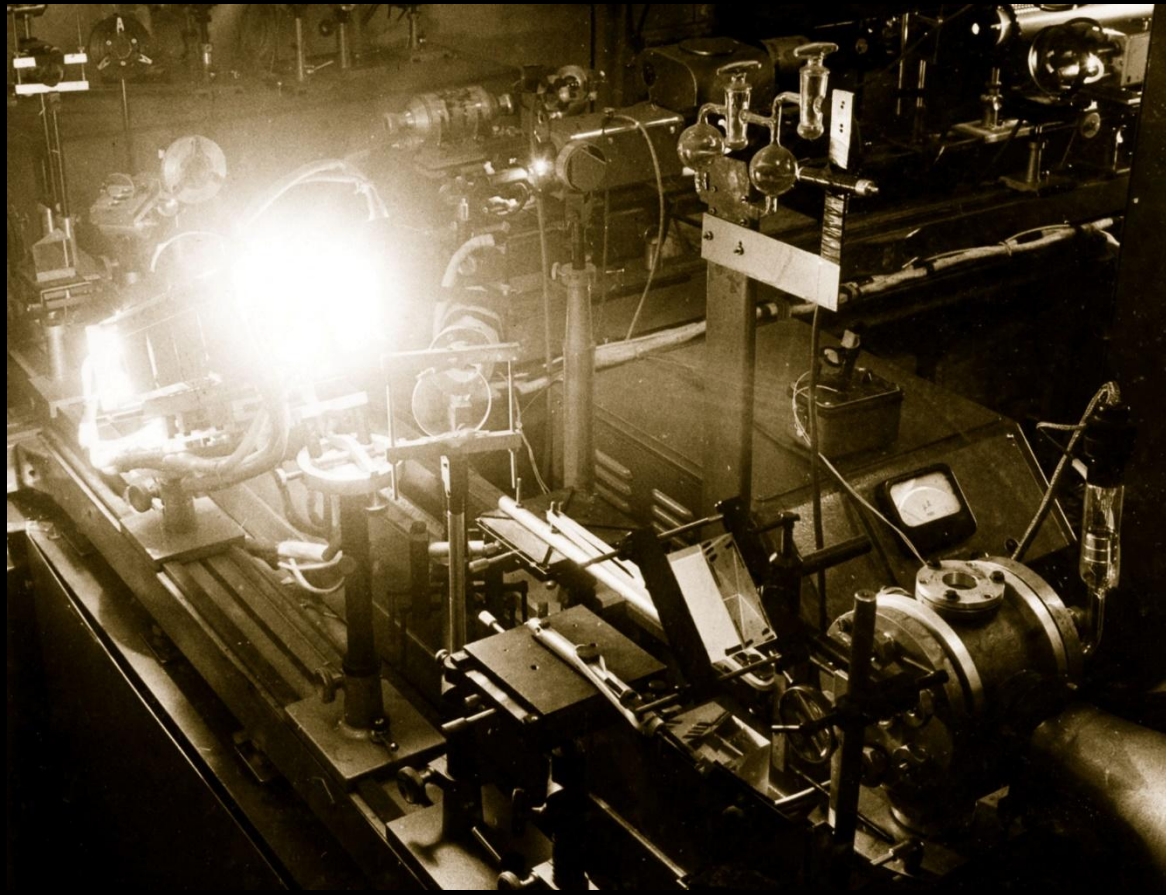


1928 год: экспериментальное подтверждение Р. Ладенбургом и Г. Копферманном существования вынужденного излучения



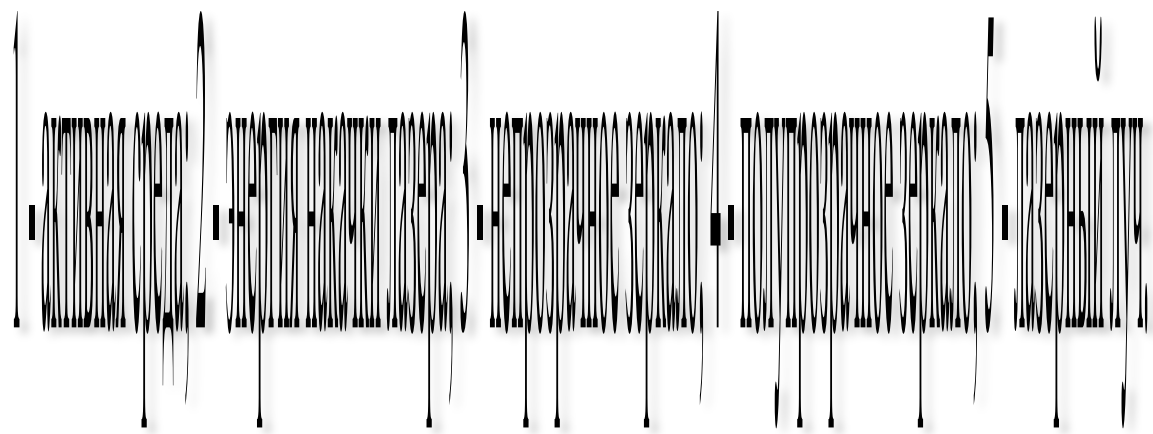
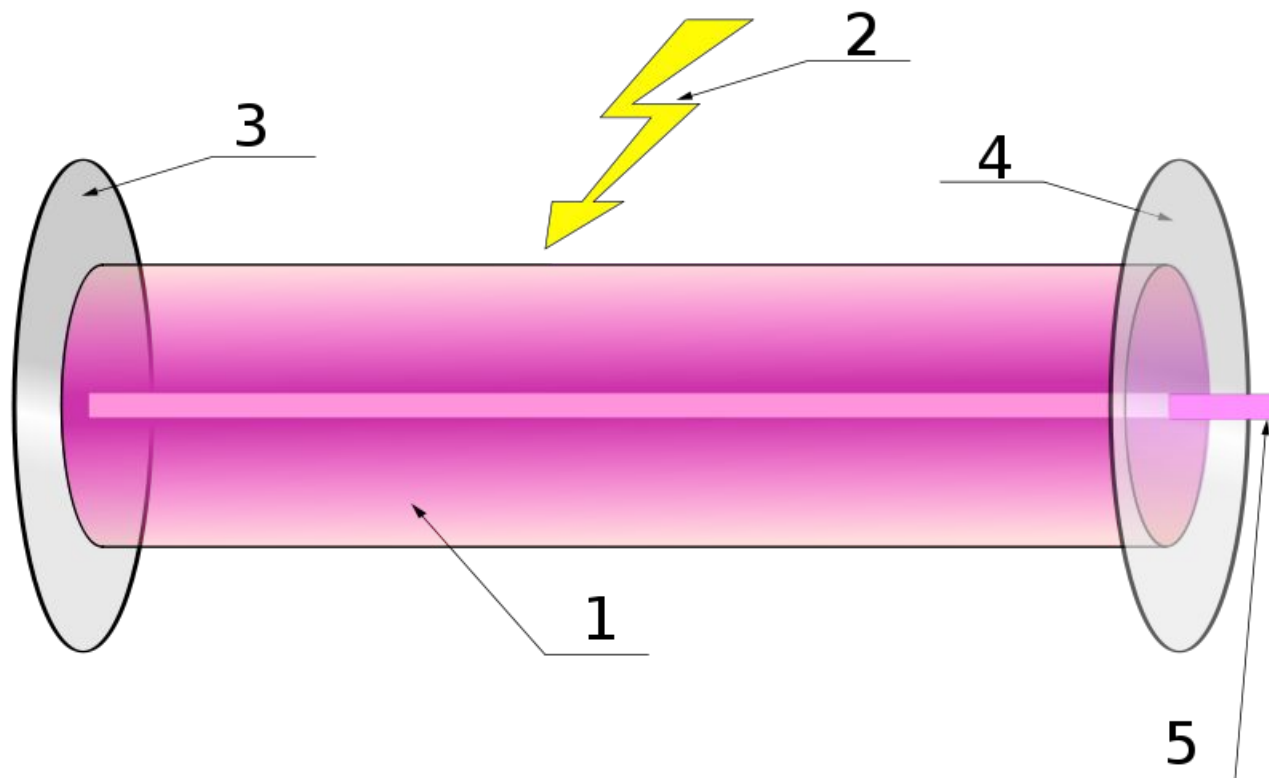


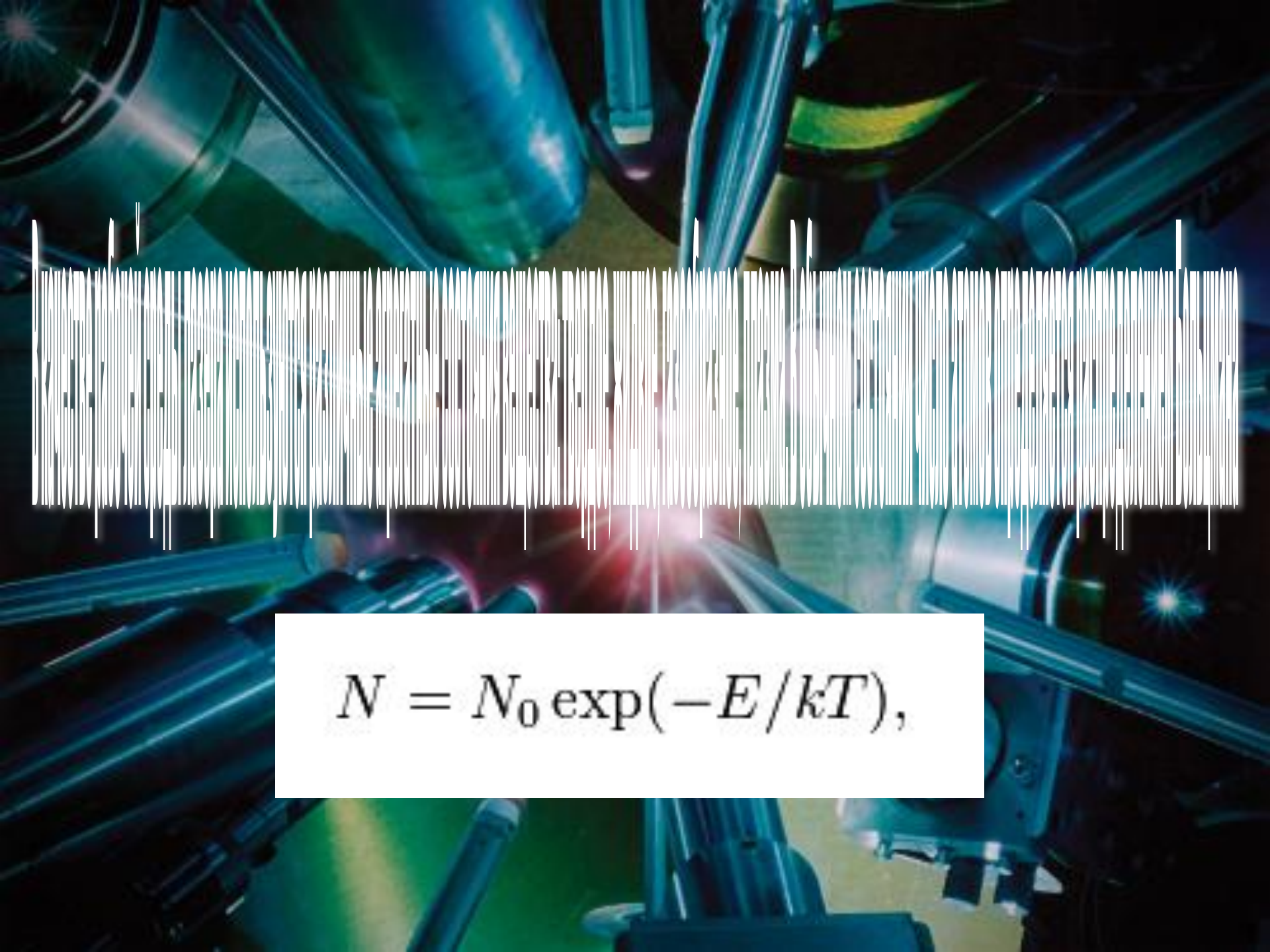
1960 год: 16 мая Т. Мейман продемонстрировал работу первого оптического квантового генератора - лазера

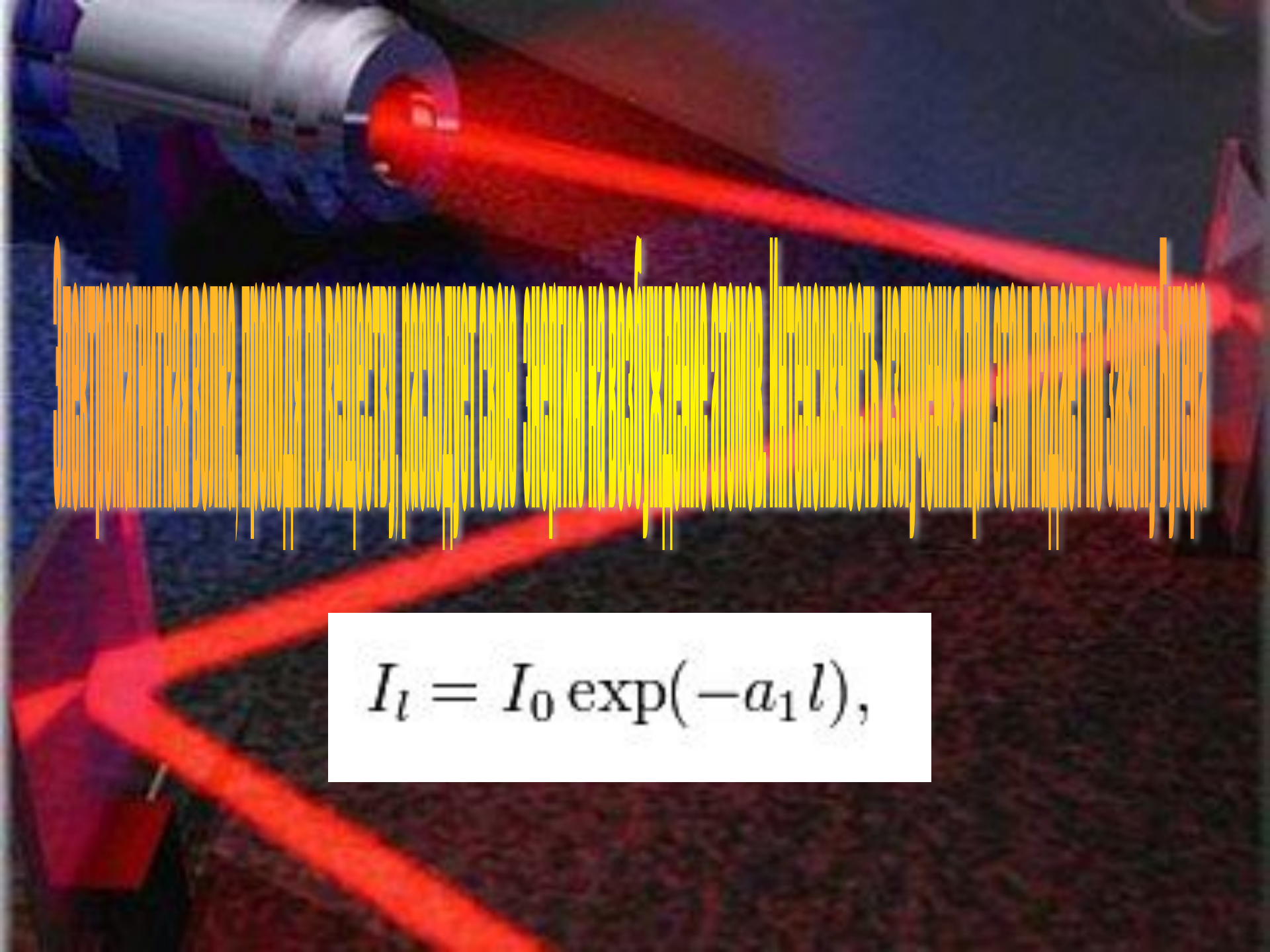


1961 год: создан лазер на неодимовом стекле, затем были разработаны лазерные диоды, лазеры на красителях и т. д.

Устройство лазера



The background of the slide is a complex, futuristic scene with a blue and green color palette. It features various mechanical components, pipes, and structures, possibly representing a laboratory or an industrial facility. A bright light source in the center creates a lens flare effect. A white rectangular box is positioned in the lower-middle part of the image, containing a mathematical equation.
$$N = N_0 \exp(-E/kT),$$


$$I_l = I_0 \exp(-a_1 l),$$

A photograph of a laser laboratory setup. Several bright blue laser beams are visible, intersecting on a perforated metal table. The beams originate from various points and converge towards the center. The background is dark, with some faint lights and equipment visible. The overall scene is illuminated by the blue light of the lasers.

Классификация лазеров

A blue laser tube is shown in the upper right corner, emitting a red laser beam that extends across the frame. The background is a deep blue with some light streaks. The title text is overlaid in the center, rendered in a white, stylized, outlined font.

Твердотельные лазеры на люминесцирующих твердых средах



Лазеры на красителях



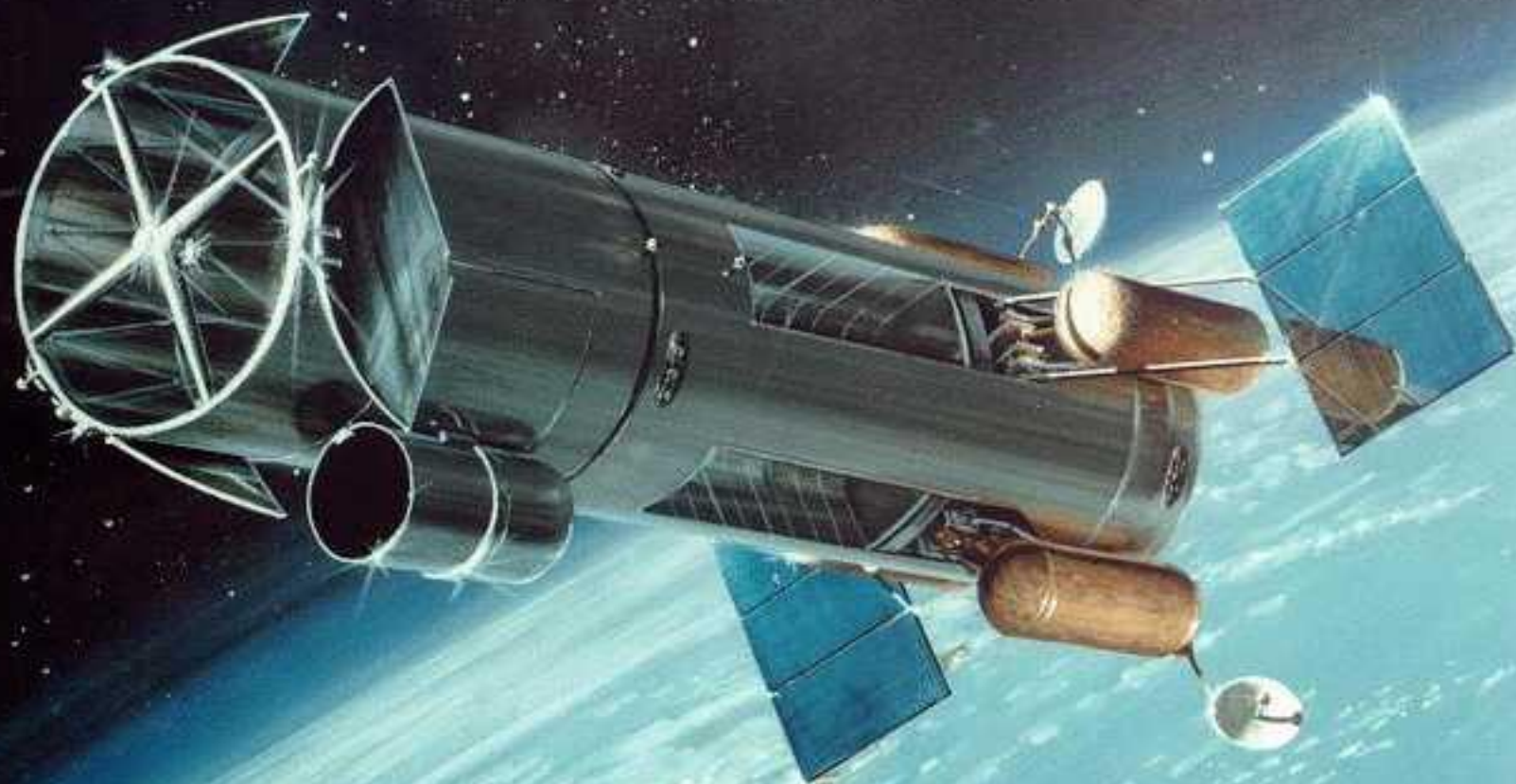


Газовые лазеры

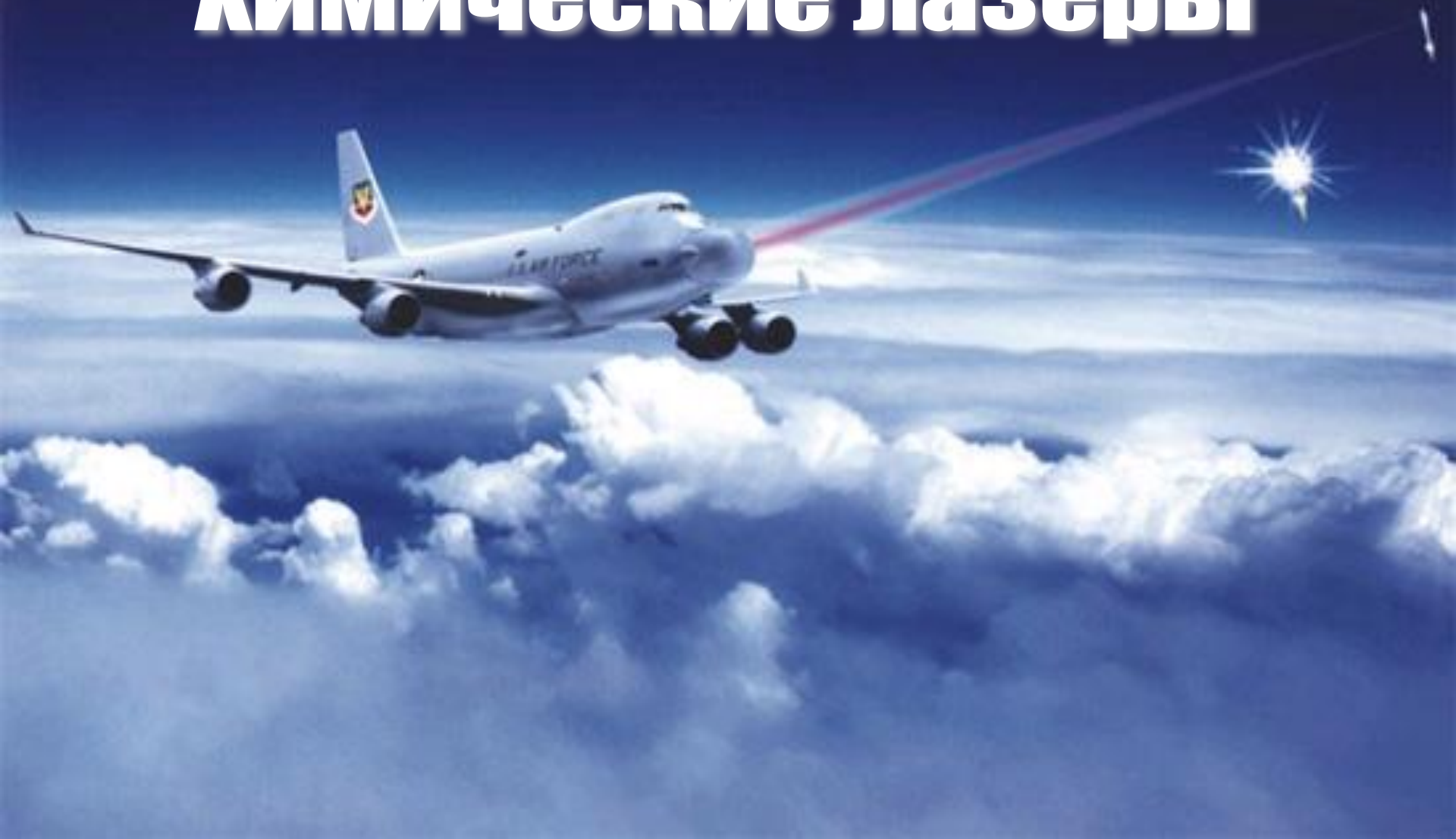
Газодинамические лазеры

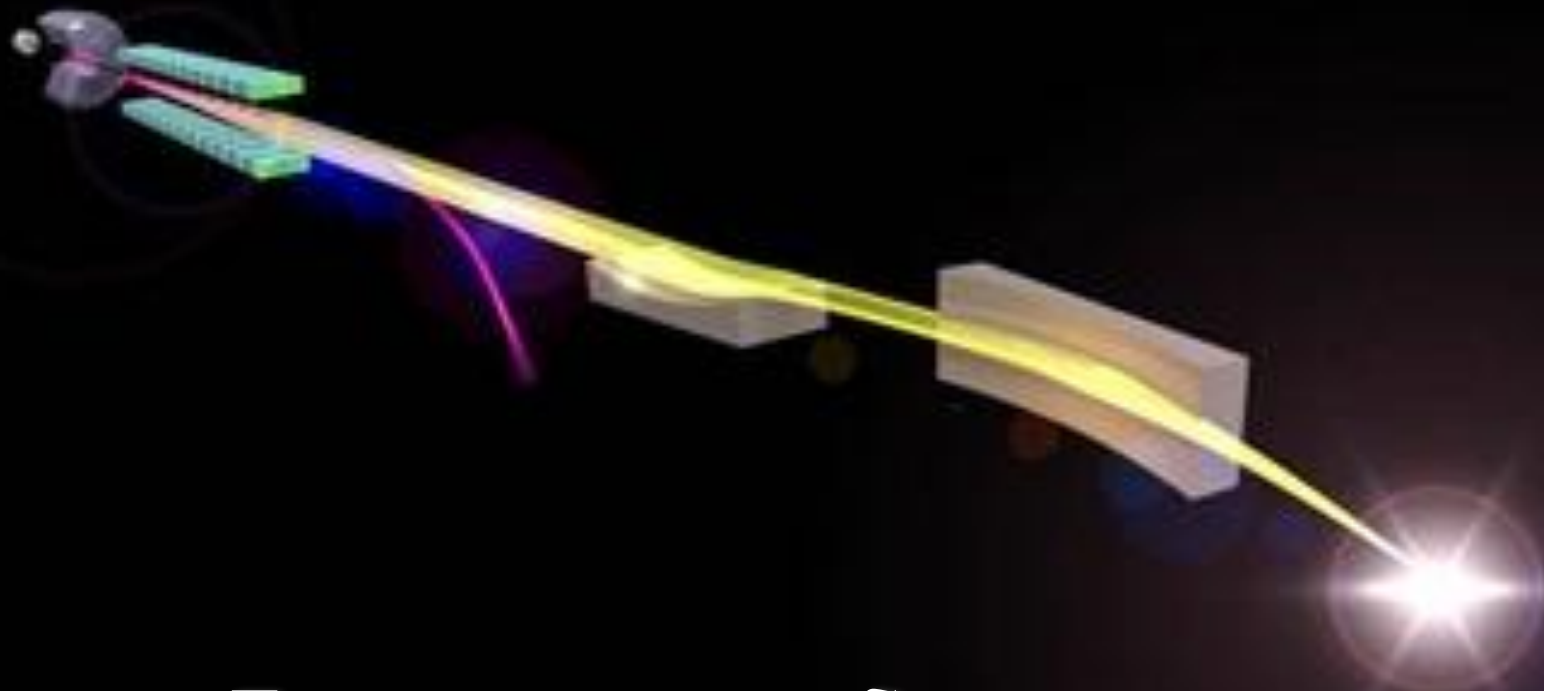


Эксимерные лазеры



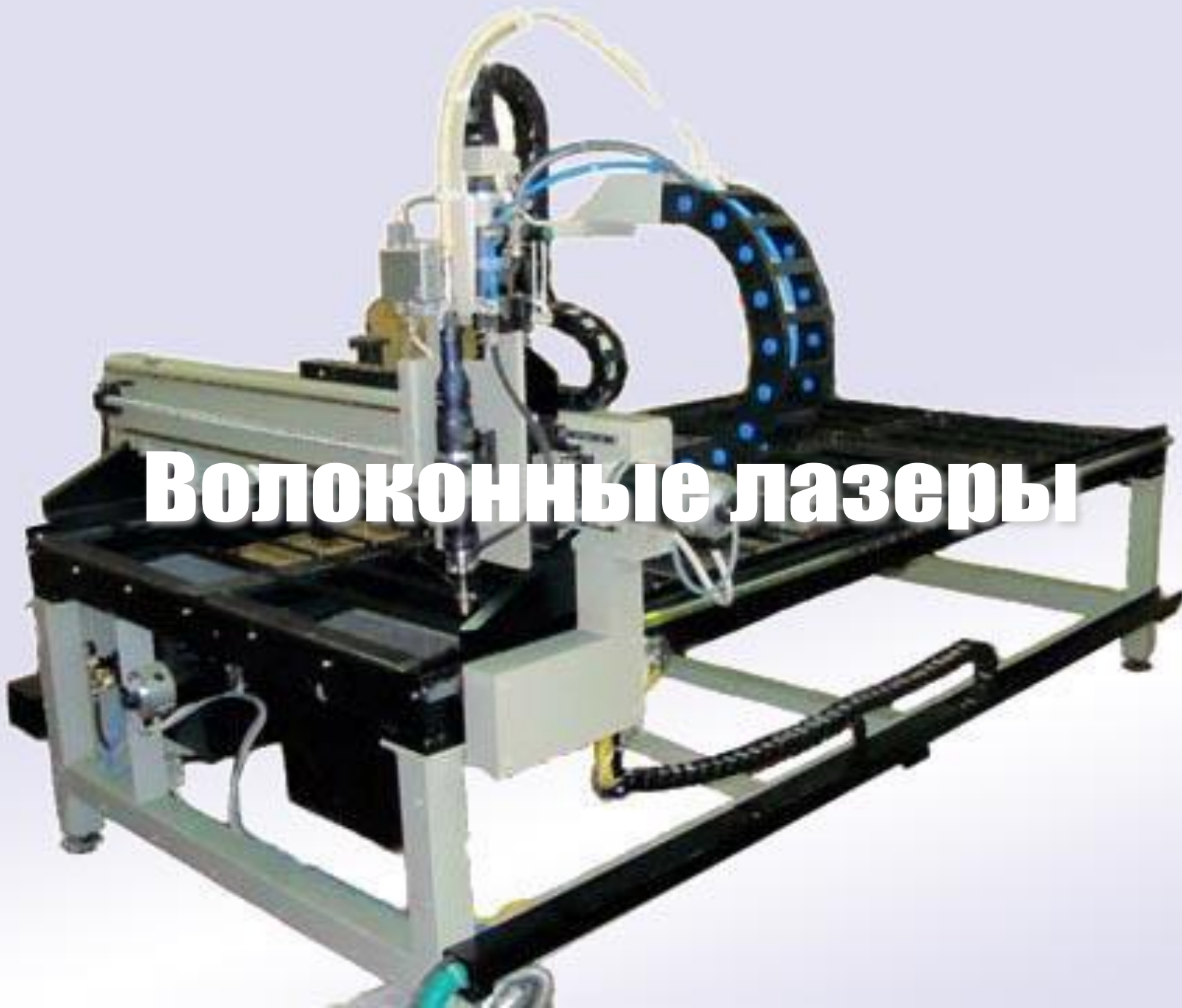
Химические лазеры





Лазеры на свободных электронах

Волоконные лазеры



A black laser pen is shown at an angle, emitting a bright green laser beam. The beam is directed towards the bottom left of the frame, where it illuminates a textured, brownish surface. The pen has a silver-colored tip and a small blue button on its side. The background is dark and textured.

Использование лазеров



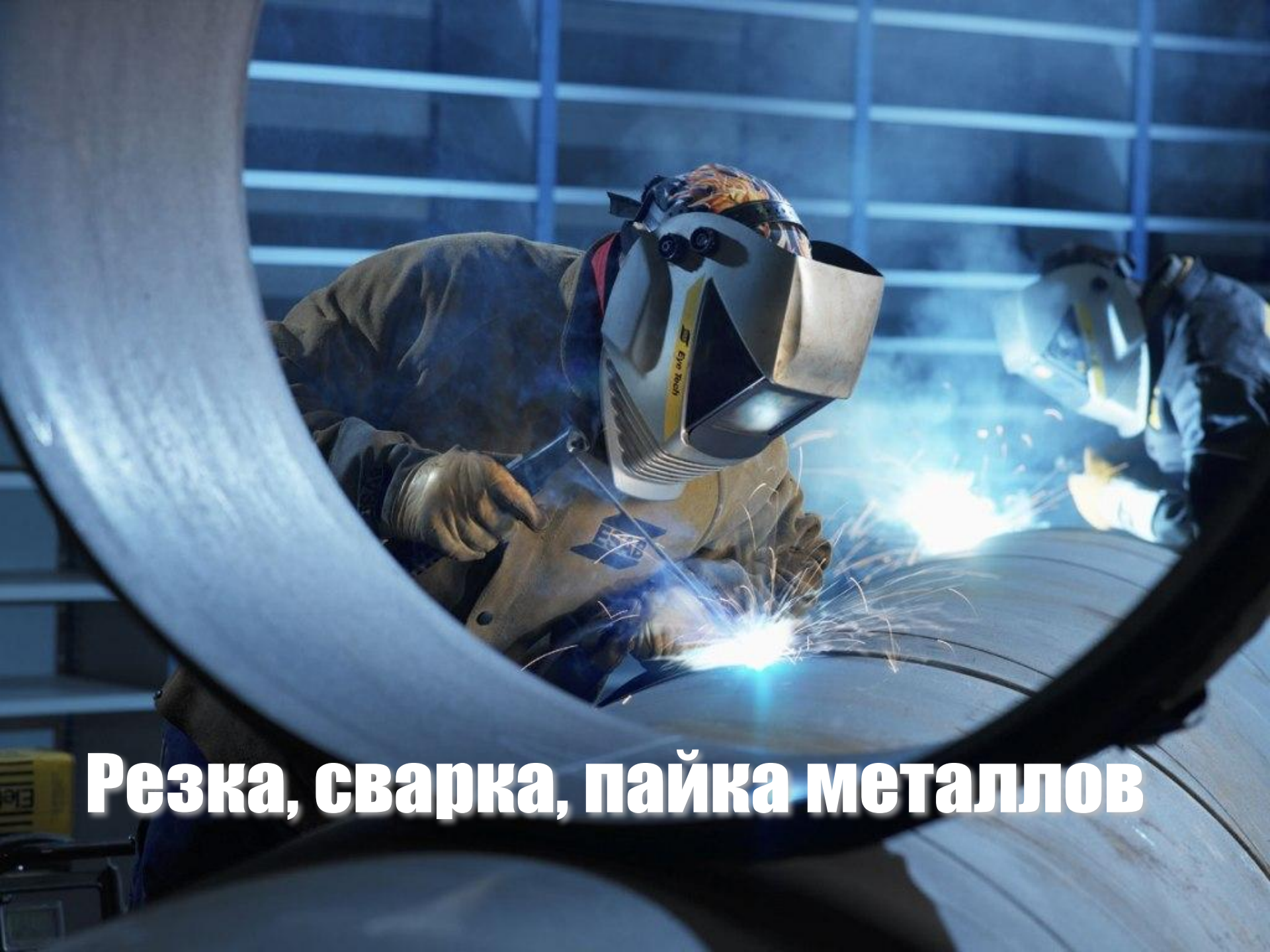
Проигрыватели компакт-дисков



Лазерные принтеры



СЧИТЫВАТЕЛИ ШТРИХ-КОДОВ



Резка, сварка, пайка металлов

A glowing green 3D wireframe head is positioned on a circular grid base. The head is rendered with a grid of lines and is illuminated from above, creating a bright glow. The base is a circular platform with a grid pattern, also glowing with a green light. The background is dark, making the glowing elements stand out.

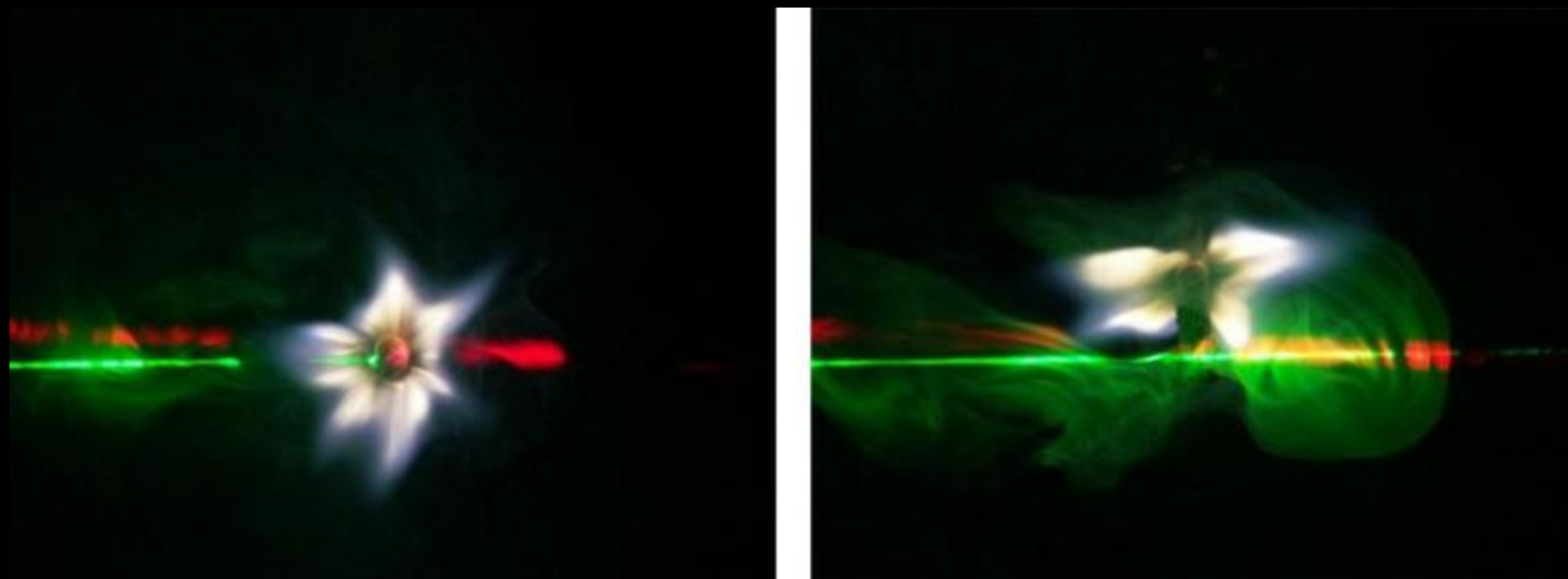
Голограффия

A close-up photograph of a vintage radio tuner dial. The dial is rectangular with rounded corners and a light-colored face. It features a frequency scale with numbers 5, 7, 8, 10, 12, 14, and 16. A red needle points to the number 8. Below the scale, the letters 'V E R C' are visible. The dial is mounted on a dark red surface and is flanked by two yellow control knobs. The lighting is dramatic, with a bright light source from the left creating a strong highlight and shadow.

Радиосвязь

A close-up photograph of a dental procedure. A bright red laser beam is directed at a tooth, creating a small, glowing yellow point of contact. The surrounding gum tissue is a deep red color. The text "Медицина (лечение глаз и зубов)" is overlaid in the center of the image.

Медицина (лечение глаз и зубов)



Лазер в кинематографе



"Синее небо" (1971) - о начале лазерной эры в медицине, а именно в офтальмологии.

