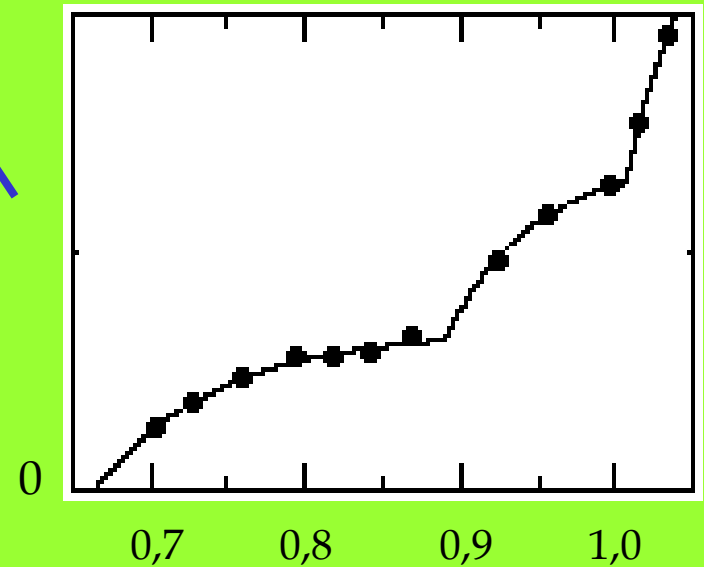


Fundo físico

A fim de demonstrar os princípios do método vibro-acústico para avaliação da cavitação, um sensor vibro-acústico simples foi montado na carcaça de uma turbina pequena equipada com uma janela de plexiglass através da qual a cavitação foi observada. A potência média da saída do sensor foi medida em uma série de valores do potência da turbina, e a aparência da cavitação respectiva foi fotografada.

Potência do ruído



Potência da turbina normalizada

Resultado:

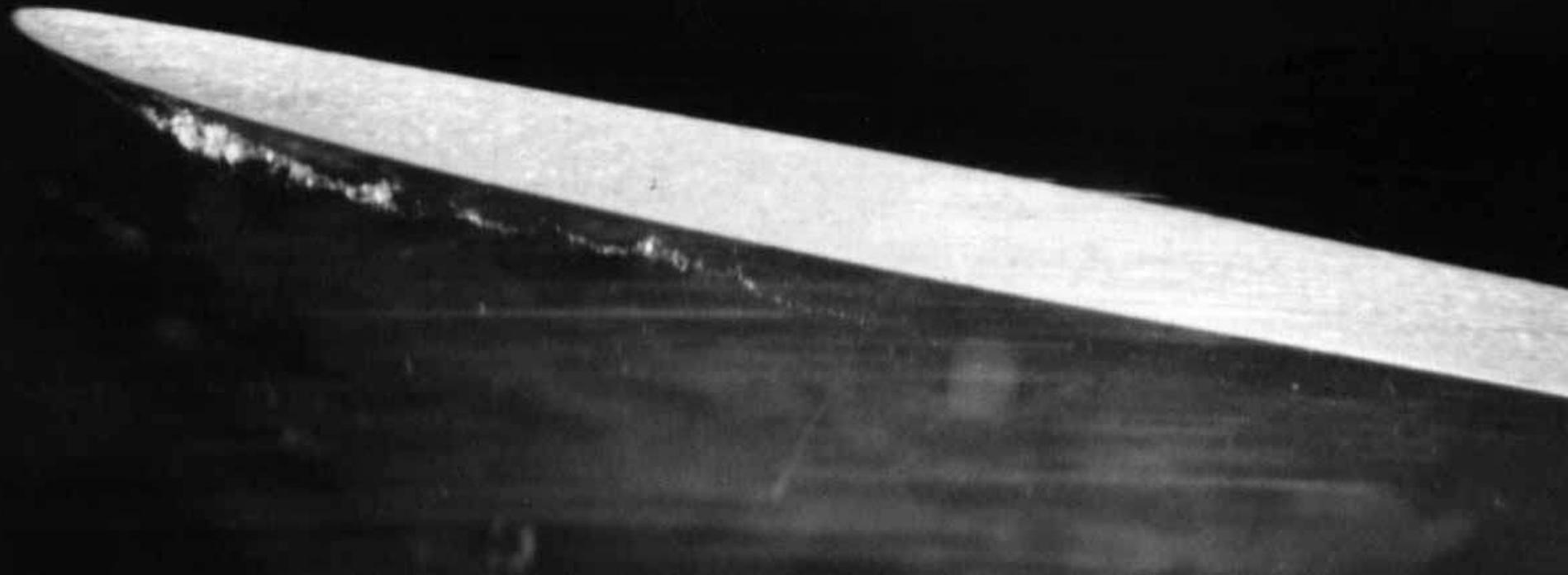
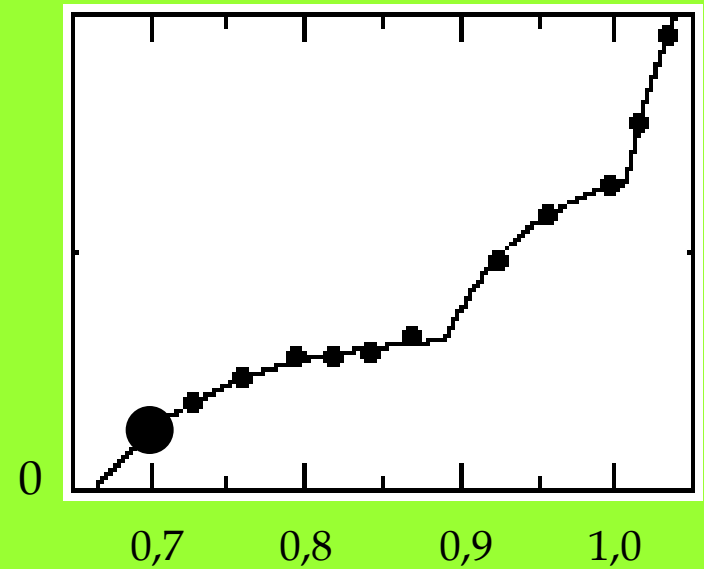
pontos – medida

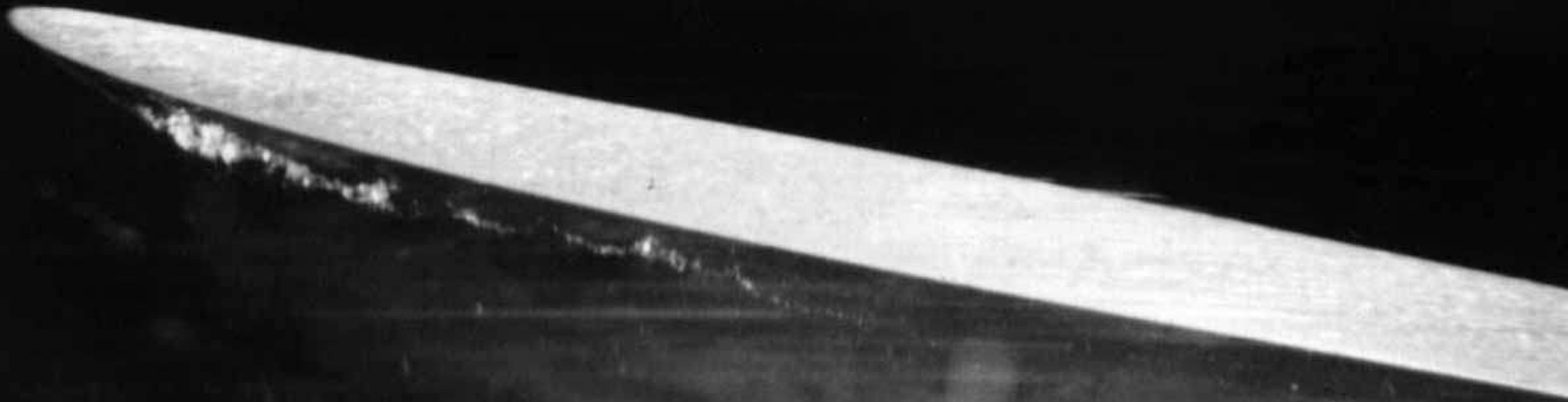
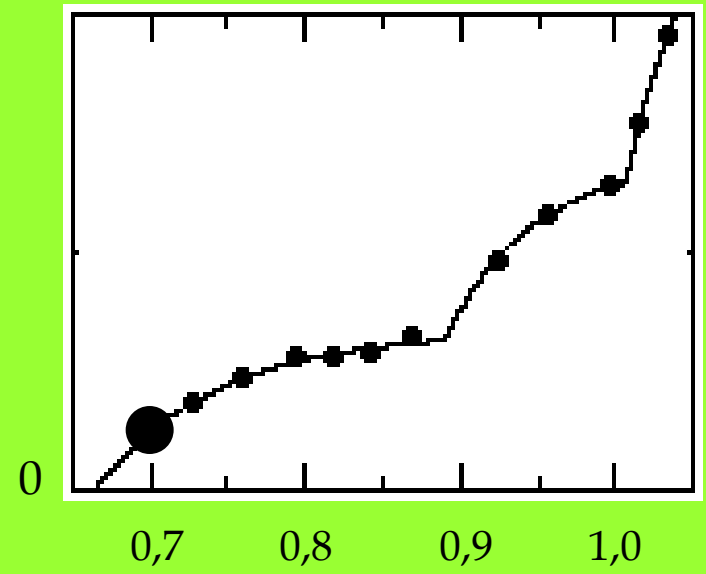
linha – modelo quase teórico

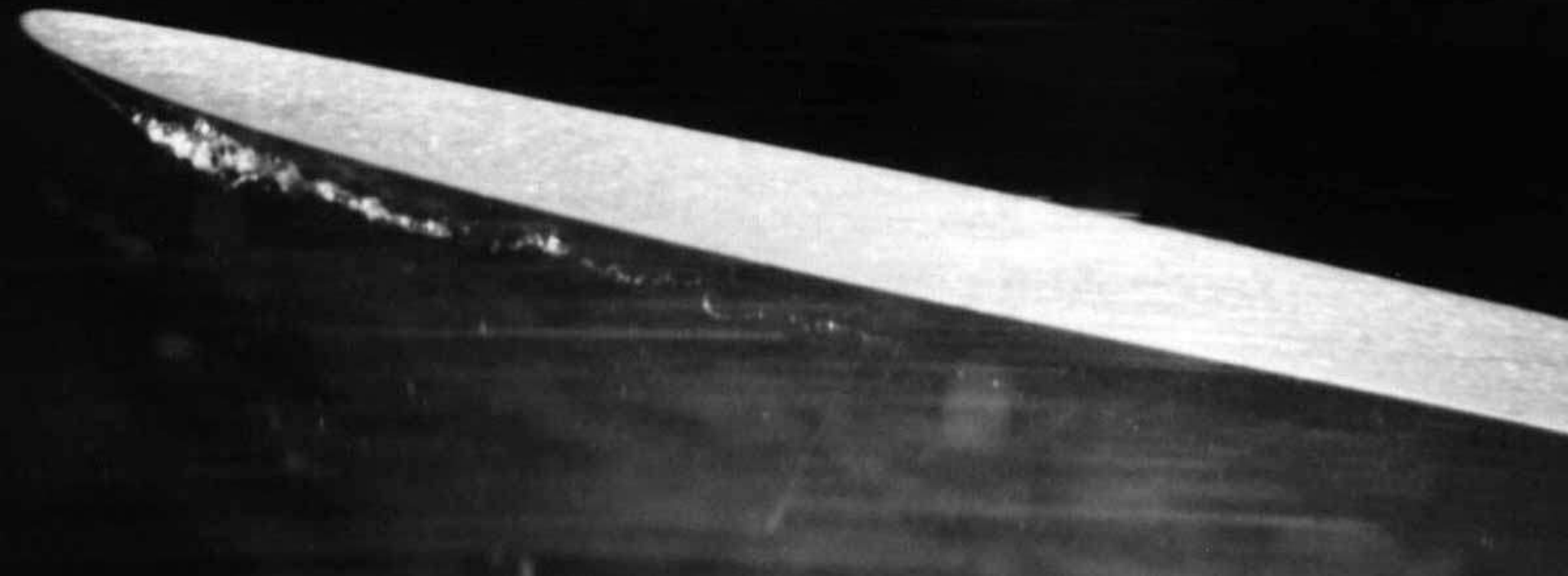
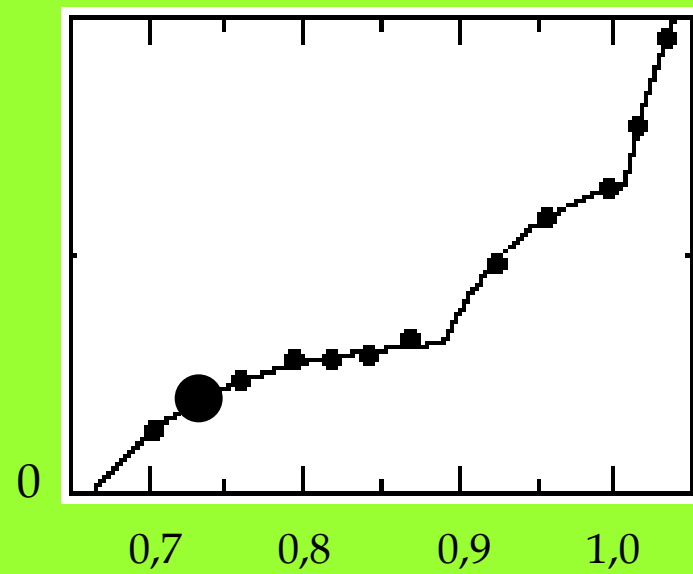
**O corpo branco:
pá do rotor**

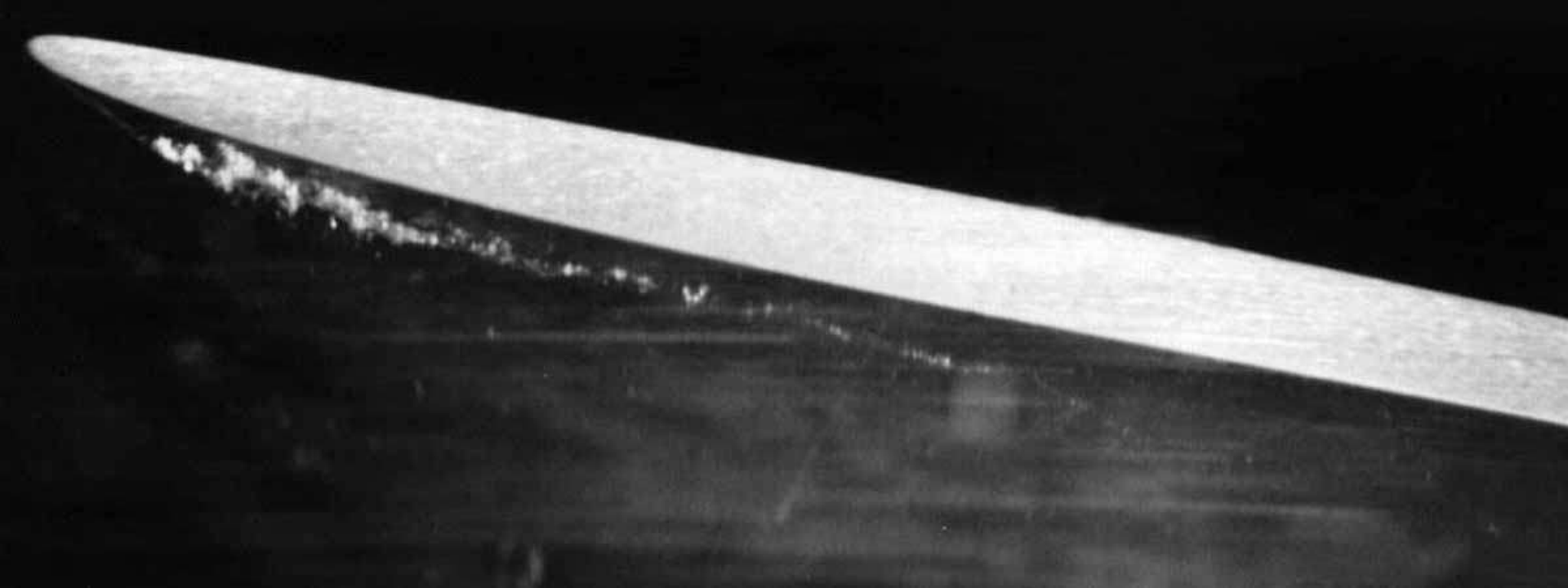
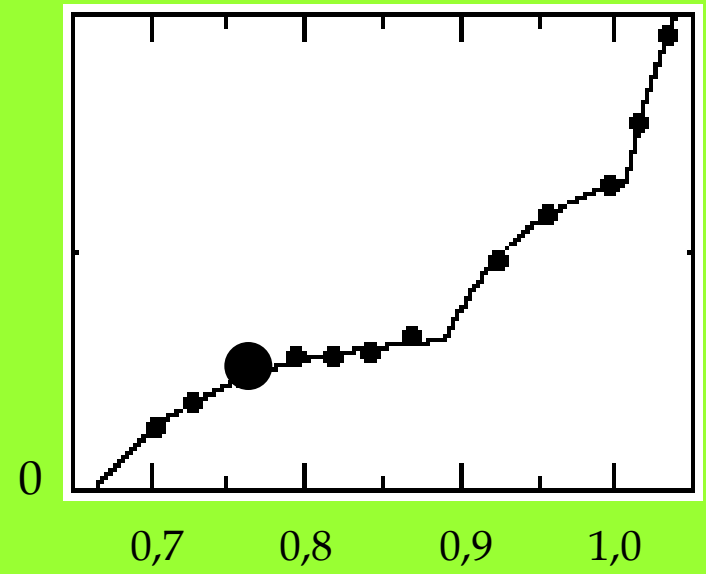
**As partes brancas abaixo dela:
cavitação**

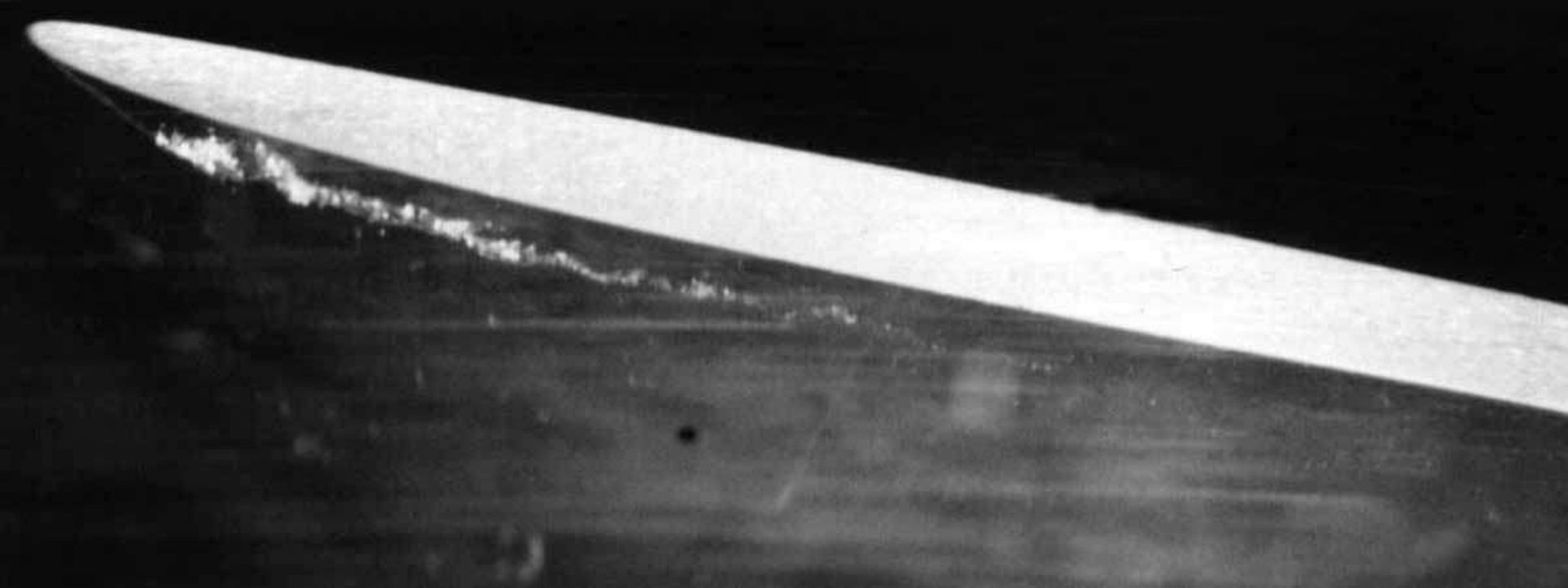
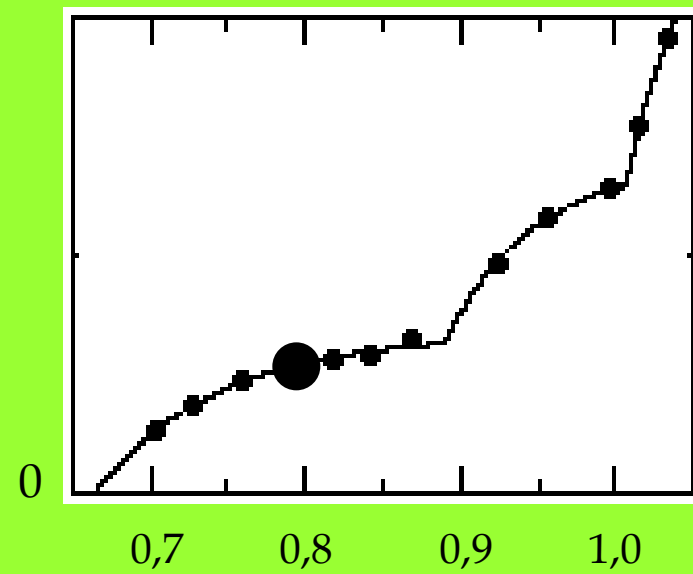
A seguir: 12 medidas

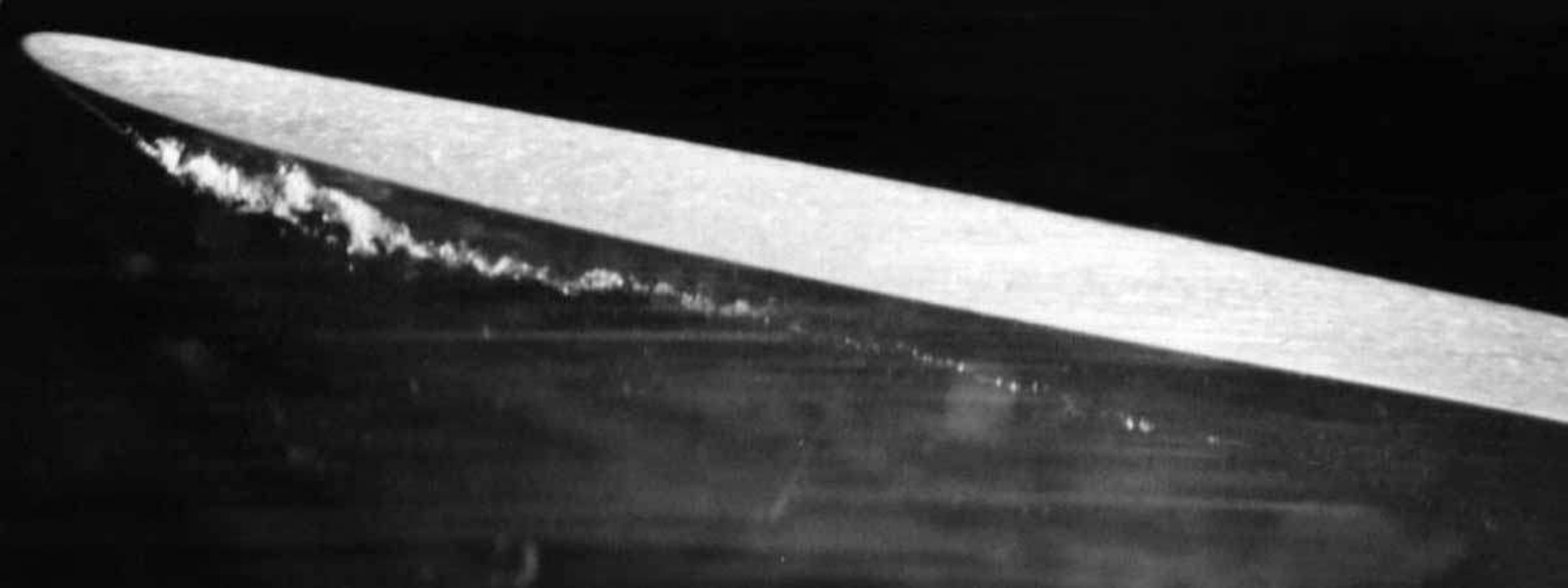
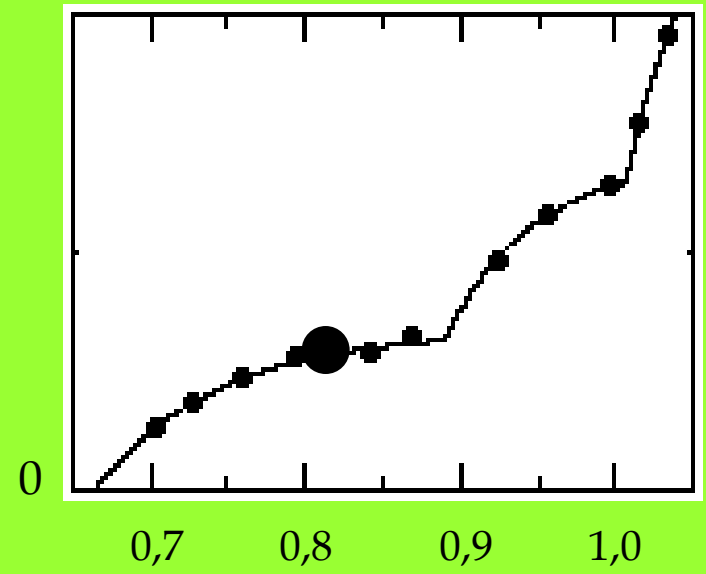


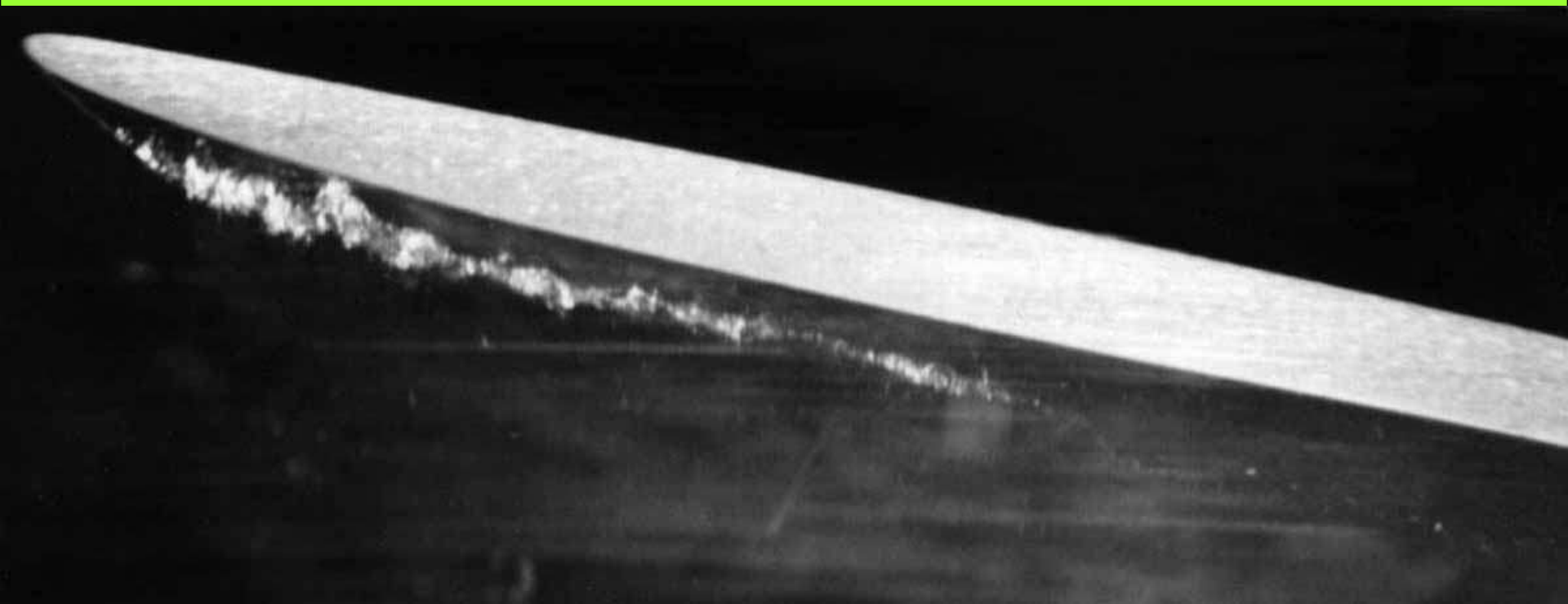
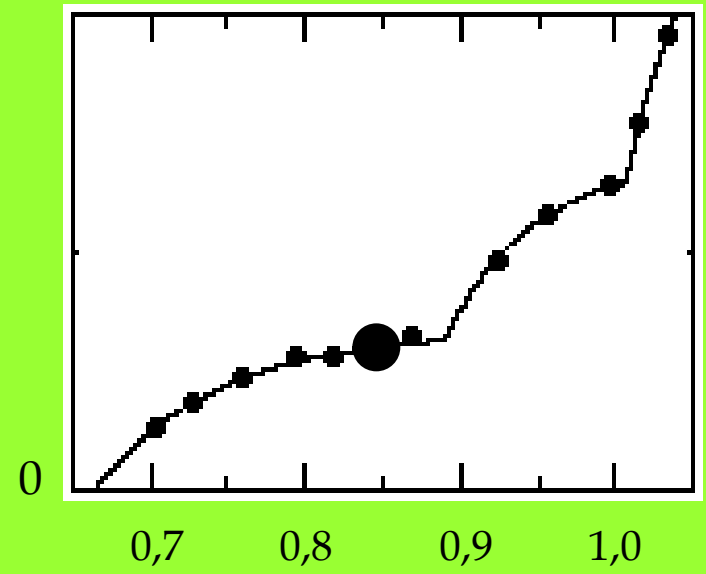


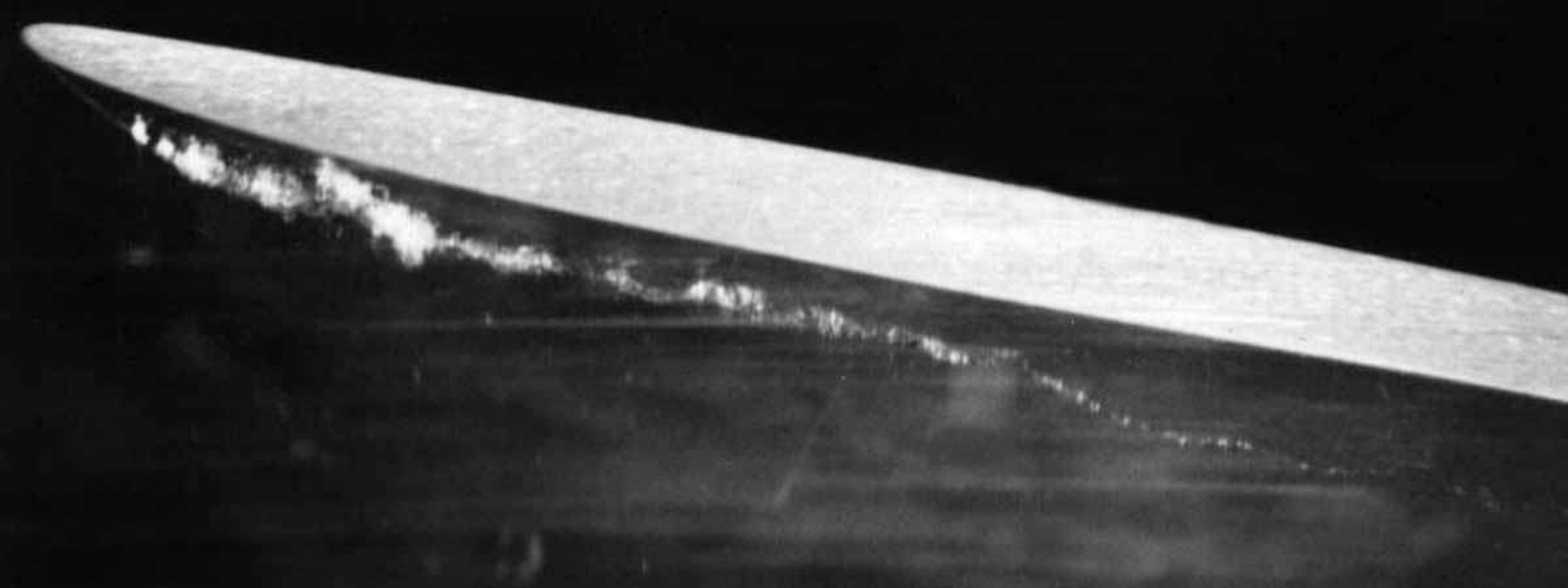
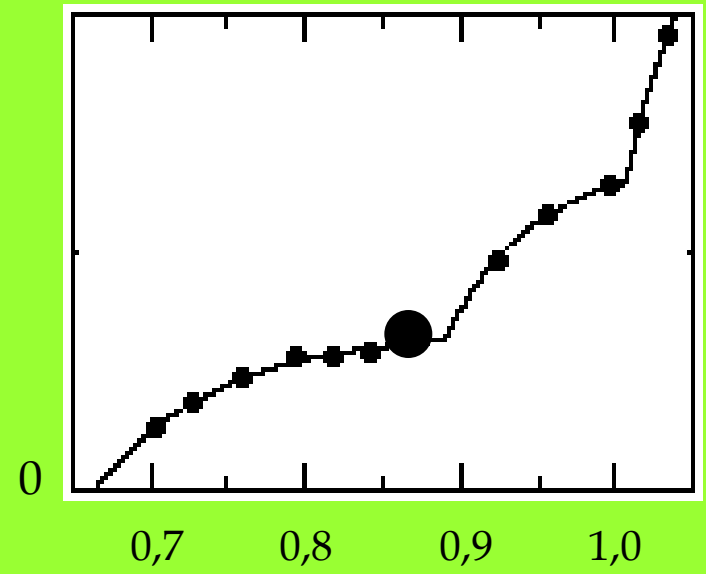


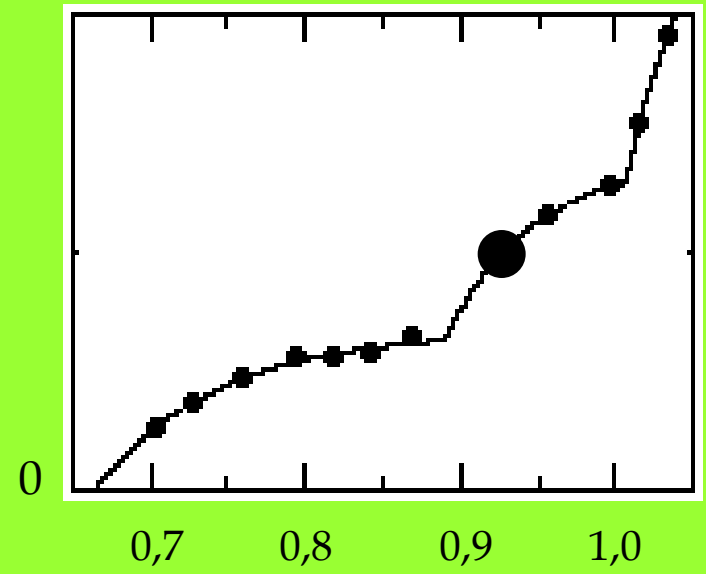


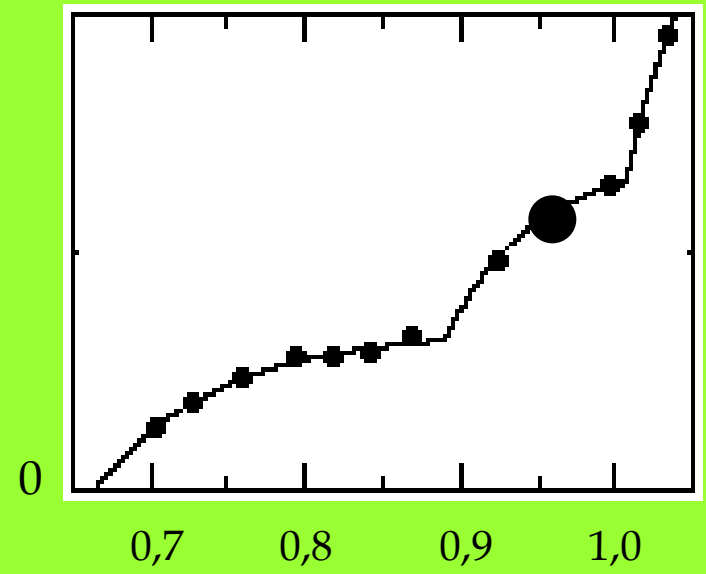


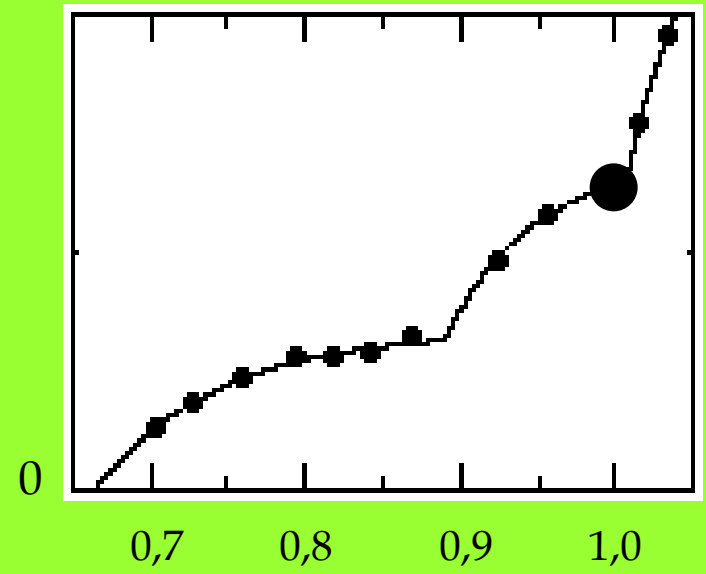


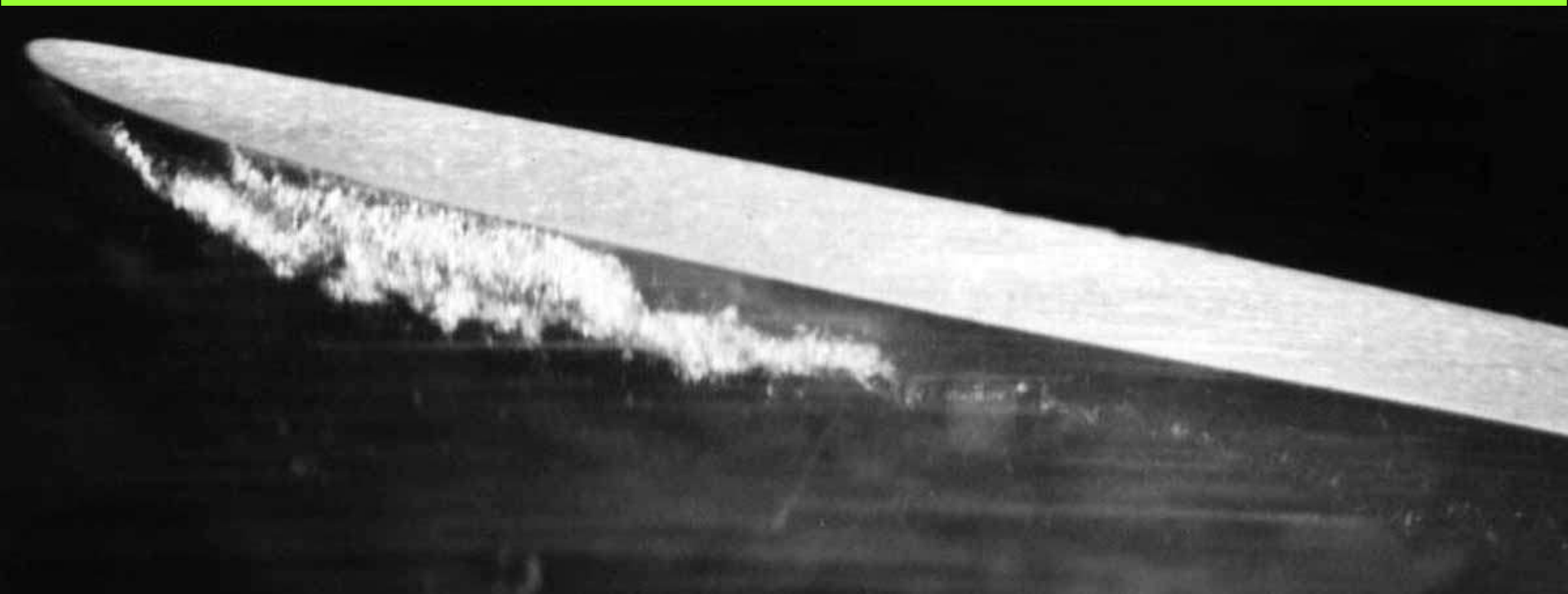
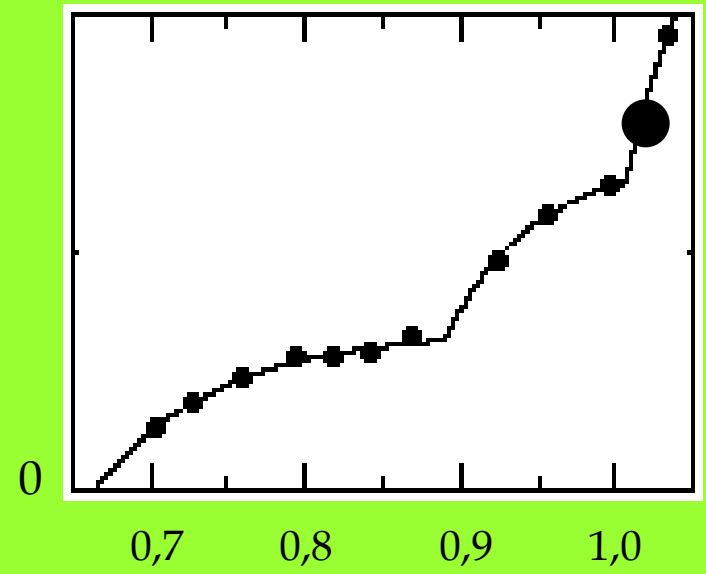


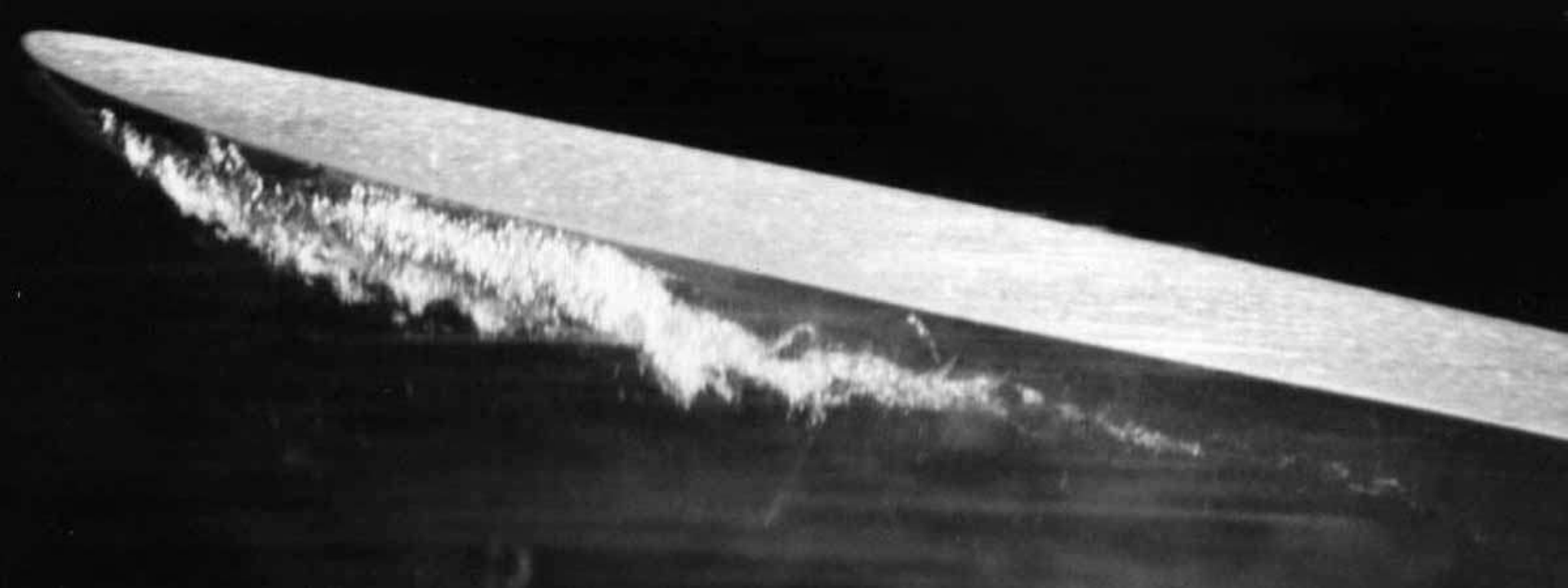
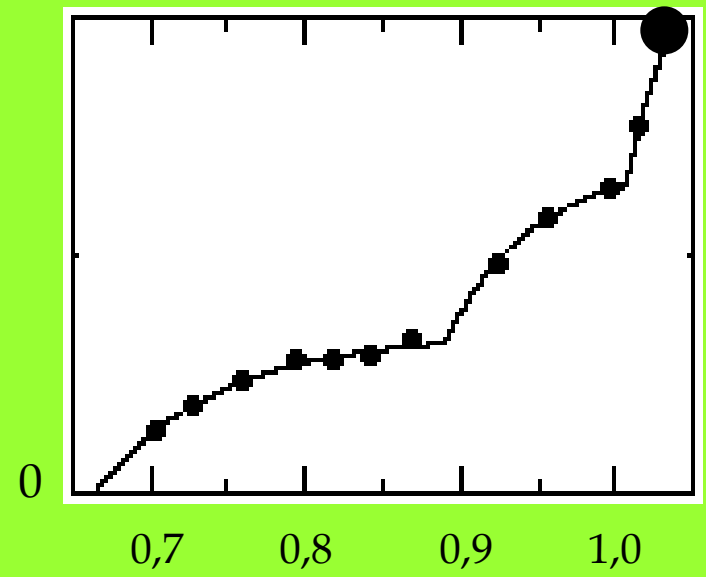




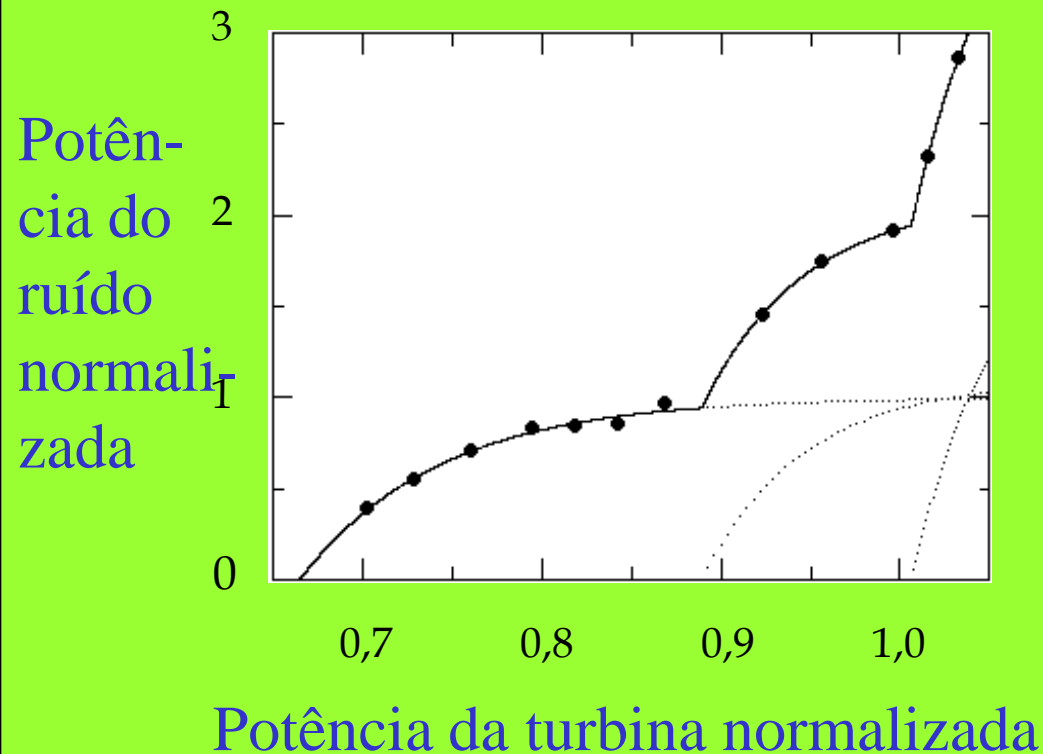








Em alguns casos, mesmo um teste tão simples pode revelar mecanismos diferentes da cavitação. Há 3 mecanismos neste caso.



Os mecanismos podem ser quantitativamente descritos. Diferem no valor do limiar da potência e na intensidade plena conseguida.

