MP15-13: Mechanism of Pulse Modulated Holmium:YAG Lithotripsy

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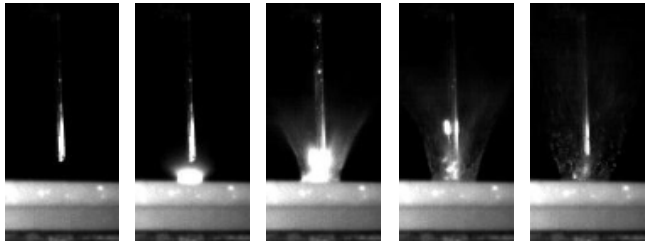
Experiment Overview

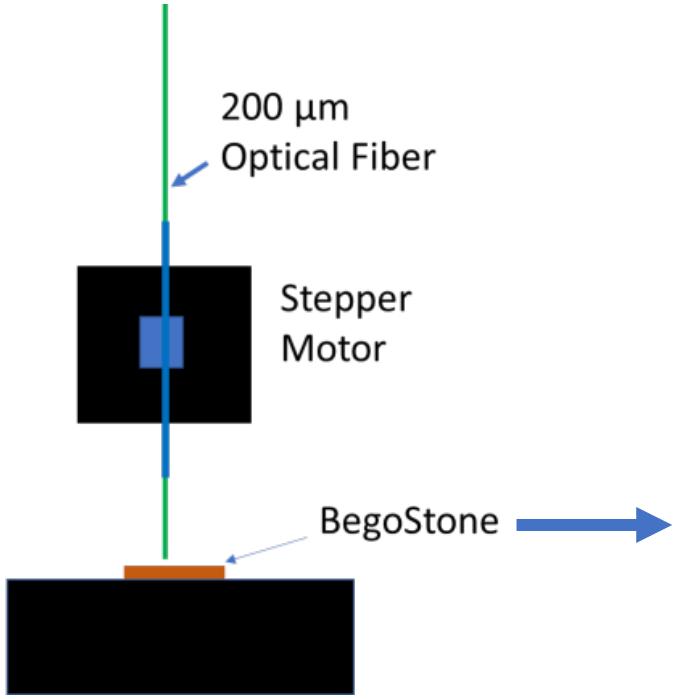
Fast Video Recording



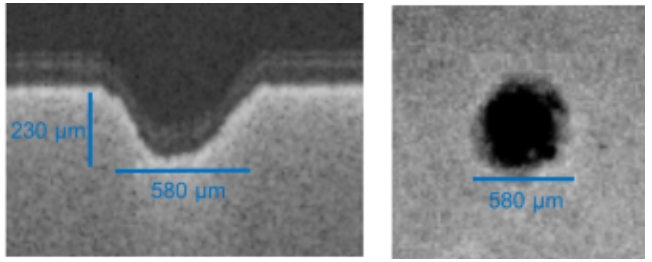
Photron
Fastcam mini
ux100

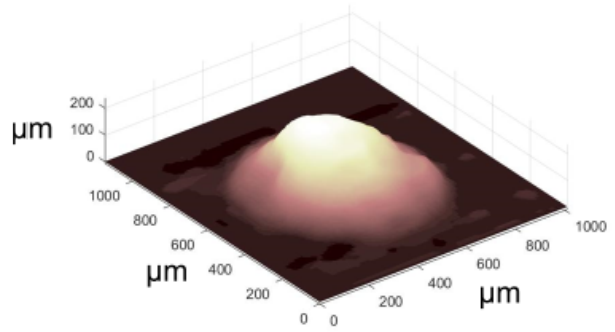
(50,000 FPS)

Ablation With a Single
Ho:YAG Pulse



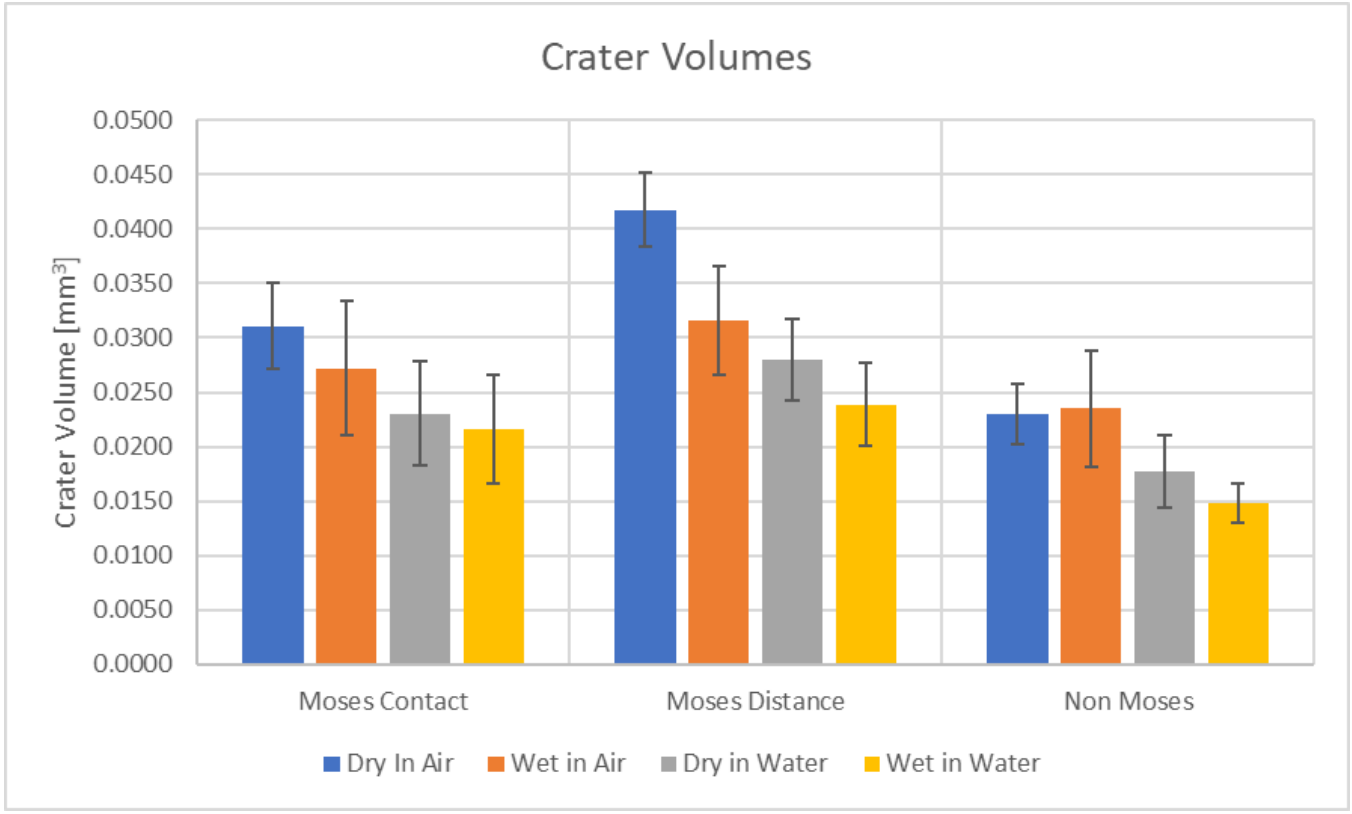
Optical Coherence
Tomography (OCT)





Crater Volume =
0.042 mm^3

Ablation Volume Comparison



- Moses-Distance pulse modulation had larger craters than Non-Moses for all conditions.*
- Stones in air had larger volumes than stones in water for all conditions.*
- Moses-Distance dry stones in air had larger craters than wet stones in air.*
- Mechanisms require further study.

* p-value <0.05