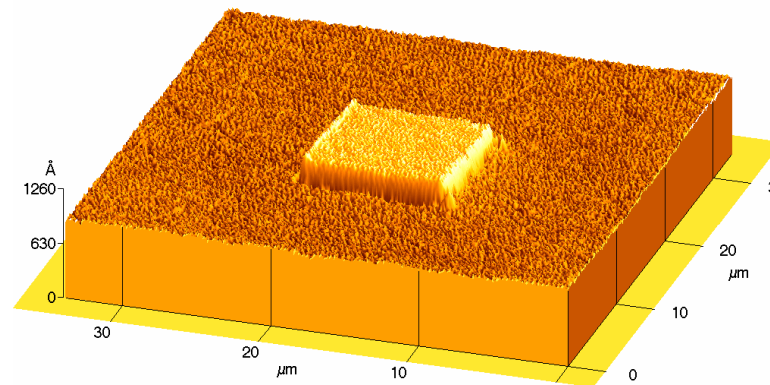
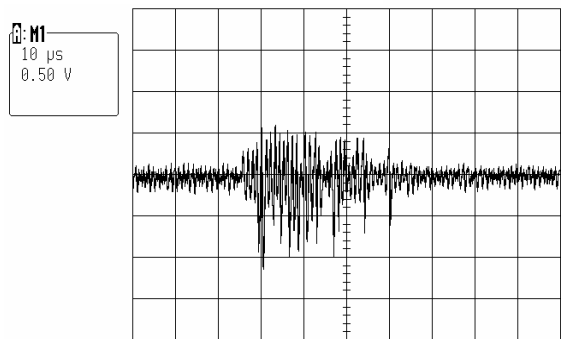


The MS signal of bump defects exhibited a negative polarity pulse as shown in Figure 3. The 1.25 μm $10\mu\text{m} \times 10\mu\text{m}$ bump measured with an AFM produces a characteristic PZT Glide signal [at 890 ips] of the downward force of the bump on the downward facing head slider and a characteristic MR magnetic modulation signal plus MS signal of a bump.

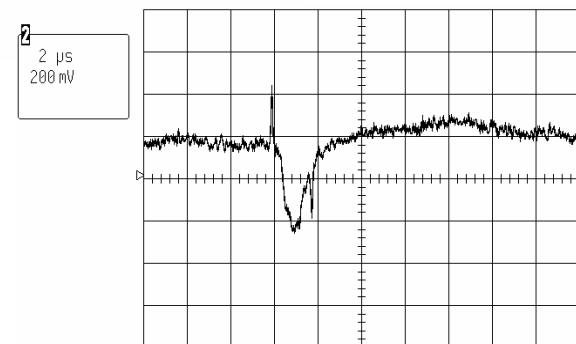
Signal Characteristics from Reference $10\mu\text{m} \times 10\mu\text{m} \sim 1.25 \mu\text{m}$ Bump Defect



AFM Micrograph



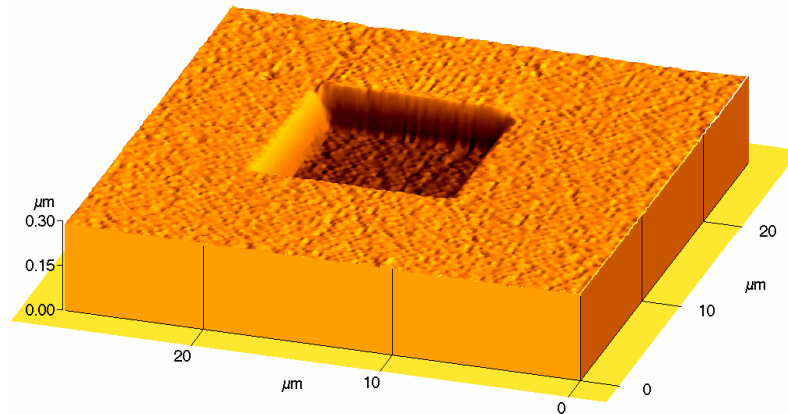
Non-contact PZT Glide



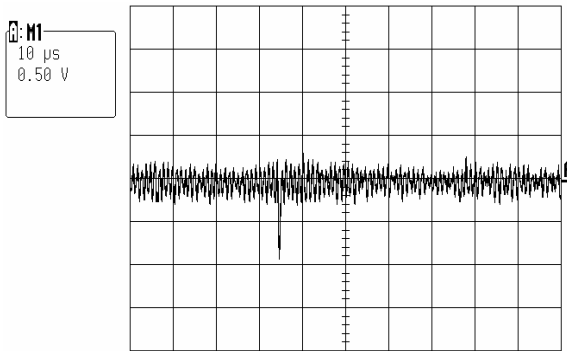
Non-contact MS-valve signal

Figure 4 shows that for $\sim 2\mu\text{m}$ $10\mu\text{m} \times 10\mu\text{m}$ pit measured with an AFM produce a PZT Glide signal [measured at 890 ips] and the characteristic MR magnetic modulation signal plus MS signal of a pit.

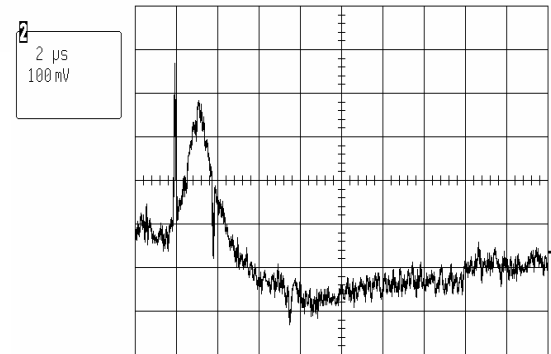
Signal Characteristics from Reference $10\mu\text{m} \times 10\mu\text{m} \sim 2\mu\text{m}$ Pit Defect



AFM Micrograph

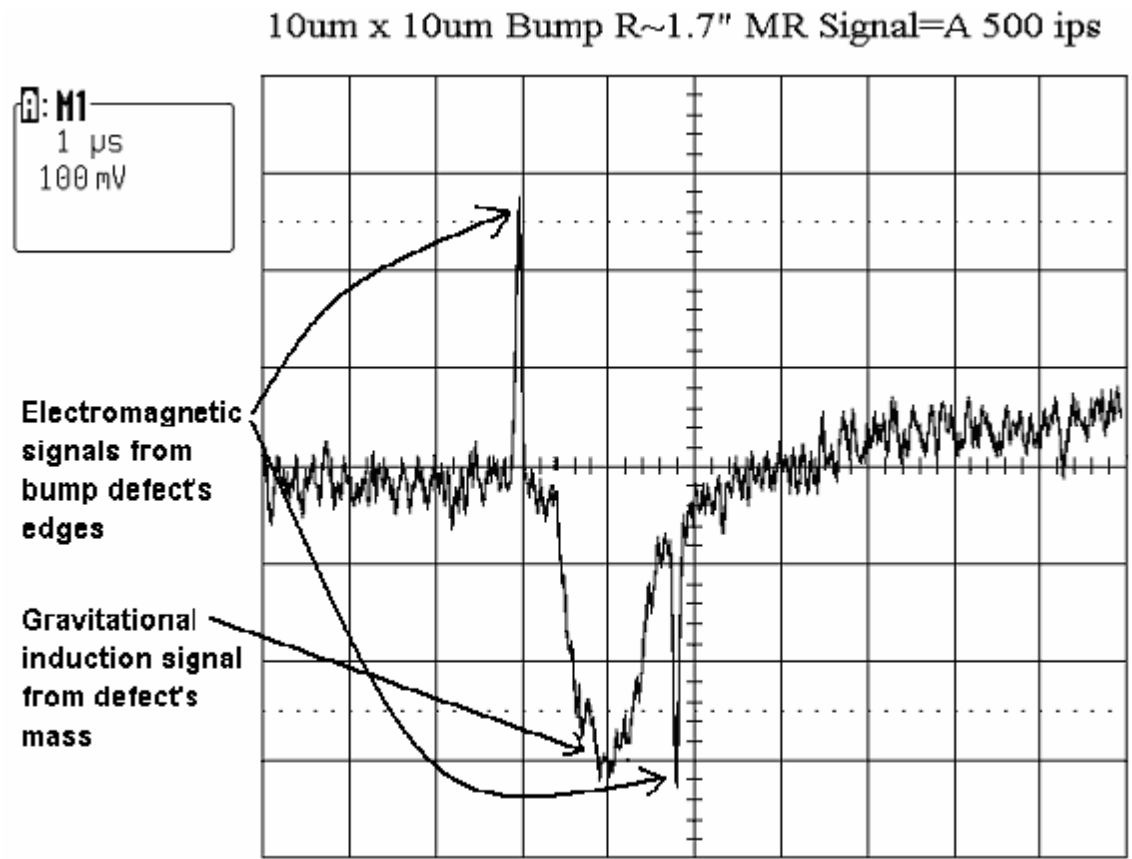


Non-contact PZT Glide



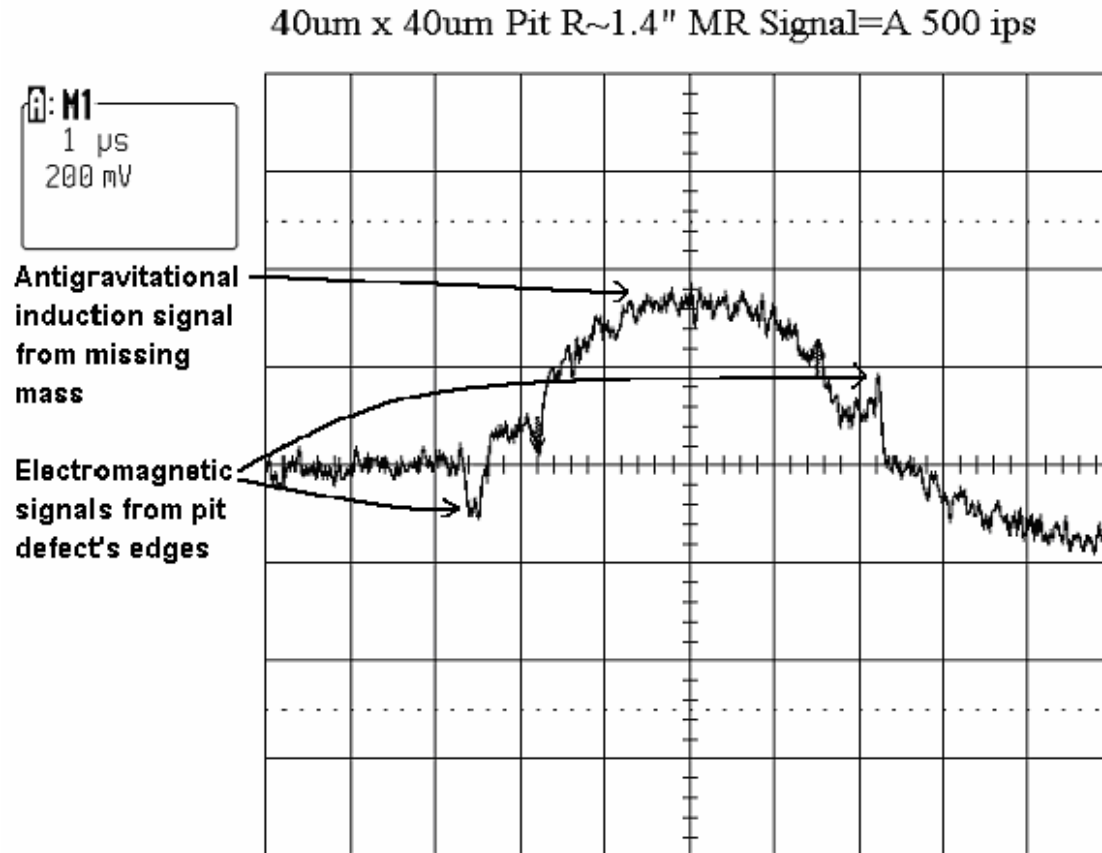
Non-contact MS-valve signal

Figure 5 shows that 10 μ m x 10 μ m bump defect at a radius of 1.7 inches on a disk spinning at a linear velocity of 500 inches per second exhibits two electromagnetic signals due to electromagnetic induction created by the edges of the bump defect following Maxwell's right hand rule and also exhibits the gravitational induction signal of 0.304 Volts



A gravitational signal of 0.304 Volts has an equivalent negative force of -0.304 nNewtons produced by $3.82E-18$ cubicmeters of additional matter

Figure 6 shows that 40μm x 40μm pit defect at a radius of 1.4 inches on a disk spinning at a linear velocity of 500 inches per second exhibits two electromagnetic signals due to electromagnetic induction created by the edges of the pit defect and also exhibits the gravitational induction signal of 0.378 Volts



An antigravity signal of 0.378 Volts has an equivalent positive force of ~0.378 nNewtons produced by 7.69E-17 cubicmeters of missing matter