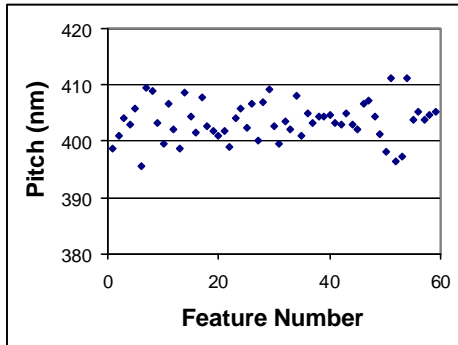
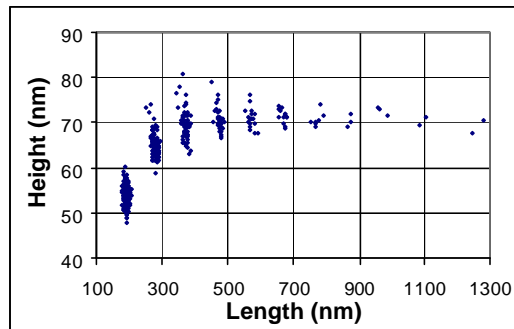
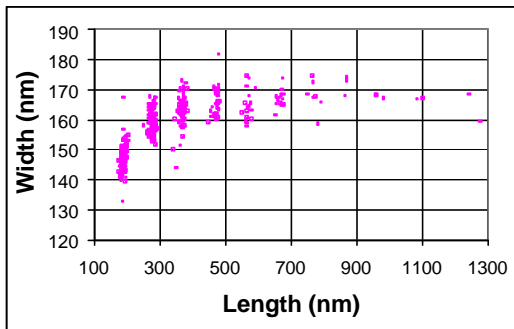


DiscTrack Plus™ Uncovers an HD-DVD Surprise

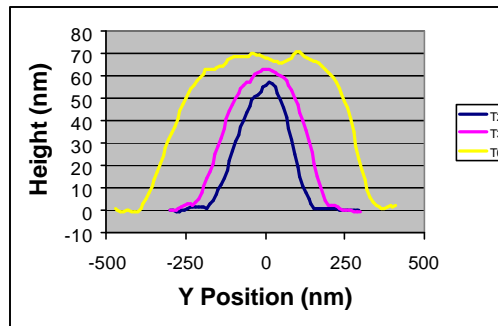
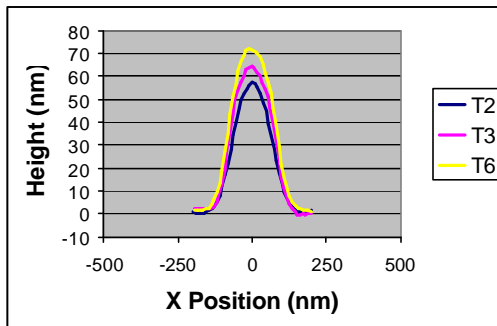
Our customers have long benefited from automated measurements of the **size, shape and position** of data marks. DiscTrack Plus helped develop DVD production processes and it is **now solving problems in Blu-Ray and HD-DVD**. When analyzing HD-DVD stampers that produced discs with good electrical characteristics, we found interesting results.



The **small track pitch variation** is good to see. The allowed range for HD-DVD is 380-420 nm.



From our prior experience with CD and DVD, we were not surprised to see width increasing with length from T2 to T5, but we were **surprised** to see a large height increase as well.



Height profiles for typical T2, T3, and T6 bumps give us a closer look. The rounded shape of the T2 and T3 bumps in both directions indicates that the corresponding photoresist pits were not developed down to the glass. In comparison, DVD bumps made by a photoresist process often approach an ideal trapezoidal height profile with a flat top. The rounded shape of the HD-DVD bumps is by no means a limitation of the mastering system. This shape distribution resulted in replicas which showed the **best electrical signals** upon playback, in this initial study.

(Data shown based on AFM images courtesy Singulus Mastering.)



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