• vertical angulation is insufficient/too flat

Vertical angulation

- refers to the **positioning of the PID in a** vertical, or **up-and-down plane**
- **correct** vertical angulation results in an image that is the **same length** as the tooth
- **incorrect** vertical angulation results in **ELONGATION** or **FORESHORTENING**
- an **elongated** image appears **long** & results from **too flat** vertical angulation
- **a foreshortened** image appears **short** & results from **too steep** vertical angulation
- **0 degree** vertical angulation = **PID parallel with floor**
- **positive** vertical angulation = **PID pointing DOWN to floor**/PID above occlusal plane
- **negative** vertical angulation = **PID pointing UP to ceiling**/PID below occlusal plane

Horizontal angulation

- refers to the **positioning of the PID in a** horizontal or **side-to-side plane**
- when the central ray is directed **through the interproximal contacts** of the teeth, **correct** horizontal angulation results and open contacts on seen the dental image
- **incorrect** horizontal angulation results in **overlapped contacts** *(contacts are superimposed over each other)*

ELONGATION results when the vertical angulation is **TOO FLAT;** teeth look **long** & stretched

FORESHORTENING results when the vertical angulation is **TOO STEEP;** teeth look **short**