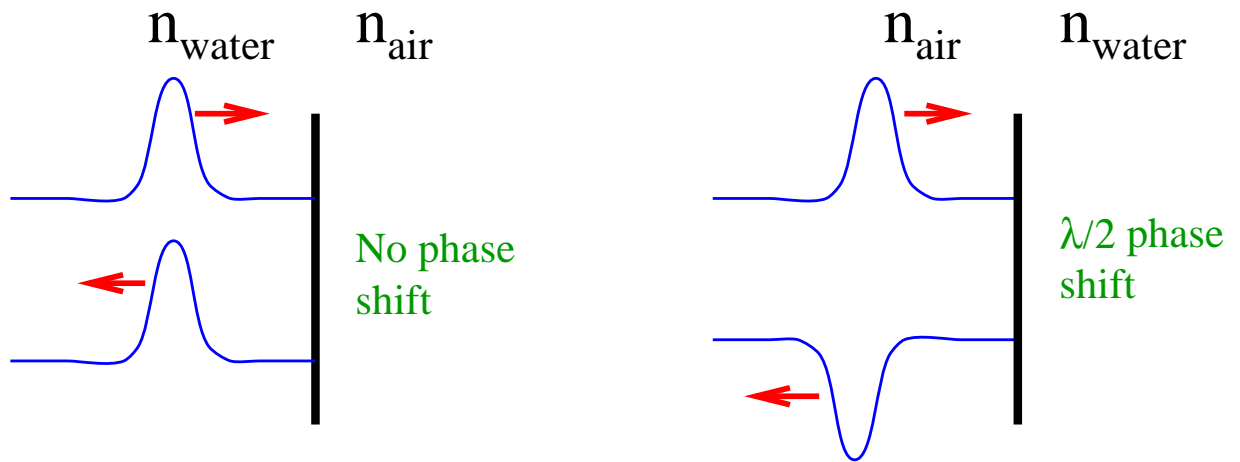


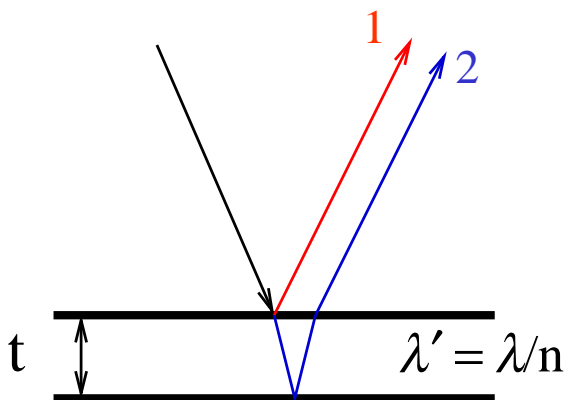
# Physics 113 -Lecture 5

## Reflection of EM Wave at Interface



### Thin Film Interference

Assume near normal rays



#### Specific Cases:

- soap bubbles
- oil on water
- Newton's rings
- glass plates

Phase Change		Equation	
Ray 1	Ray 2		
0	0	$2t = m\lambda'$	light fringe
$\lambda/2$	0	$2t = m\lambda'$	dark fringe
0	$\lambda/2$	$2t = m\lambda'$	dark fringe
$\lambda/2$	$\lambda/2$	$2t = m\lambda'$	light fringe