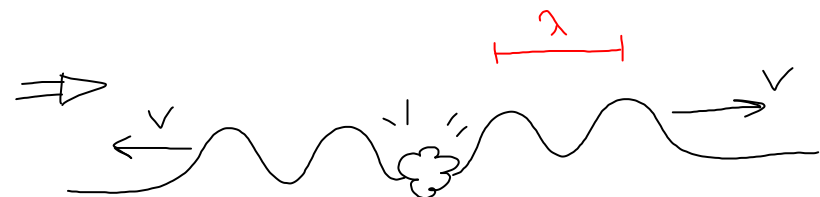


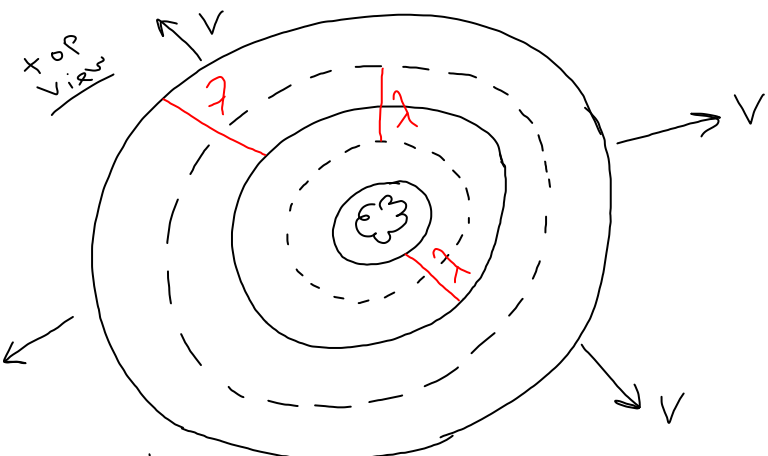
## Waves, cont.

Consider throwing a rock into still water



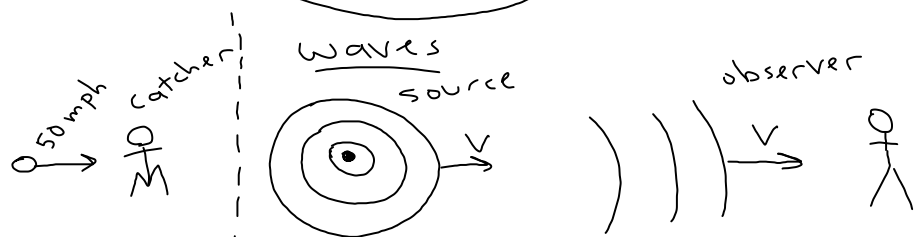
Still water

For a given medium, waves travel with constant velocity even if the source is moving.

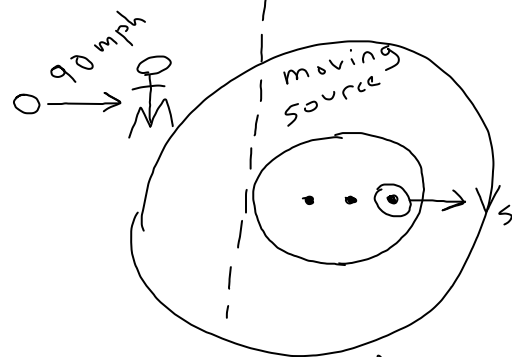


## Particles

Pitcher 50 mph



Same pitcher 50 mph  
40 mph



(See animated images on website - class 17)

ripples ("wave fronts") are closer together (ie. higher frequency) but same velocity.

• See dopplerActivity.pdf

↳ part 2 - repeat for observer moving towards the source w/  $V_o$

$$T' = \left( \frac{V - V_s}{V + V_o} \right) T$$

Doppler effect