





- Piles successive incoming waves on top of each
 other
- · Leading to local sea-level rise



- Wind stress pushes water downwind
- Until the pressure gradient balances the stress
- Factors that favor greater surge:
 - Strong wind lasting a long time over a wide area.
 - Shallow water extending far offshore.















New model refinements include:

- The level of gross parameterization and bulk modeling can now be significantly reduced
- Improvements in winds by incorporating directional land roughness to adjust the overland/near-shore wind boundary layer
- Incorporation of canopies where winds are zeroed due to loss of momentum propagating through the canopy
- Dynamic wind drag coefficient variation between land and sea values as region becomes inundated
- Lagrangian tracking to ensure that no artificial weakening of the storm occurs
- Applying both the PBL wind model and the NHC data assimilation based Nowcast system











- Butter and the series of the series

For next time: 1940's, Halsey's Typhoons, E 172-173, 174-180, 181