

Redfield \& Reid, Including the Ocean


## How Do We Use SLOSH?

- Make many runs for all possible tracks, sizes, intensities.
- Retain greatest extent of inundation for any run
- This defines the Maximum Envelope of Water (MEOW)
- Evacuation-zone boundaries are defined in terms of recognizable landmarks and include the MEOWs for any storm, nonmajor, and major hurricanes.
- Has to be simple, because evacuation is chaotic no matter what.




## Stress-Driven Storm Surge

- 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.




## Stratiform and Convective Rain




## Revised STORMFURY Hypothesis

- Target intense hurricanes with small eyes
- Seed the first rainband outside the eye
- Build a new eyewall around the old
- New eyewall strangles the old







## CAMILLE



- Formed in the W Caribbean
- Tracked northward
- Intensified rapidly over the (over the loop current?
Struck Mississippi coast as a CAT5
- Killed 259 (half by fresh-water flooding in VA)
Damage \$1.42 B (1969 \$)
Notorious Richelieu Manor apparently a cyclostrophic legend and Mary Ann Gerlach was not the sole survivor of 21 reveler
Only 8 residents (of 23 who Stayed) perished, although the
slab was washed clean


## Cyclone Tracy

- Formed on 20DEC74, 500 km NE of Darwin
- Became visible on Darwin Radar on the $22^{\text {nd }}$ as a 50 $\mathrm{m} / \mathrm{s}$ cyclone
- Slowed and tracked around Bathurst Is
- Moved over shallow warm water
- Intensified and turned toward Darwin late on the $23^{\text {rd }}$ and $24^{\text {th }}$
- Landfall Christmas morning


Last Sweep of the Miami WSR-57


## Impacts

- Damage in S. Florida \$25 B
- Homes
- 25,524 destroyed
- 101,241 damaged
- Damage in Louisiana: \$1B
- Deaths
- Bahamas: 3 direct, 1 indirect (4)
- Florida: 15 direct, 26 indirect (41)
- Louisiana: 8 direct, 9 indirect (17)
- Total 26 direct, 36 indirect (62)
- Closure of Homestead AFB


## EXAM \#2 WEDNESDAY, 15NOV17

- $60 \%$ short answer, multiple choice or matching;
- $40 \%$ short essay, draw and explain, or problems.
- You will have some extra time if nobody has to leave right at 11:50.
- We will begin promptly at 11:00 and end at $\backslash$ a bit after noon.
- Bring pencils and a calculator.

