



Instructor: Dr. C. Kim

- * Costa Concordia embarks on 7-day cruise near Rome, with 4,229 tourists and crew

- * (7:00pm) Set sail from Coast of Italy on Friday, January 13th, 2012

- * (9:30pm) Ship collides with rocks 300m off island of Giglio, Italy

- * (9:35pm) Power outage and panic begins

- * (9:45pm) Alarms go off to alert onboard crew members

- * (9:50pm) Ship begins to list (tilt on an angle)

- * (10:00pm) Captain tries to move ship toward shore

- * (10:10pm) Signal to abandon ship goes off, life boats deployed

- * (10:20pm) Coastguard launches rescue boats

- * 32 Casualties

- * 40 injured

- * Captain found ashore next day with 300 passengers still aboard ship

* Accident Brief

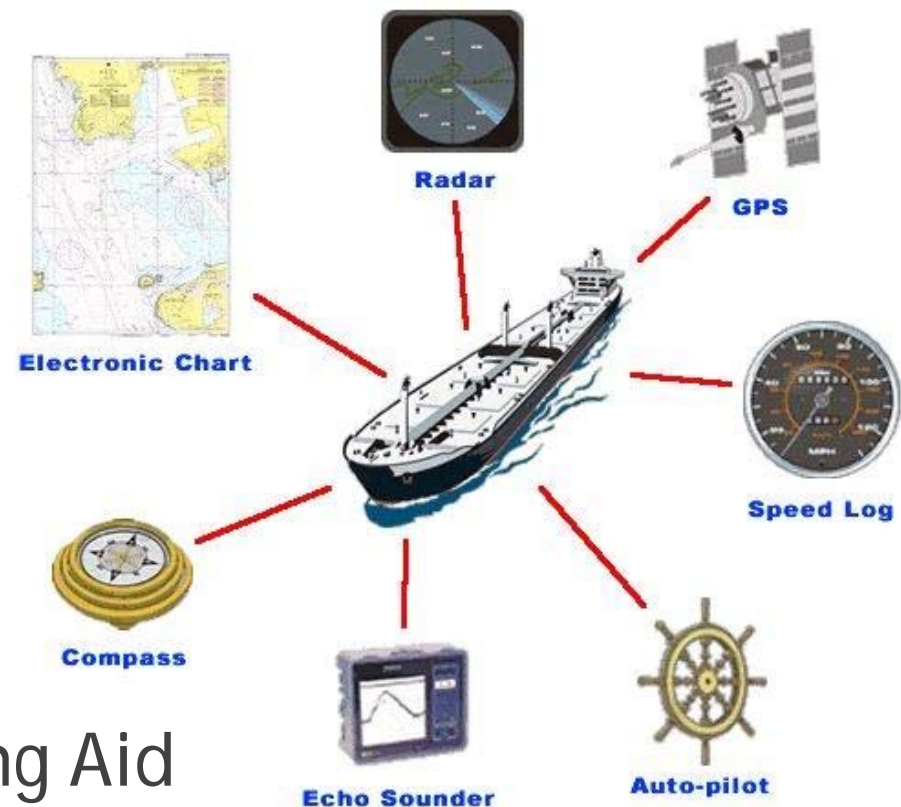
*Primary:

*GPS

*Mapping

*Radar

*Automatic Radar Plotting Aid



*Computer System

- * **On-Board Naval Navigation System:** map the rocks surrounding the cruise ship
- * **Radar:** Calculates the distance between the ship and other ships/other objects & nautical vessels
- * **Automatic Radar Plotting Aid:** shows position of ship with respect to other vessels
 - * Creates an optimal route to avoid collision
- * **GPS:** functions as a receiver
 - * shows ship's location with help of satellite in orbit

* **Normal Functions of System**

- *Electrical outage
- *No total-navigation (computer system that helps “see”)
- *Ship listed (tilted on an angle)
 - *Eventually sank
- *Explosion on board ship
- *Steering Stopped Working



***Hazards**

- * Diesel Engine Malfunction
 - * Controlled propellers to power ship
- * Alarm did not go off when ship was off course
- * Ship lights failure
- * Malfunction of ships generators



* Failures and Faults

- *As of February 6th, 2012, the International Chamber of Shipping, called for the earliest publication of the accident report
- *Still looking into how the power outage occurred
- *Still too early to have a concrete reason why the cruise ship capsized
- *Captain found to have been using drugs during voyage of cruise
- *Criminal proceedings have been made against cruise officers for negligence, and chain of events

***Conclusion**



*The End

* <http://www.dailymail.co.uk/news/article-2087133/Costa-Concordia-accident-So-DID-cause-cruise-ship-hit-rocks.html>

* <http://www.marineinsight.com/misc/marine-navigation/30-types-of-navigational-equipment-and-resources-used-onboard-modern-ships/>

* http://mapserver.mytopo.com/mapserver/nautical_symbols/K3.html

***References**