

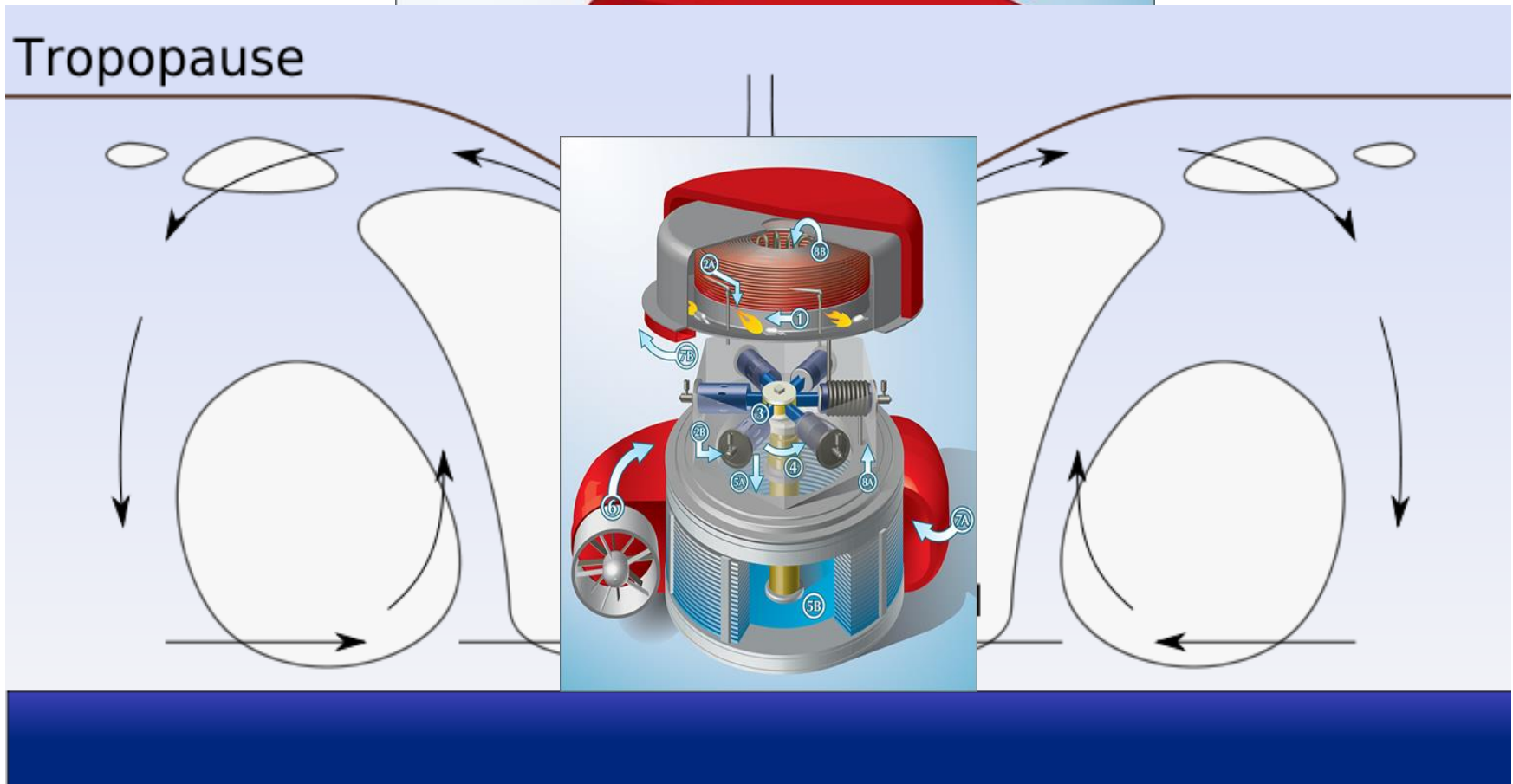


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**What is the fuel for our engine?**  
**What is the mechanics of our engine?**  
**What is the exhaust?**

**IN, UP and OUT**



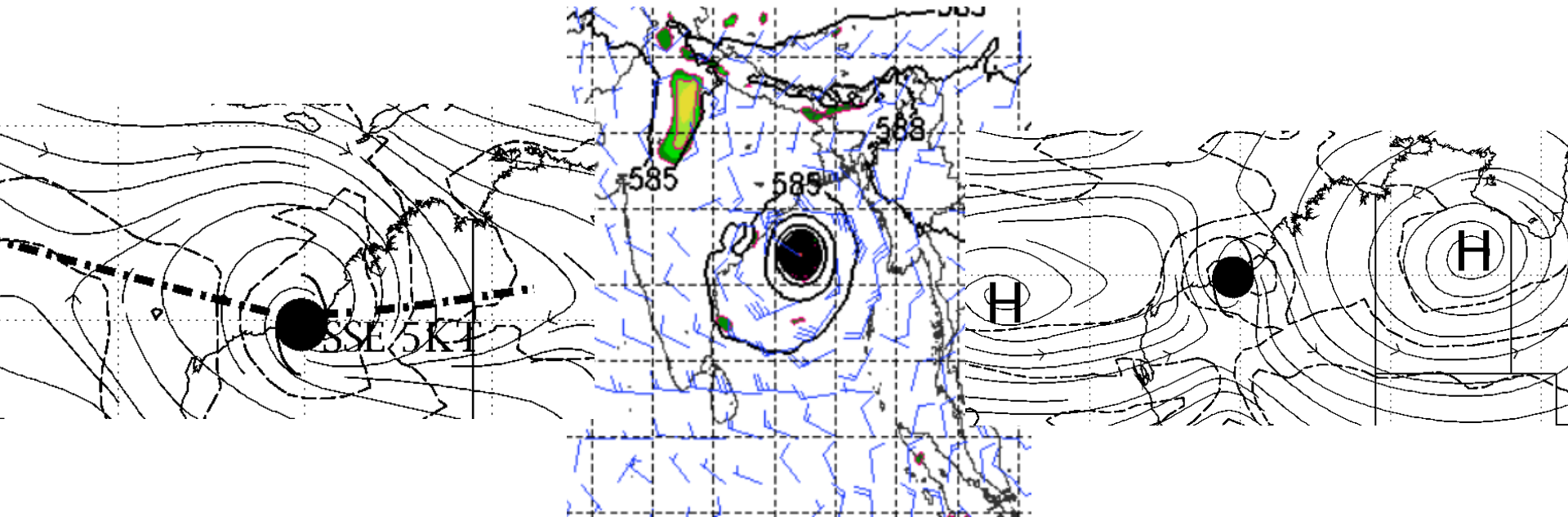


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# Circulations at different levels

(streamlines and isotachs)



Low levels  
(Gradient-850 hPa)

Mid levels (500 hPa)

Upper levels (200 hPa)

# TC Workshop summary questions

## Microwave

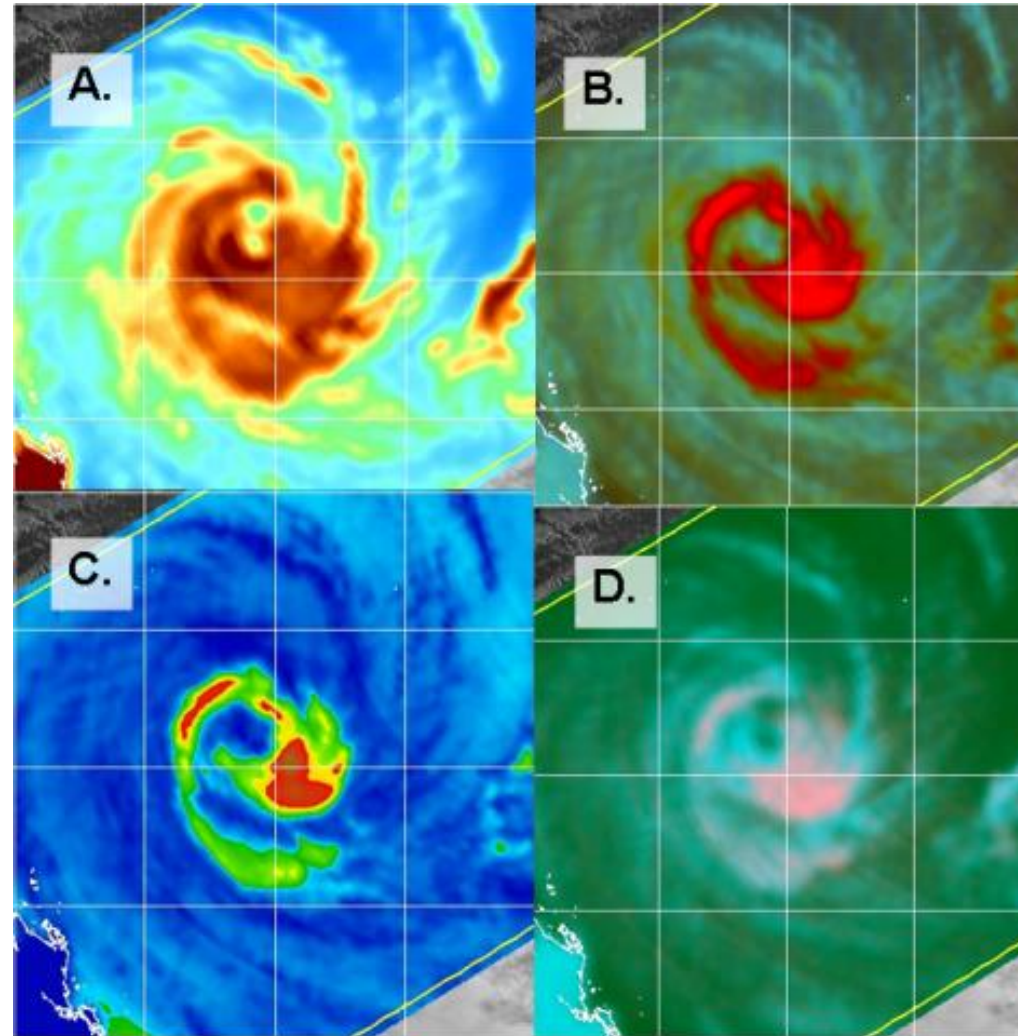
Match the following images to these types:

85-91 GHz colour composite \_\_\_\_

36-37 GHz colour composite \_\_\_\_

36-37GHz H (horizontally polarised view) \_\_\_\_

85-91 GHz H (horizontally polarised view) \_\_\_\_





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# TC Workshop summary questions

## Microwave

**Generally resolution is higher on the 37 GHz channel than 85-91 GHz channels.**

**A. True**

**B. False**

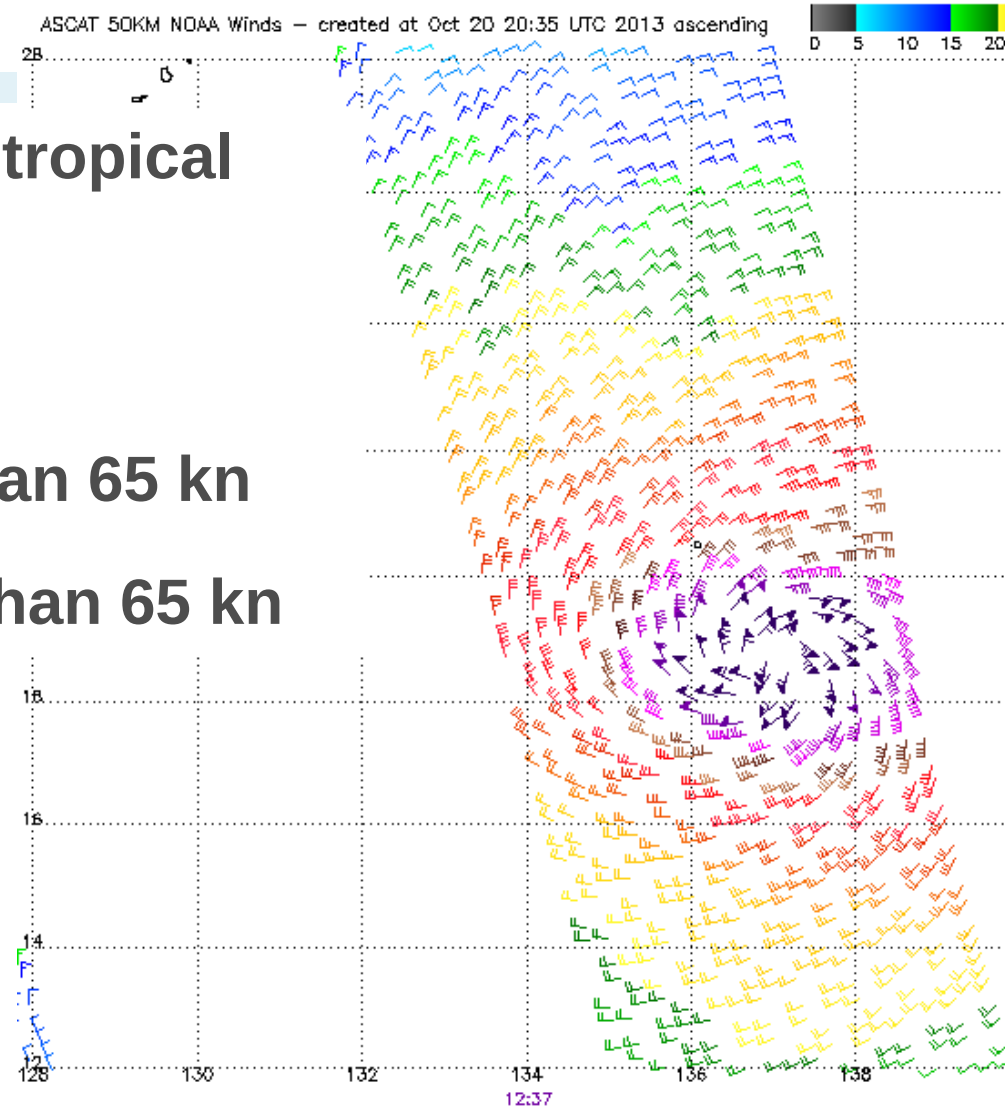


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# TC Workshop summary questions

## Ascat

- What is the intensity of this tropical cyclone?
- A. Approximately 65 knots
  - B. Likely to be much less than 65 kn
  - C. Likely to be much more than 65 kn



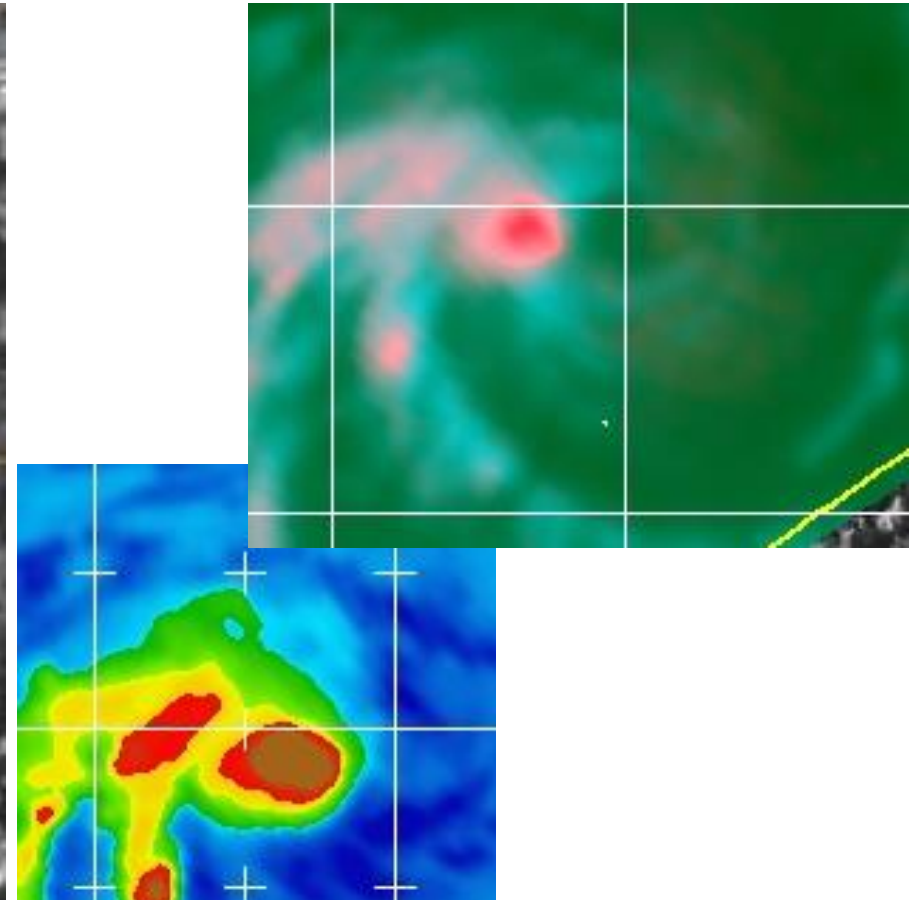
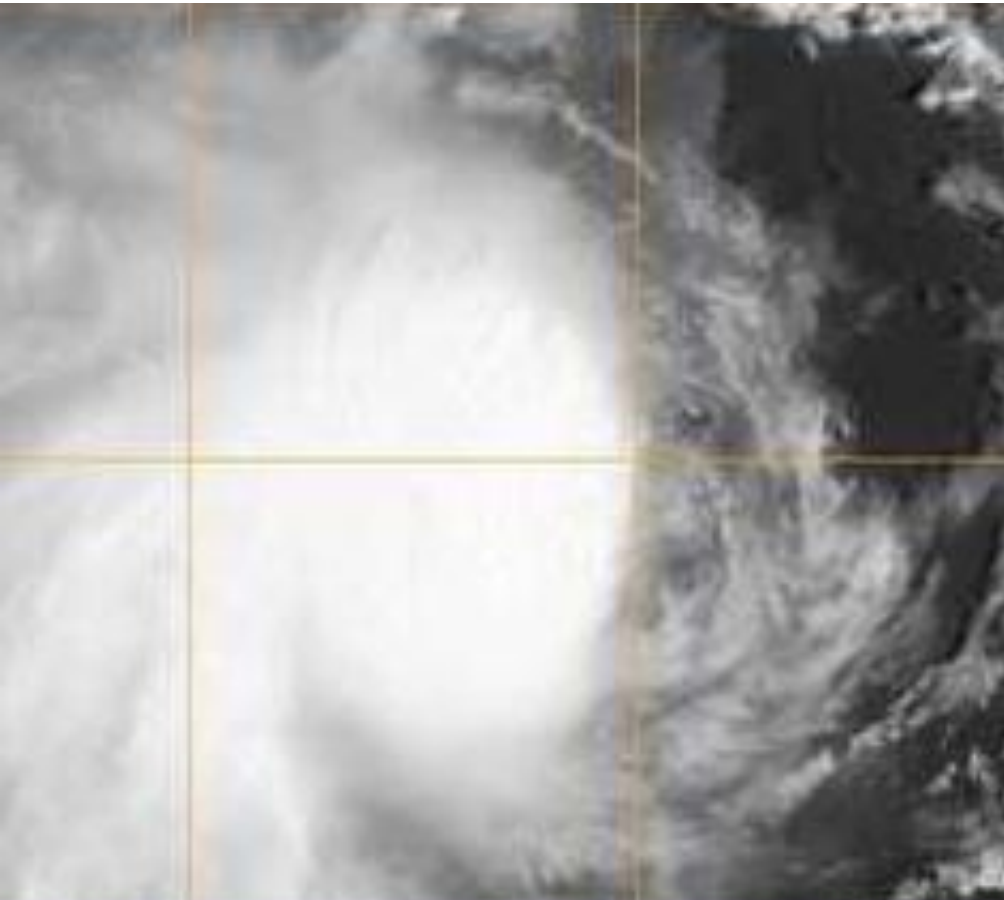




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# What is the best method to determine the centre?



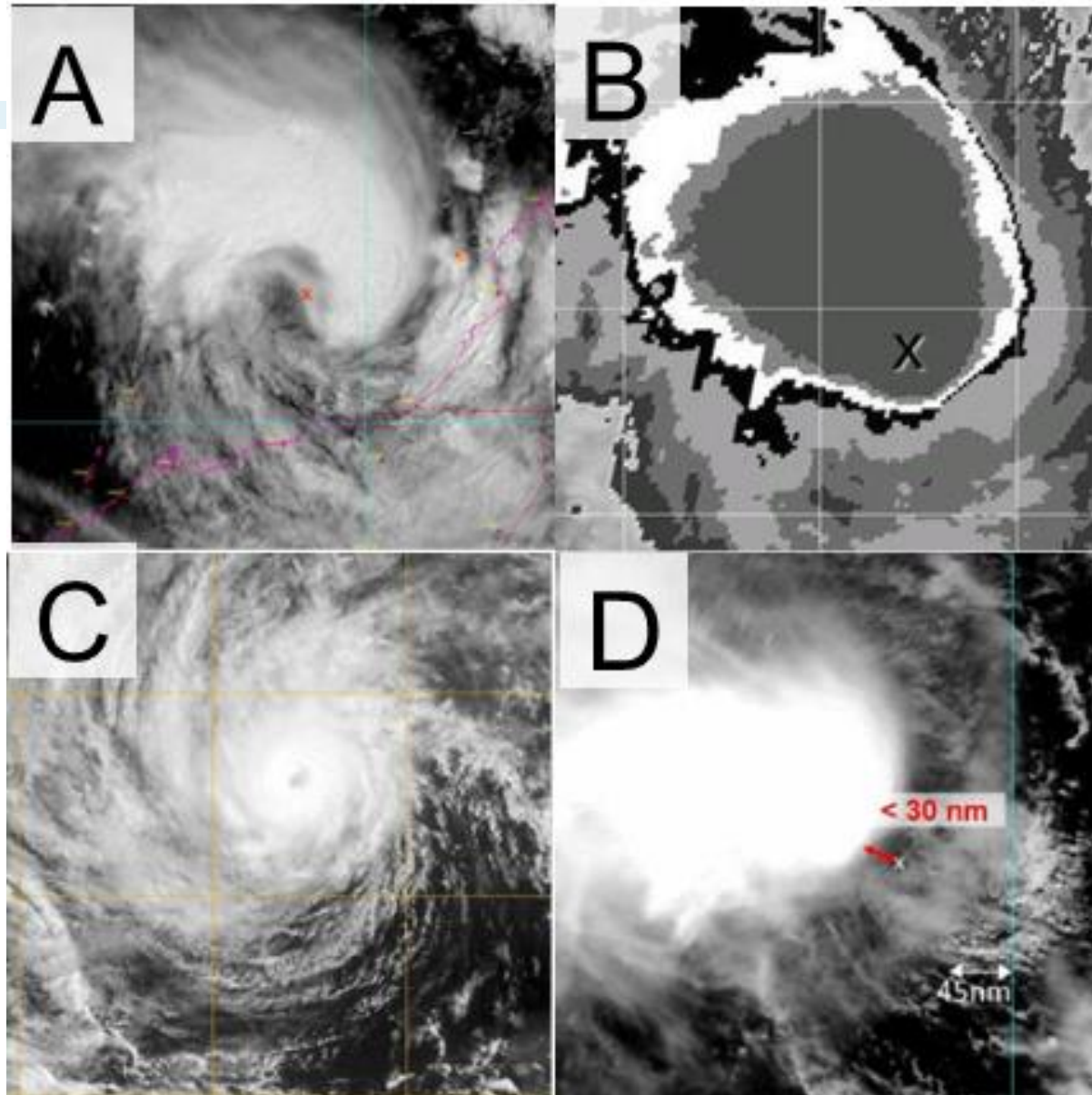
Every case is different: radar, obs etc



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# Dvorak

Name the Dvorak pattern type for each of these images

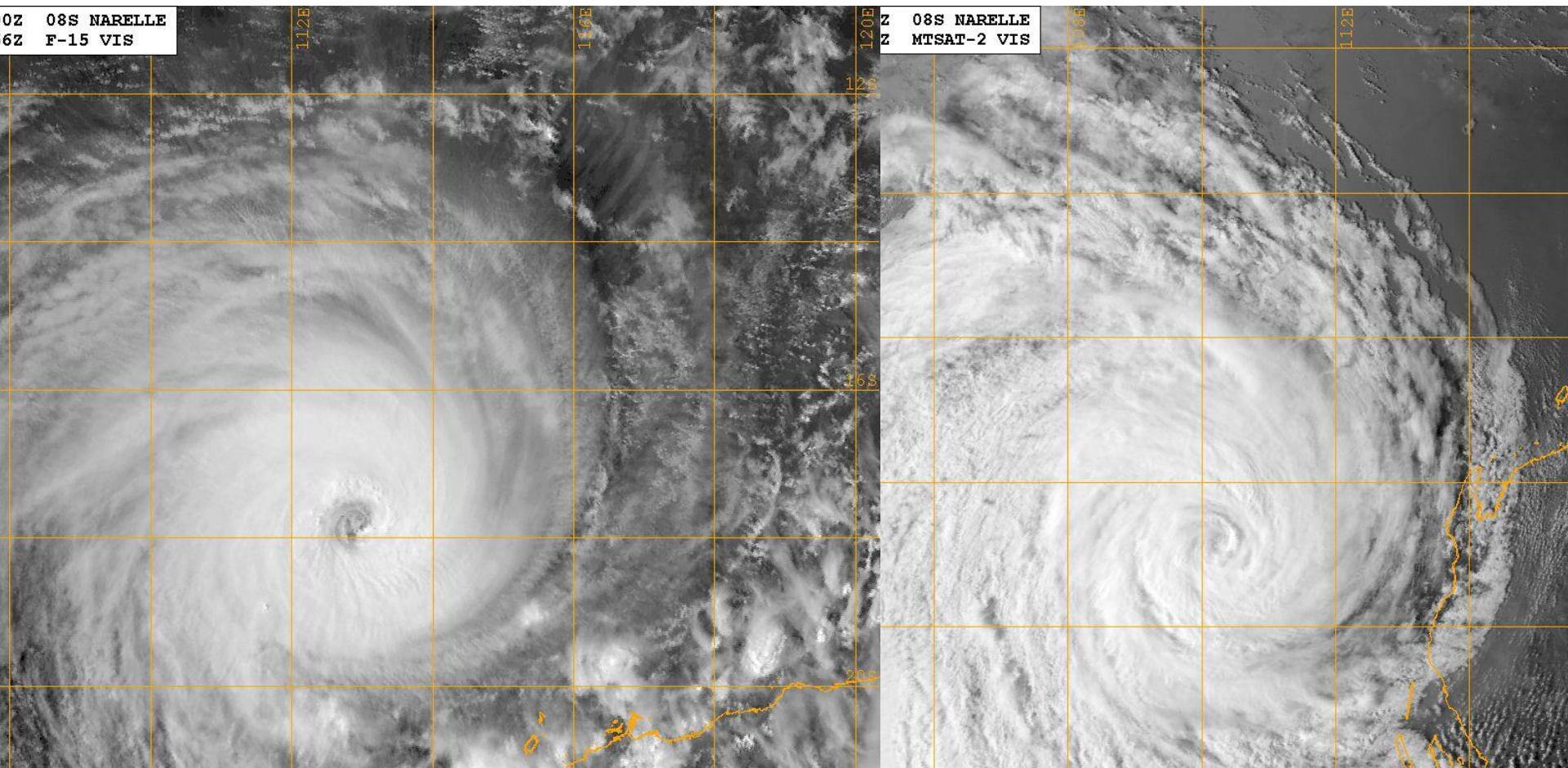


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# Dvorak

## What is the 24h change?

**If the FT was 5.5 yesterday what would be the MET now?**





## TC Workshop summary questions

**What would be the most appropriate steering wind flow to use for a 35 knot TC (CS)?**

- A. 850-500hPa deep layer mean**
- B. 700hPa**
- C. 500hPa**
- D. 850-300hPa deep layer mean**



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# TC Workshop summary questions

**What is the name for the wobbling or looping motion of strong tropical cyclones?**

**Why does this occur?**

**How does this affect the forecast?**



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# TC Workshop summary questions

## Steering flow

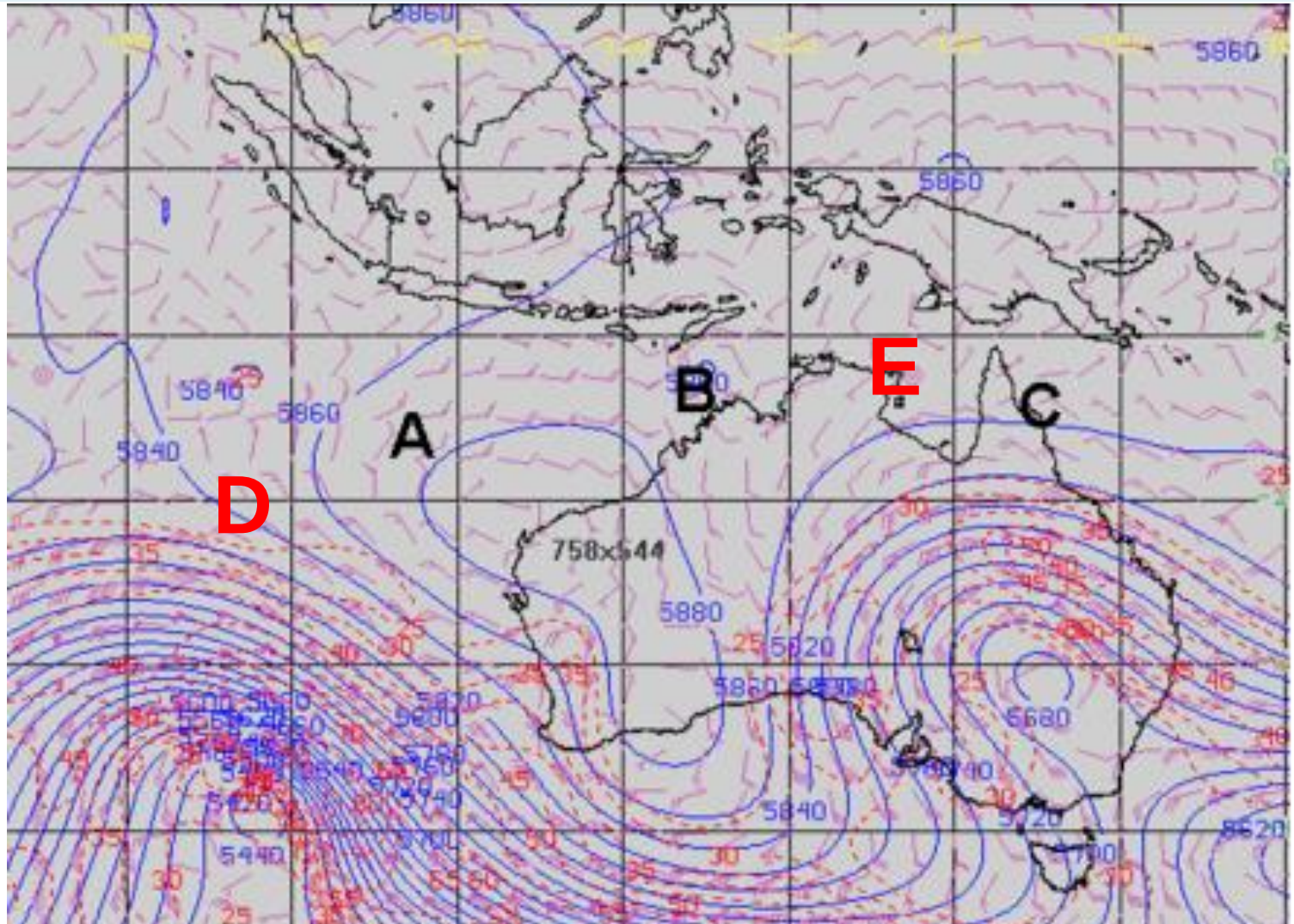
**What is the steering flow for a circulation at the following points using the 500hPa pattern (heights and winds) below?  
Which circulation would be moving the fastest moving?**



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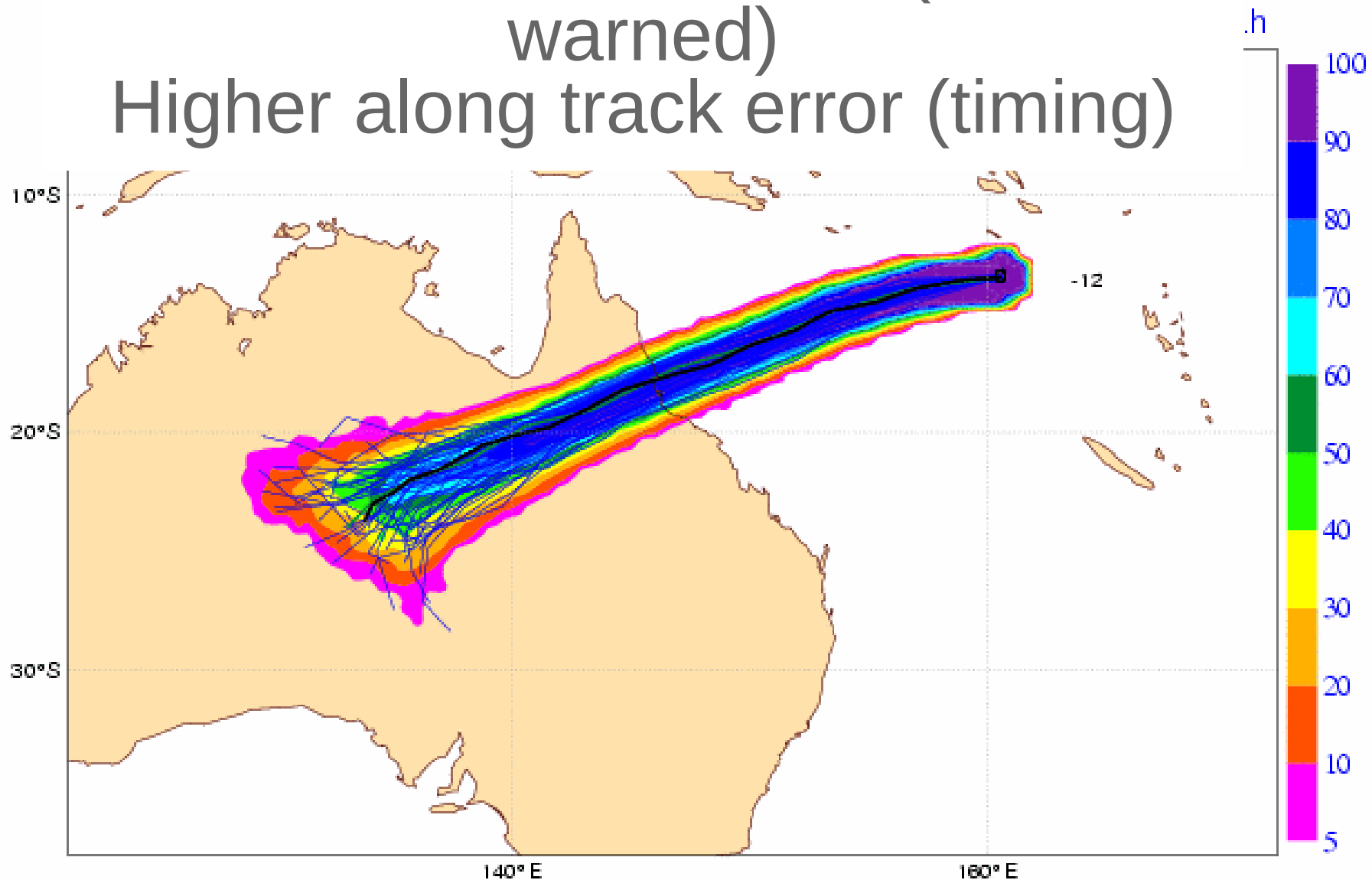
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# What direction would TCs be steered at ~~A/B/C~~ D E?

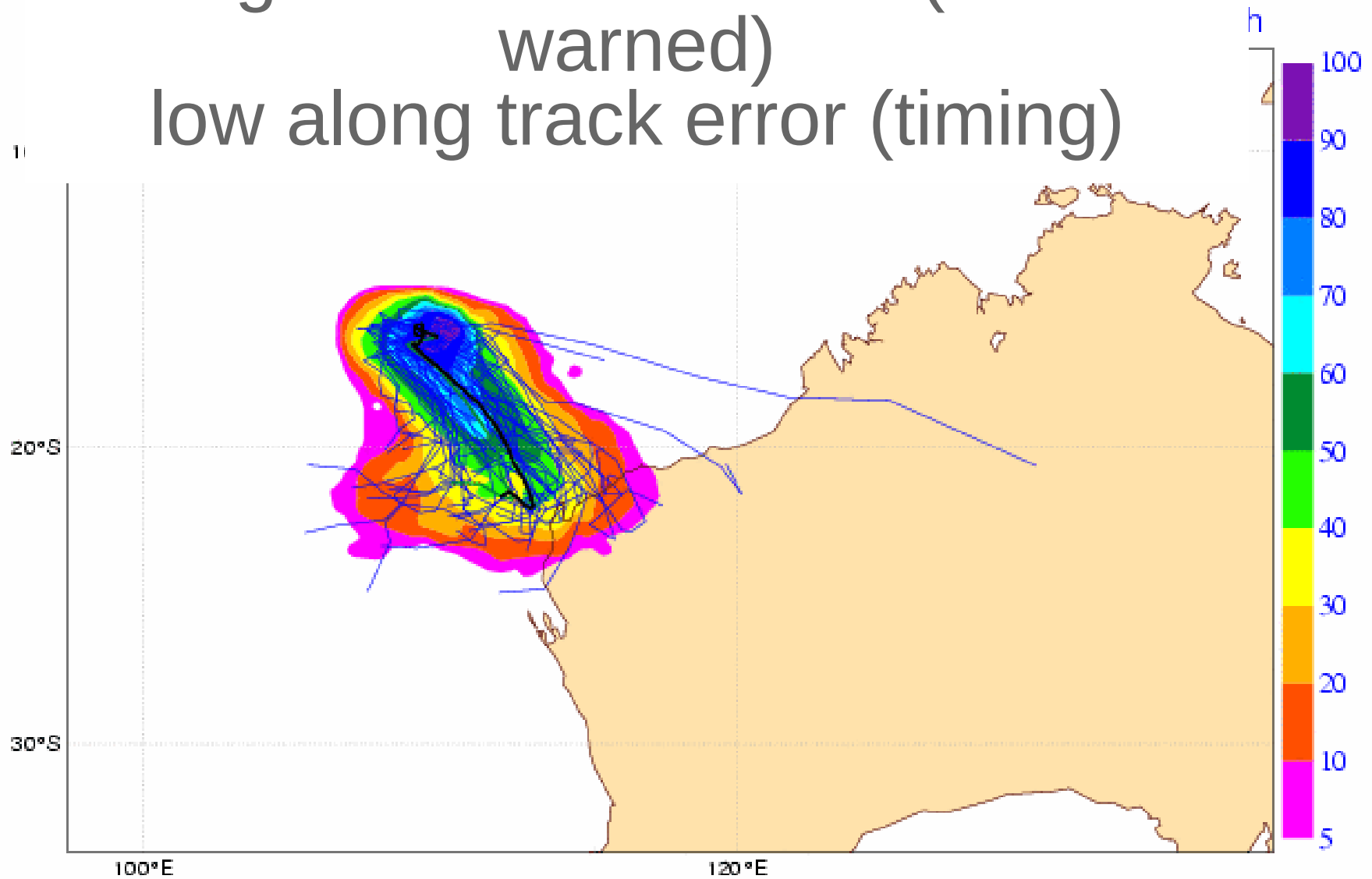




Fast motion:  
low cross track error (area  
warned)  
Higher along track error (timing)



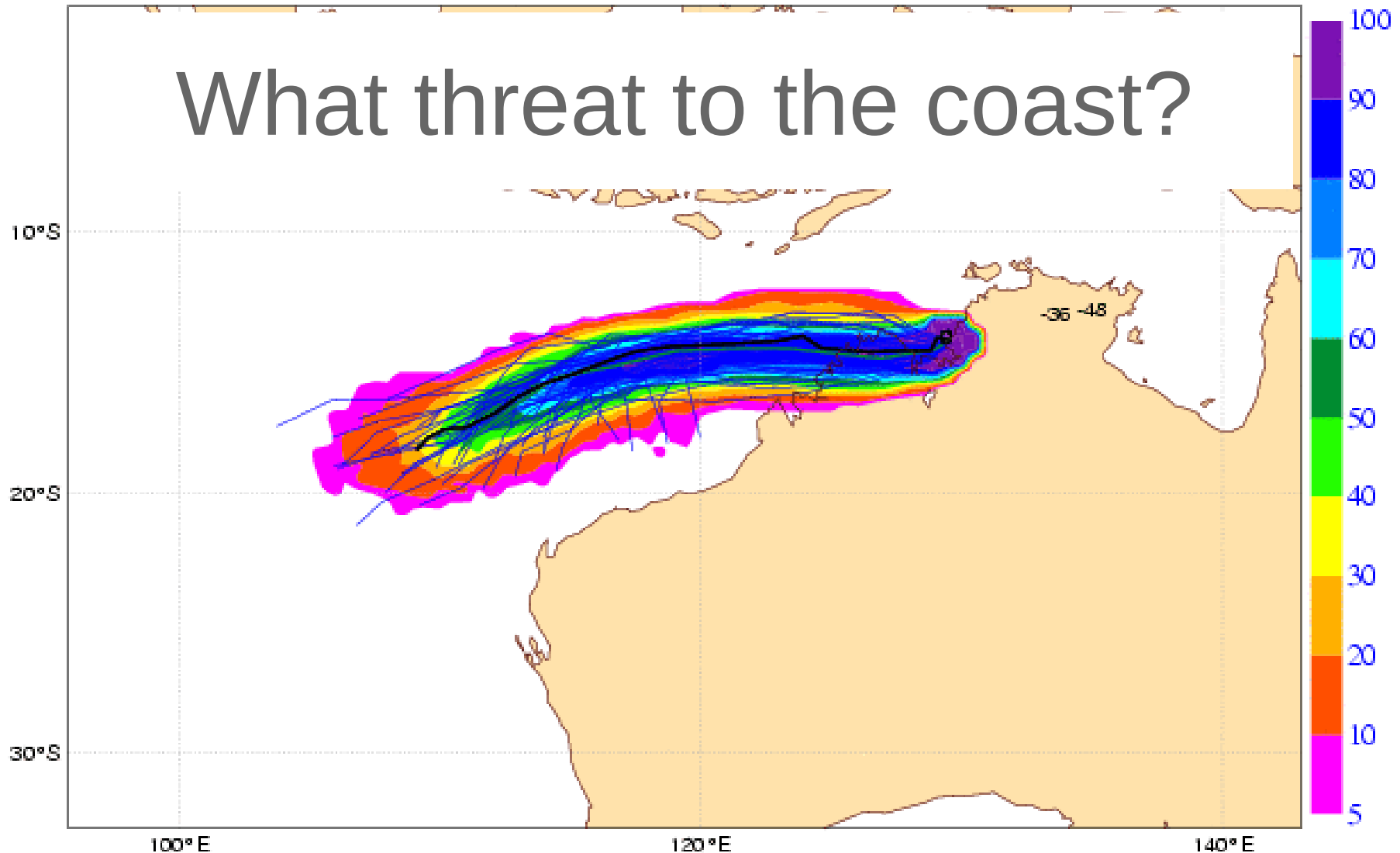
Slow motion:  
high cross track error (area  
warned)  
low along track error (timing)



20070303 12 UTC

Probability that S will pass within 120km radius during the next 120 hours  
tracks: black=OPER, green=CTRL, blue=EPS numbers: observed positions at t+..h

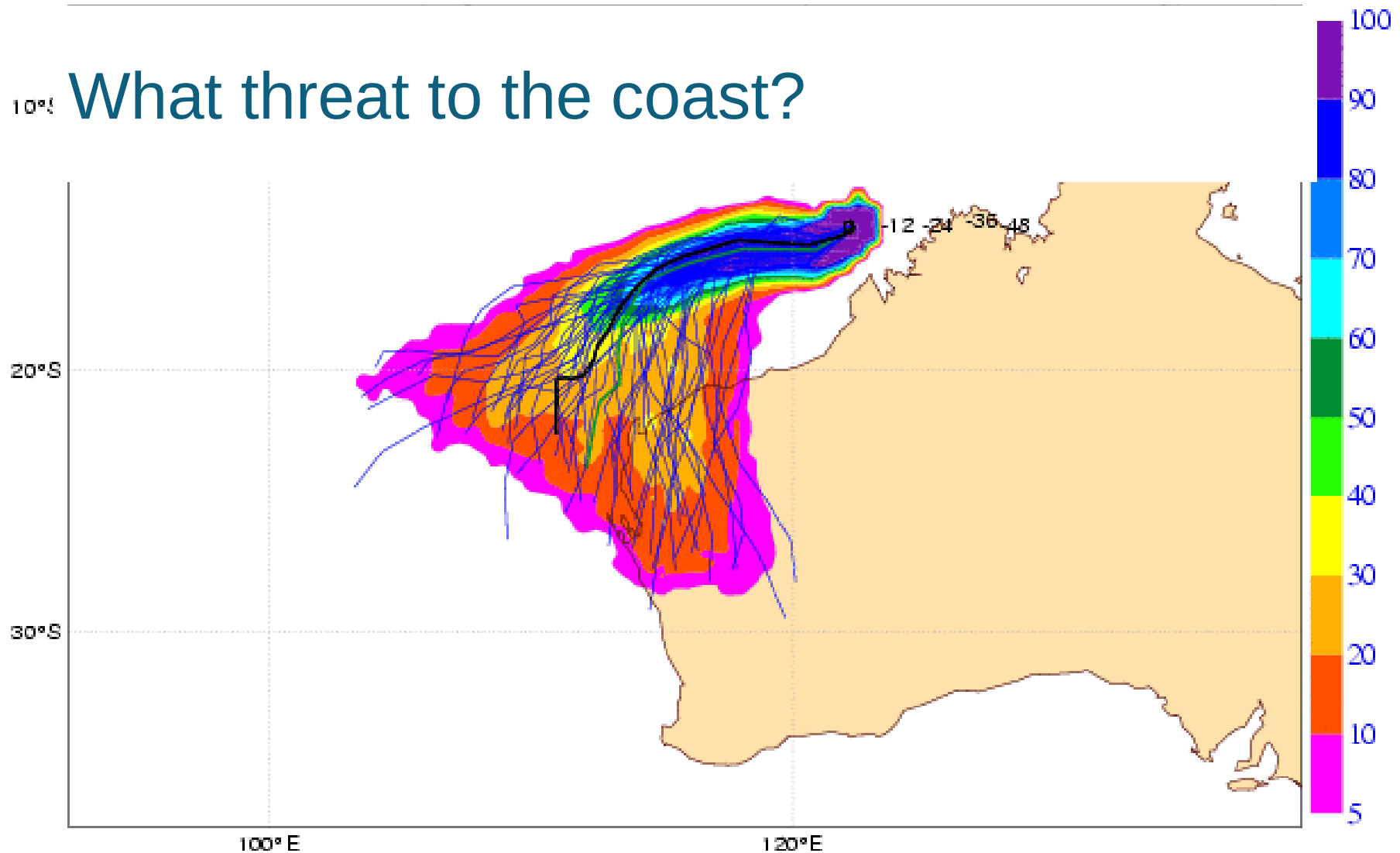
# What threat to the coast?



20070306 0 UTC

Probability that GEORGE will pass within 120km radius during the next 120 hours  
tracks: black=OPER, green=CTRL, blue=EPS numbers: observed positions at t+..h

## 10% What threat to the coast?

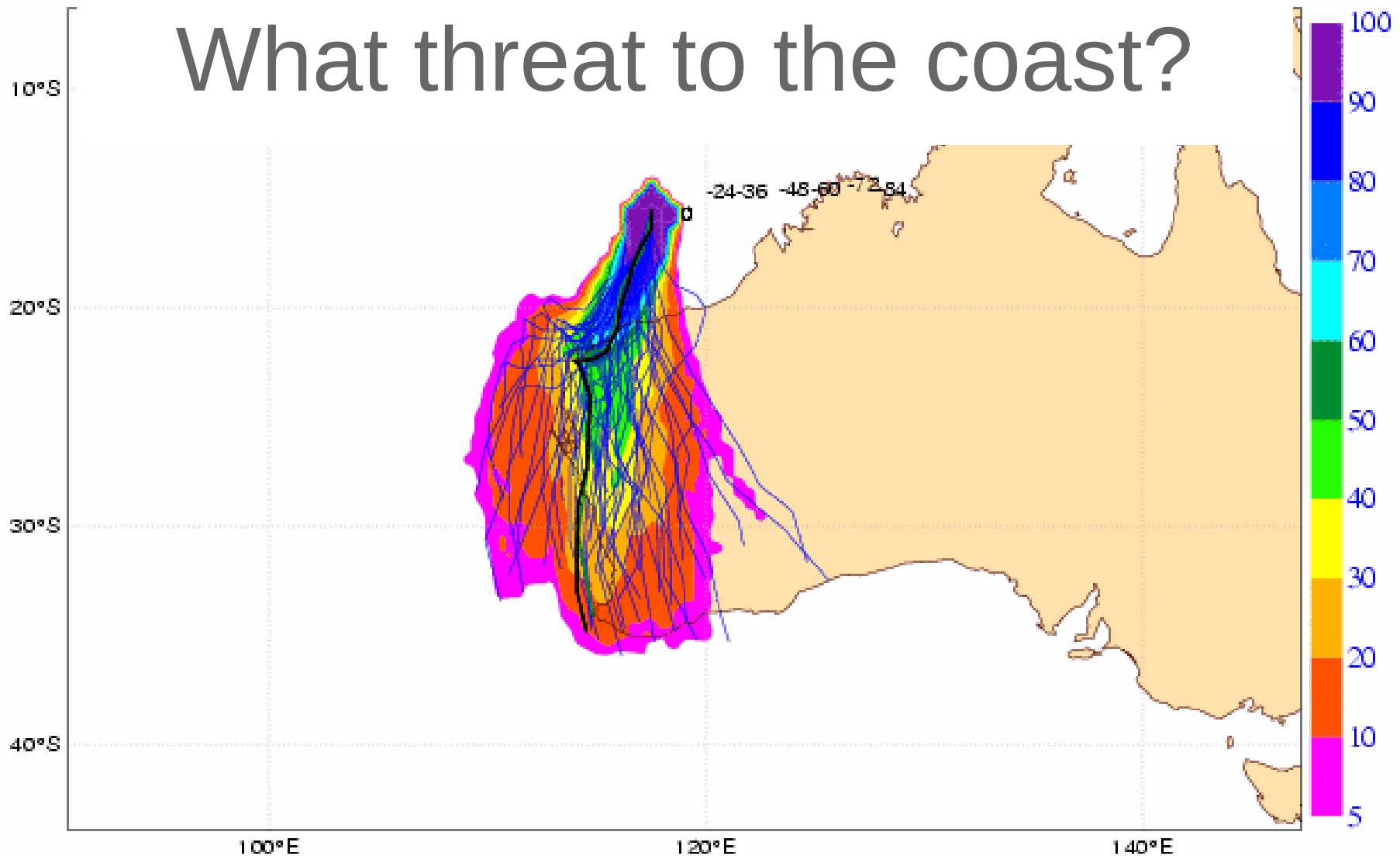




20070307 12 UTC

Probability that GEORGE will pass within 120km radius during the next 120 hours

# What threat to the coast?





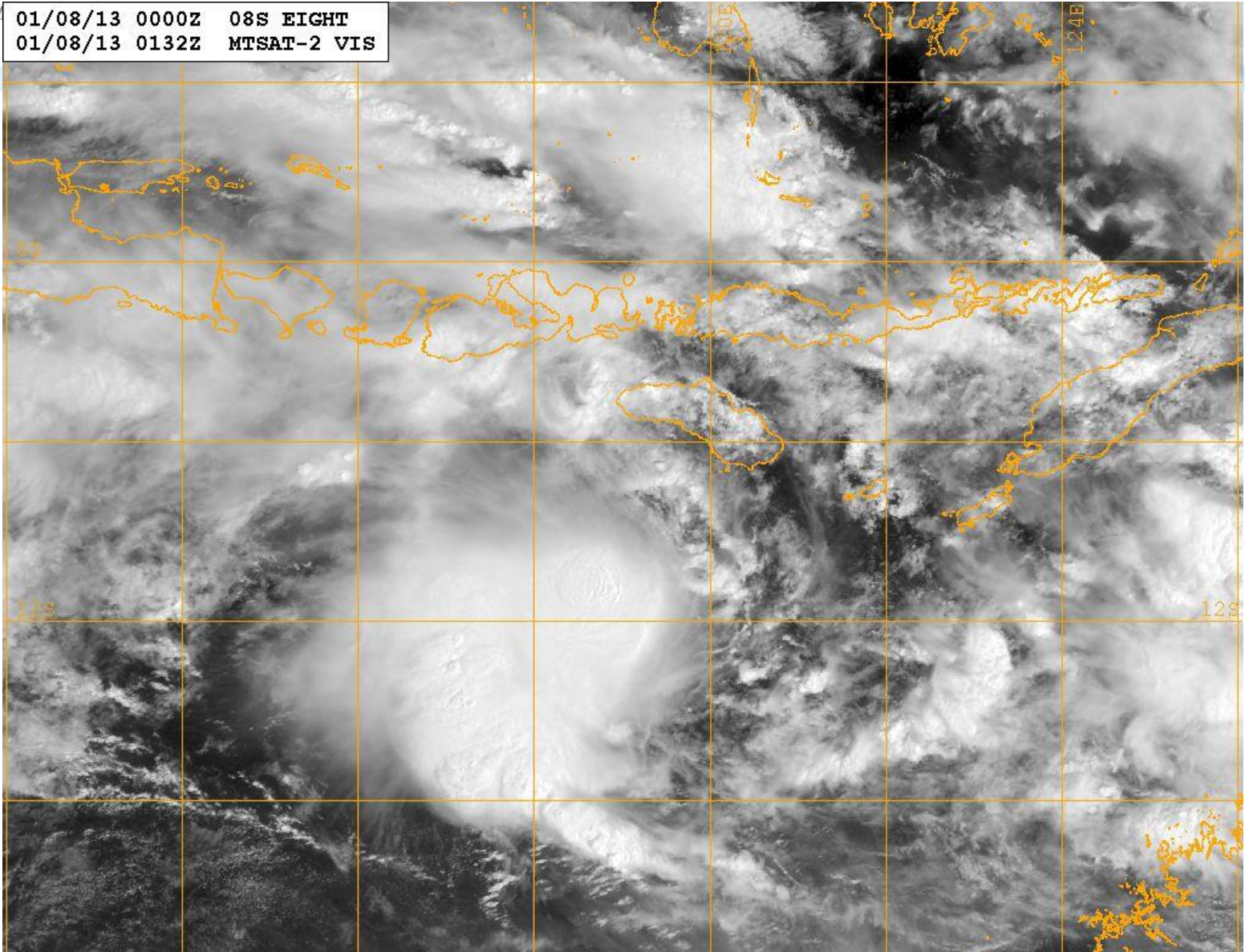
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01/08/13 0000Z 08S EIGHT  
01/08/13 0132Z MTSAT-2 VIS

# TC Workshop summary questions

## What is the direction of wind shear?



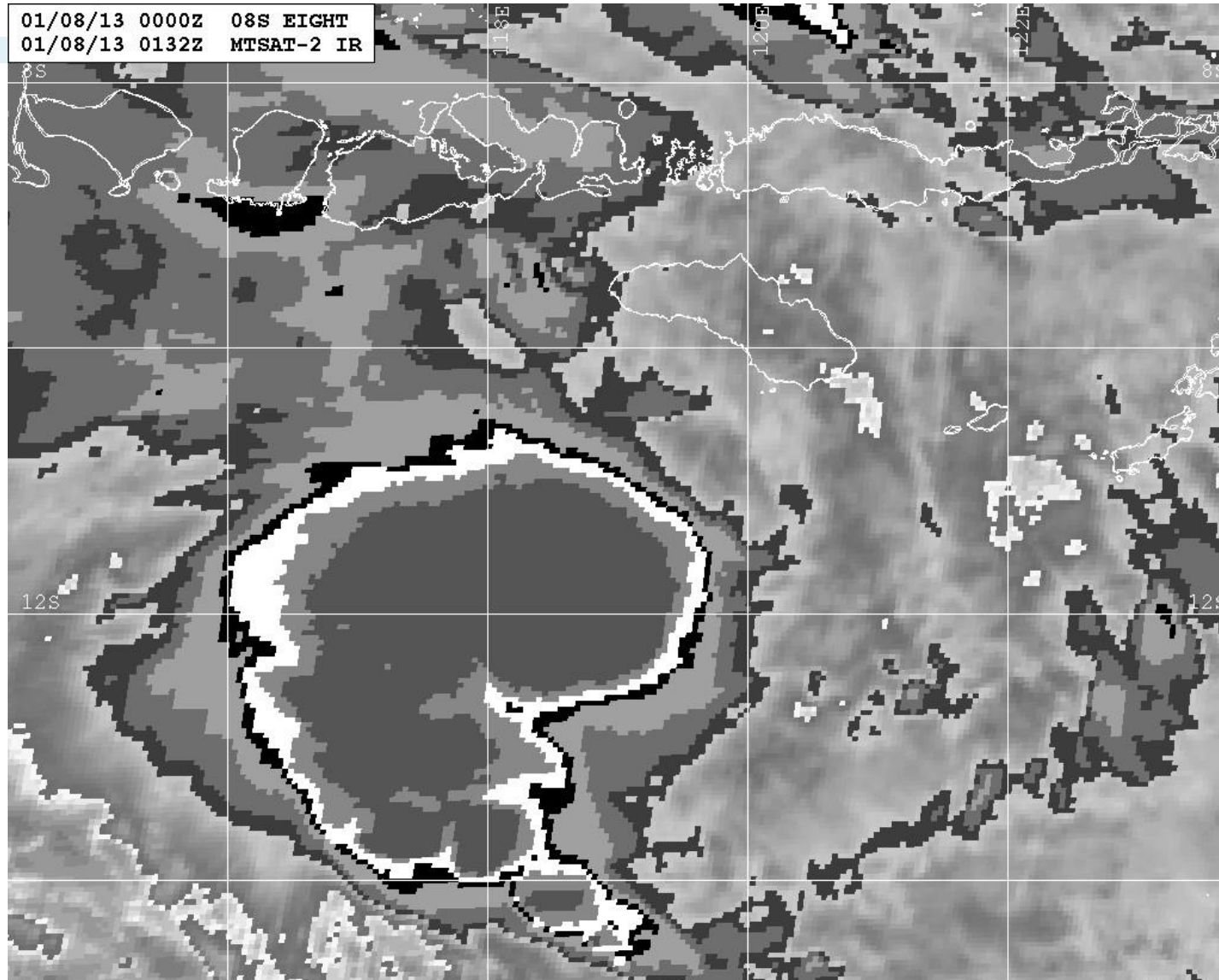


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# TC Workshop summary questions

## How can you tell shear in IR images?





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## TC Workshop summary questions

**Which of the following cases would you expect the MOST rapid development?**

- A. A small system under low shear.**
- B. A large system under low shear.**



# Do you think the circulation is developing?

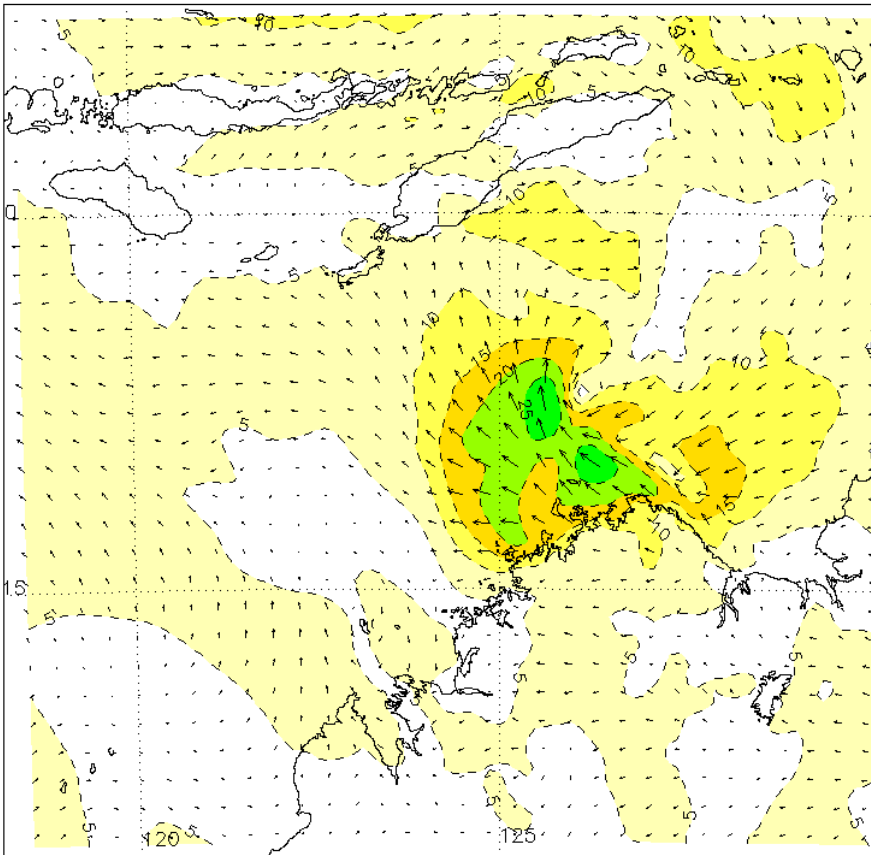
**Not Developing**  
**Developing**  
**About the Same**



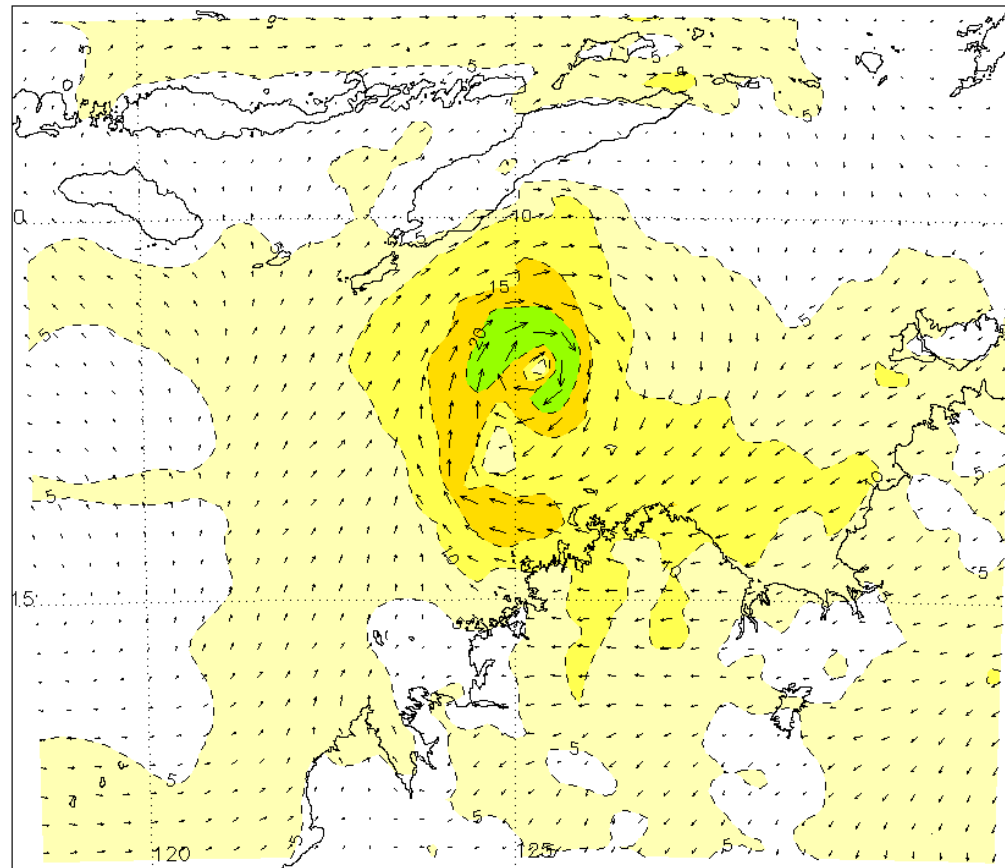
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EC\_AUS\_125 Wind Vectors: 10m(knots) : Thursday 14/ 4/2011



EC\_AUS\_125 Wind Vectors: 10m(knots) : Friday 15/ 4/2011 0Z





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# Thank you from David and Joe



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