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# **The Mesoscale feature of the Interaction between Typhoon Morakot (2009) and the Southwesterly Flow**

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Chung-Cheng Institute of Technology,

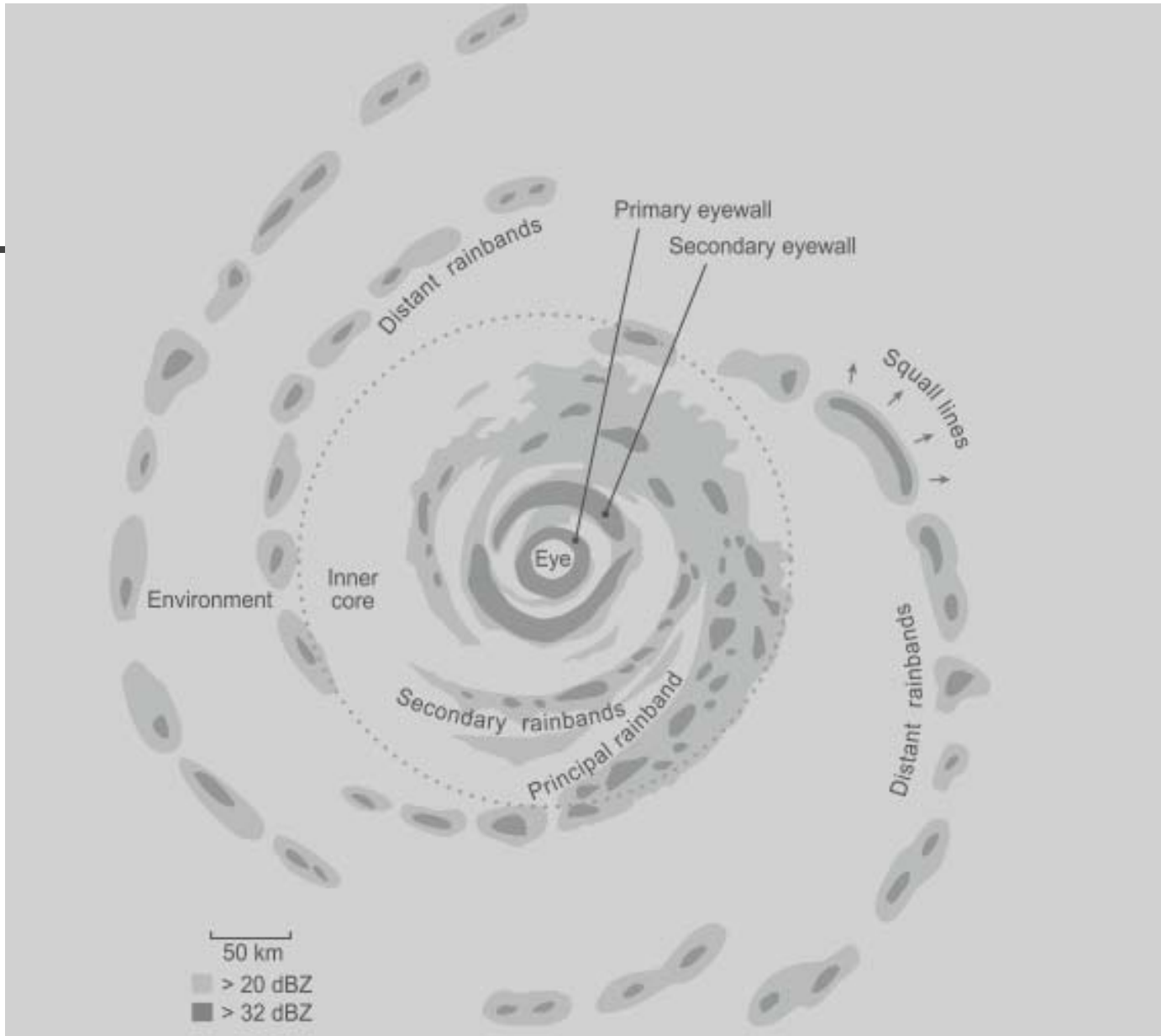
National Defense University



# Motivation

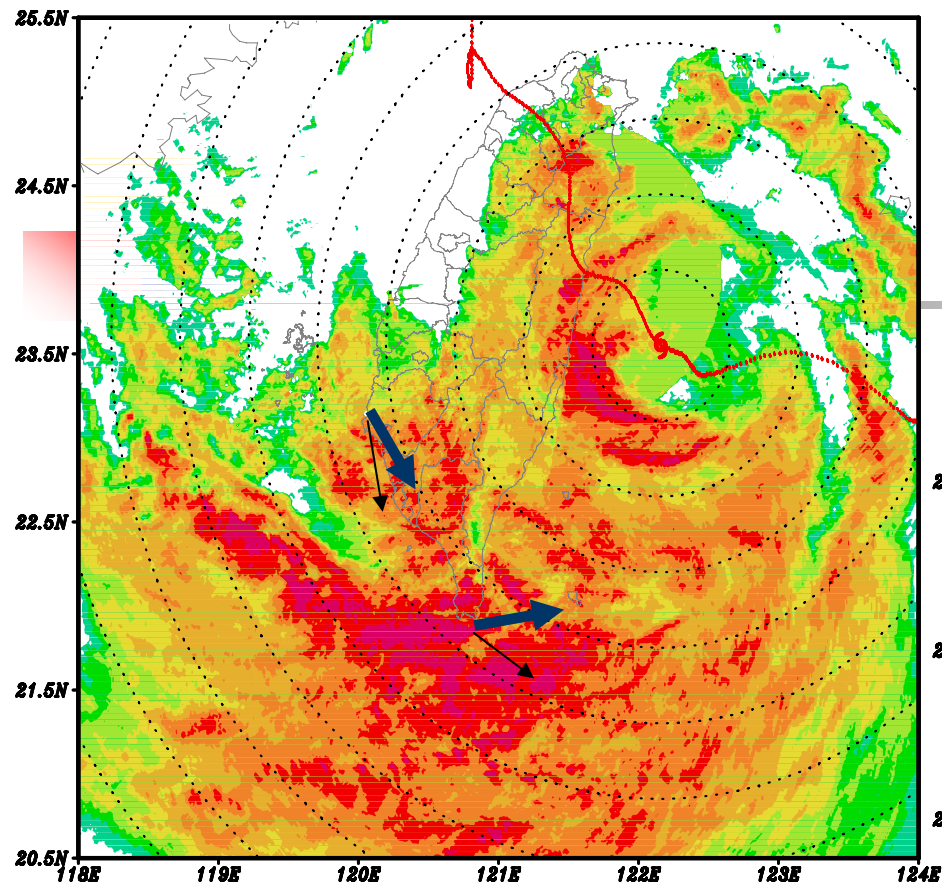
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- The present of the interaction between the typhoon circulation and the southwesterly flow
- Its mesoscale features during the invasion of the typhoon Morakot (2009) by the observation of the ground-based Doppler radar network in the southern Taiwan.

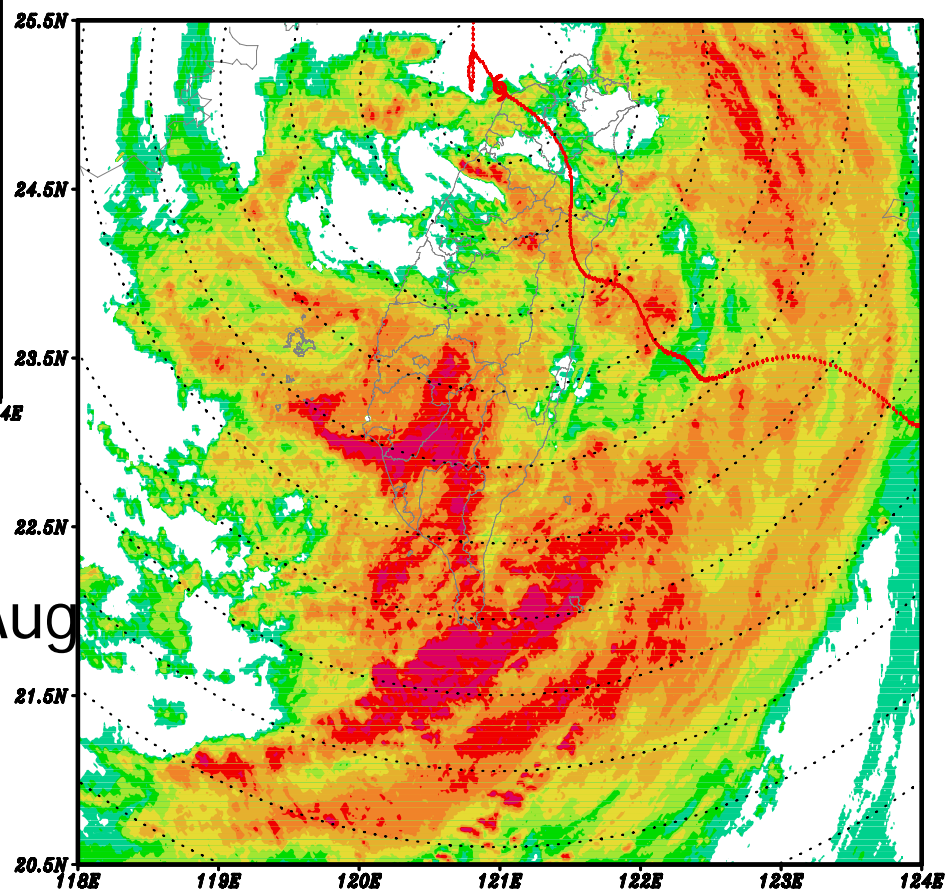


Houze, 2010(Adapted liberally from Willough by 1988.)

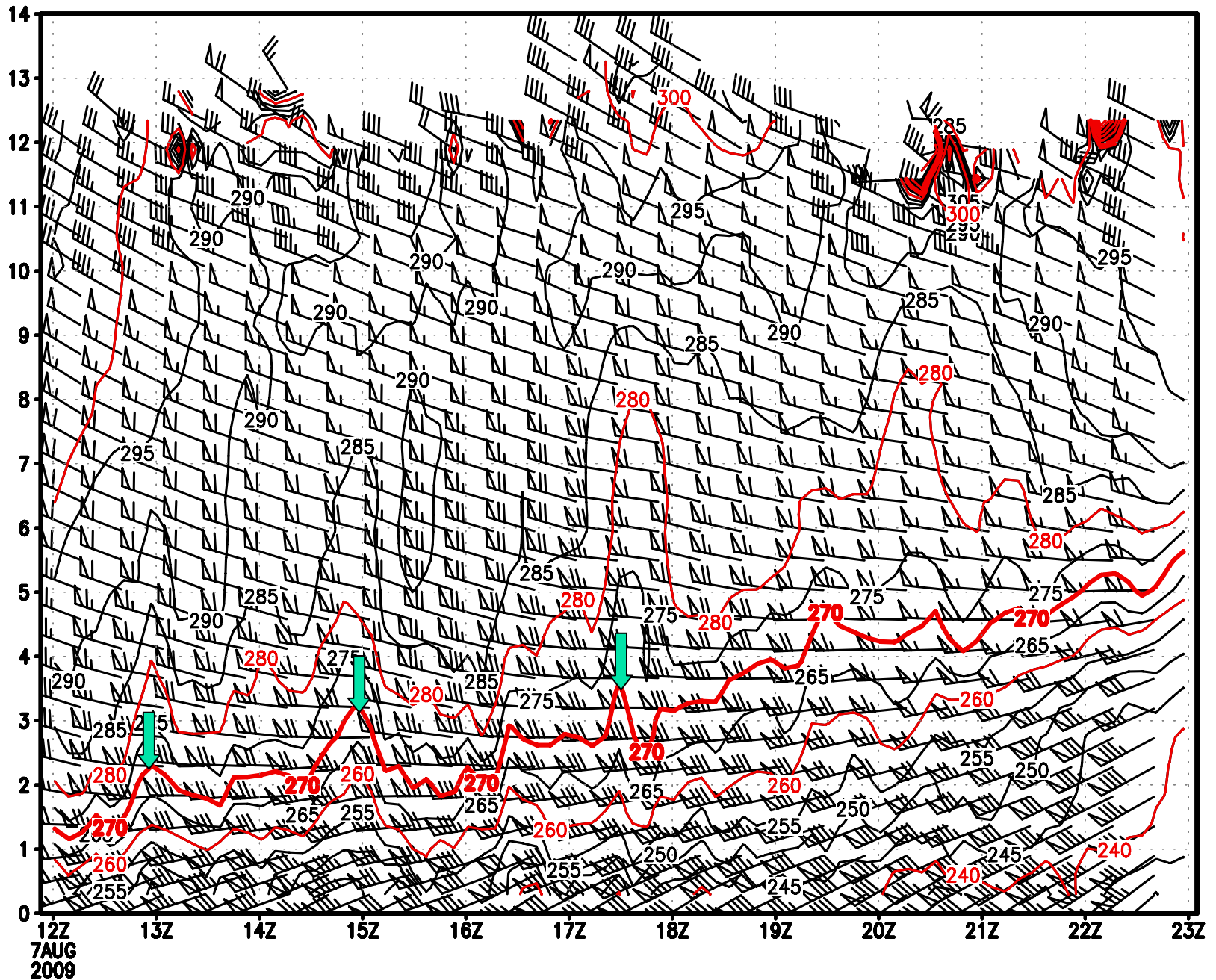
Before landfall at 1100 UTC 7 Aug



After invasion at 0600 UTC 8 Aug



# VAD analysis from Kenting Radar



00Z09AUG



18Z08AUG2009

12Z08AUG2009

06Z08AUG2009

00Z08AUG2009

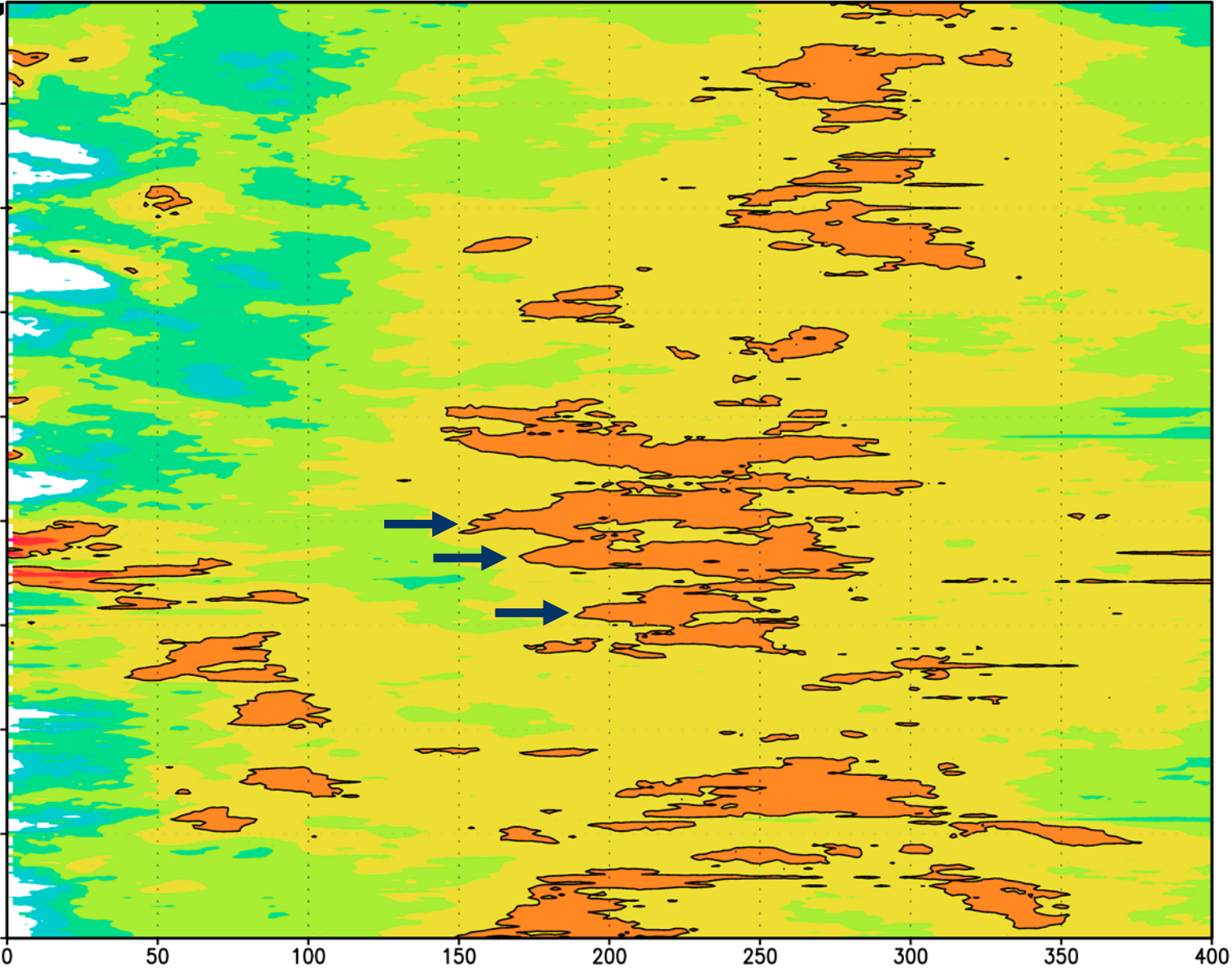
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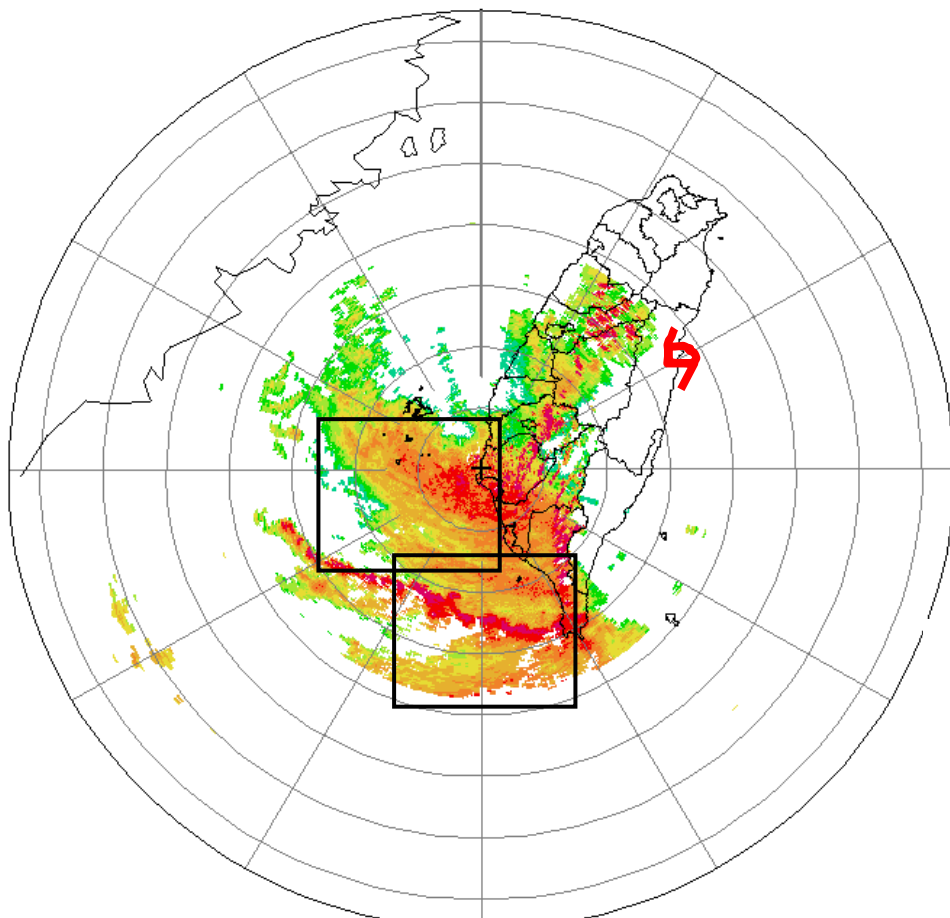
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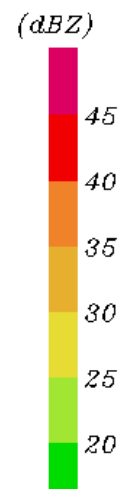
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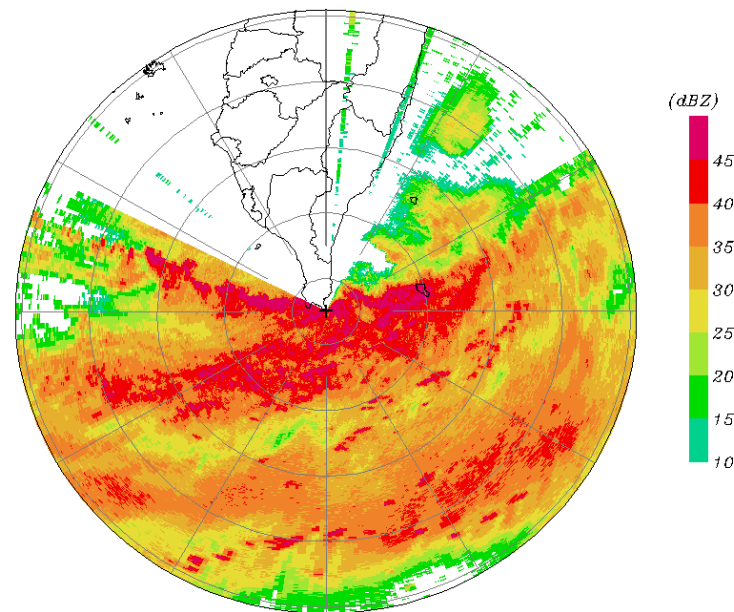
2009 AUG 07 16:16UTC RCCG 0.5° PPI



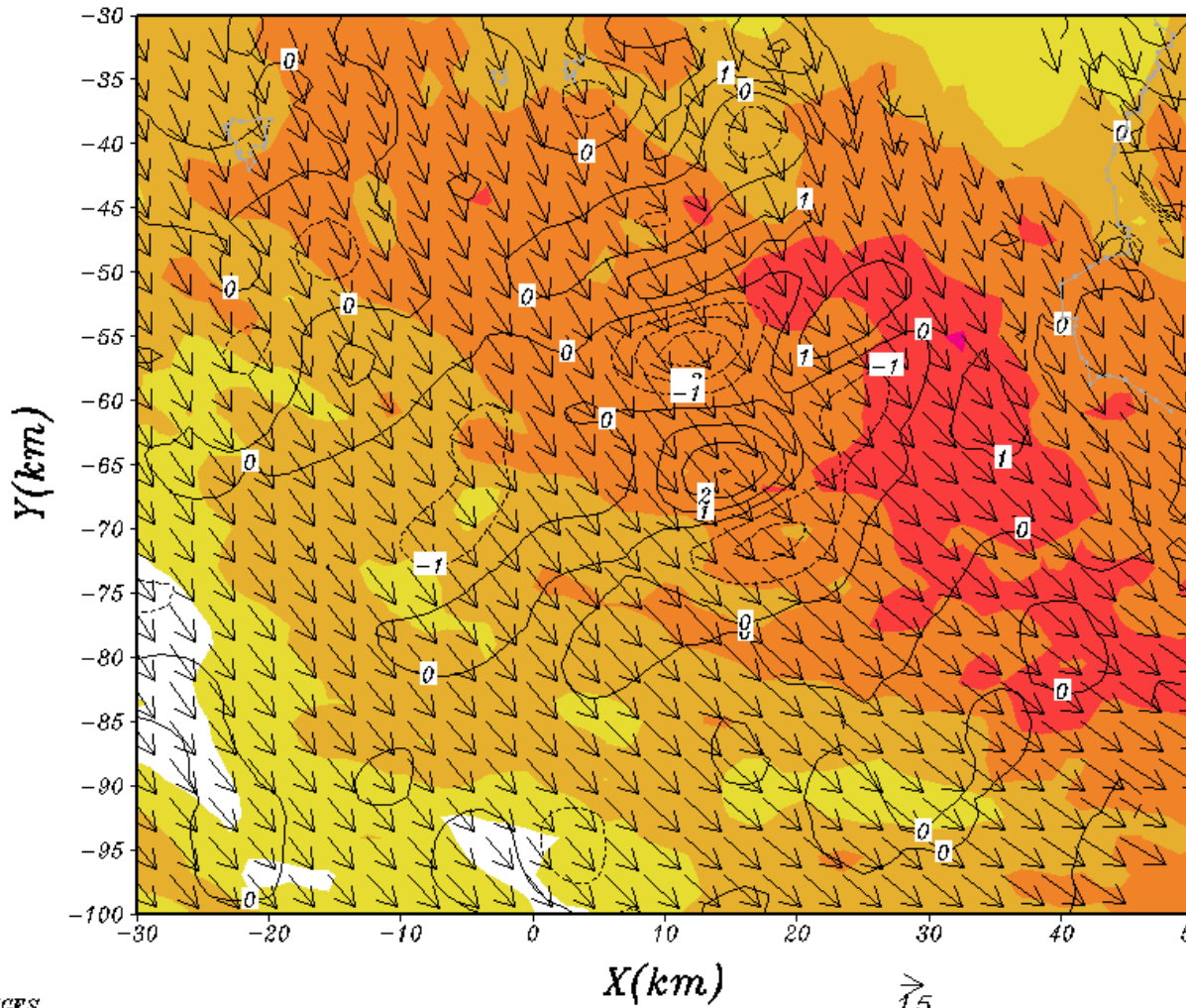
The characteristics of  
rainbands before  
landfall



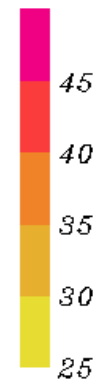
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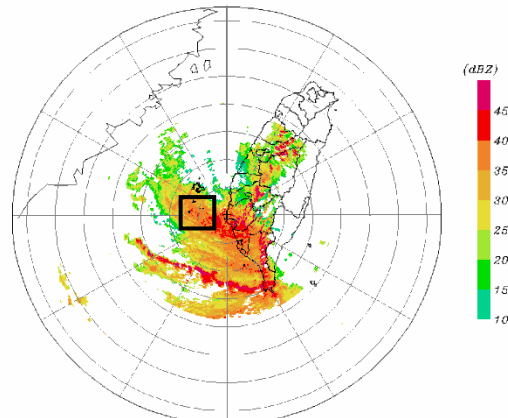
# 2009 AUG 07 16:16UTC 1km SYNTHESIZED WIND



(dBZ)

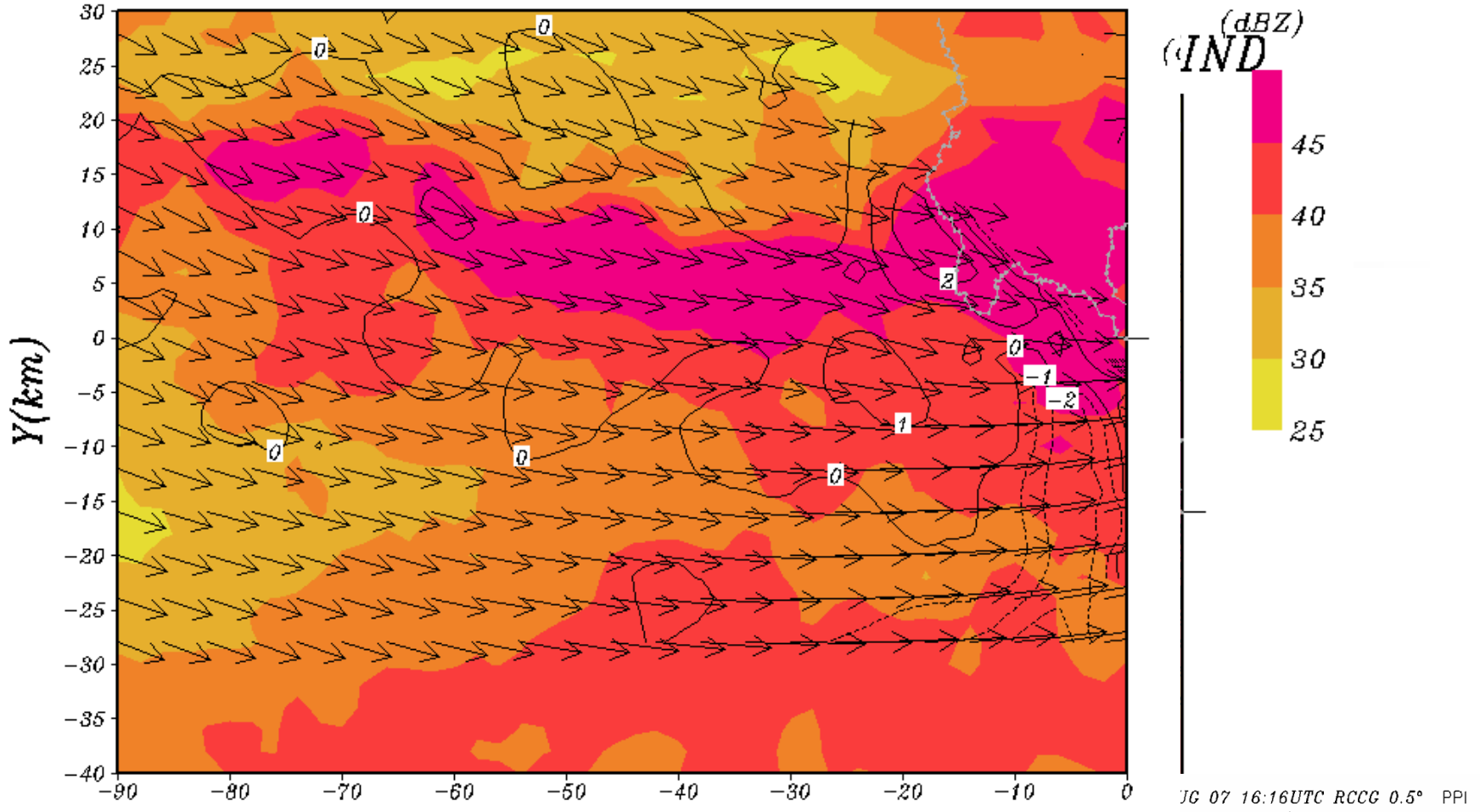


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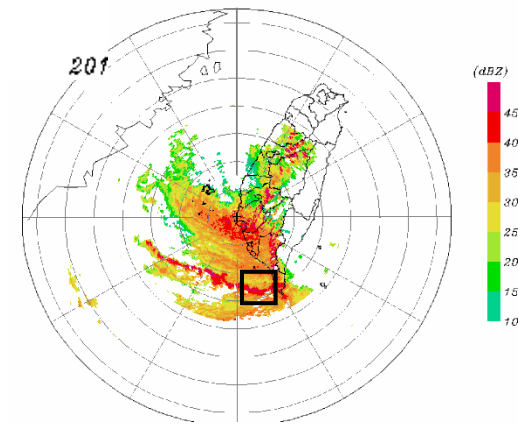


# 2009 AUG 07 16:16UTC 1km SYNTHESIZED WIN.

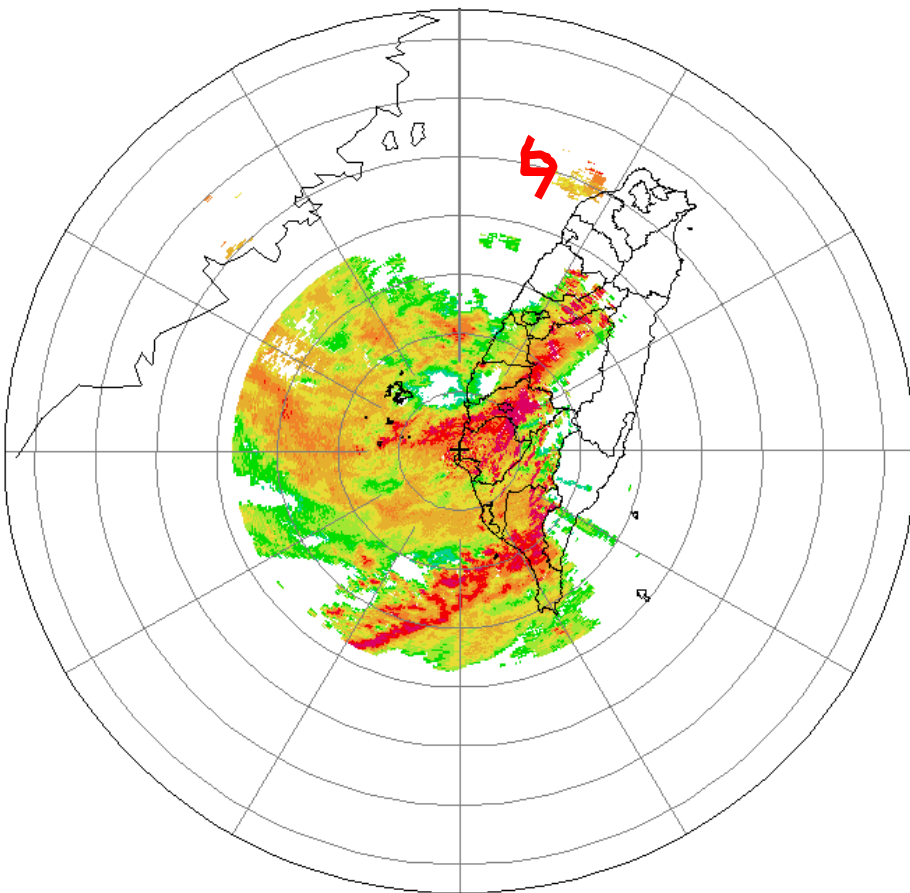


IGES  
A/IGES

JG 07 16:16UTC RCCG 0.5° PPI

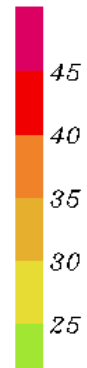


2009 AUG 08 17:01UTC RCCG 0.5° PPI

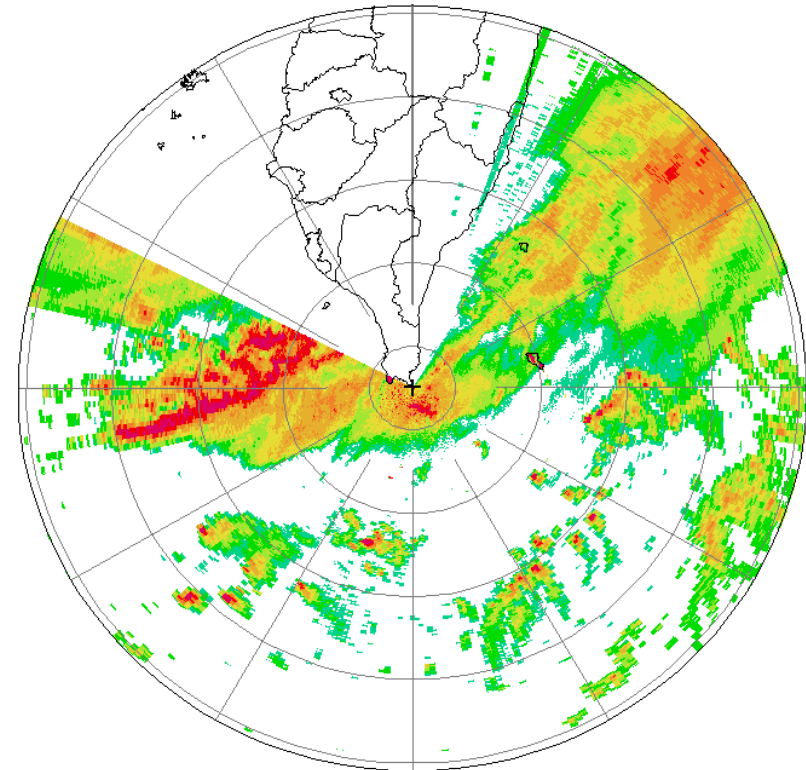


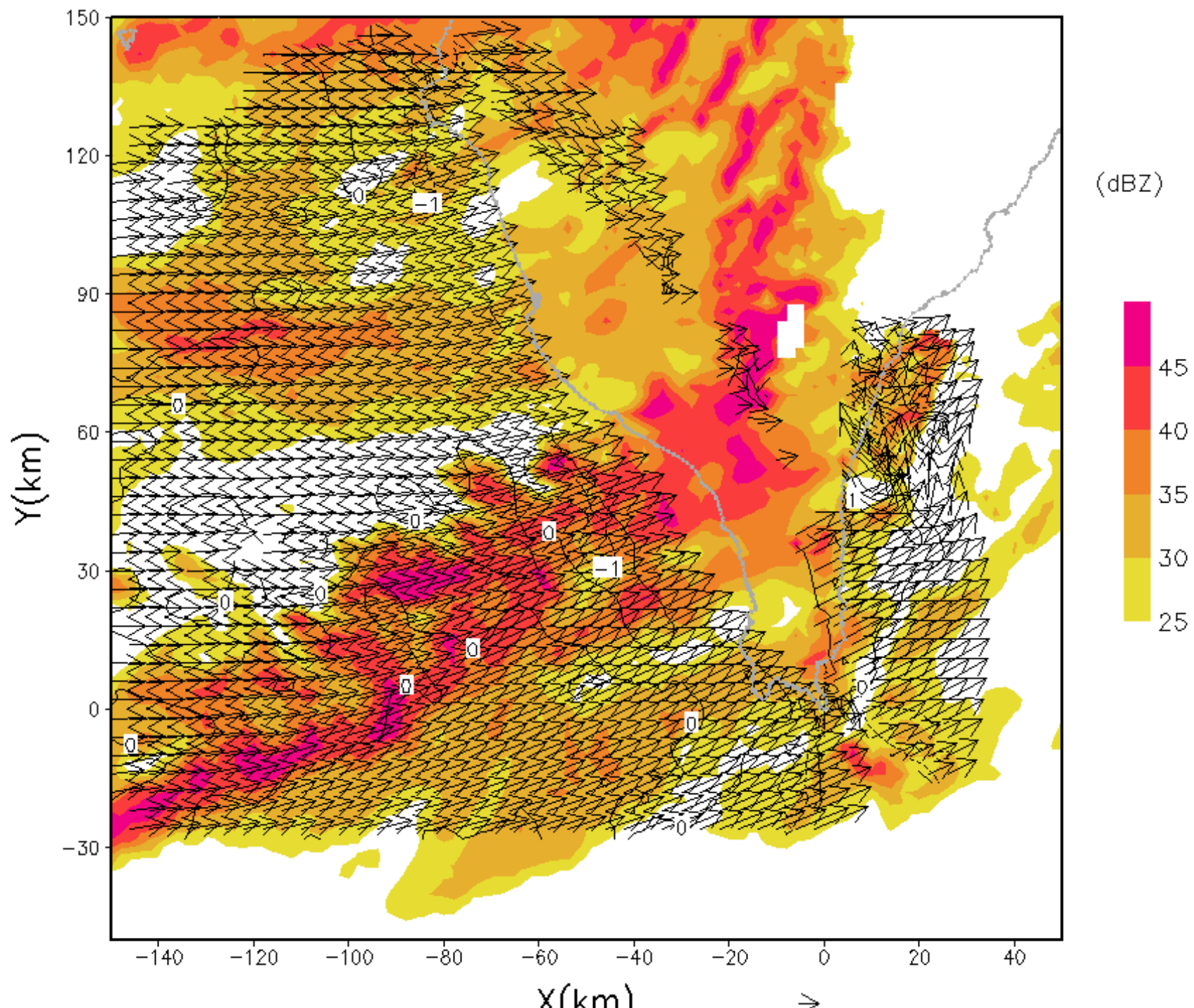
# The characteristics of rainbands after invasion

(dBZ)



2009 AUG 08 17:01UTC RCKT 0.5° PPI





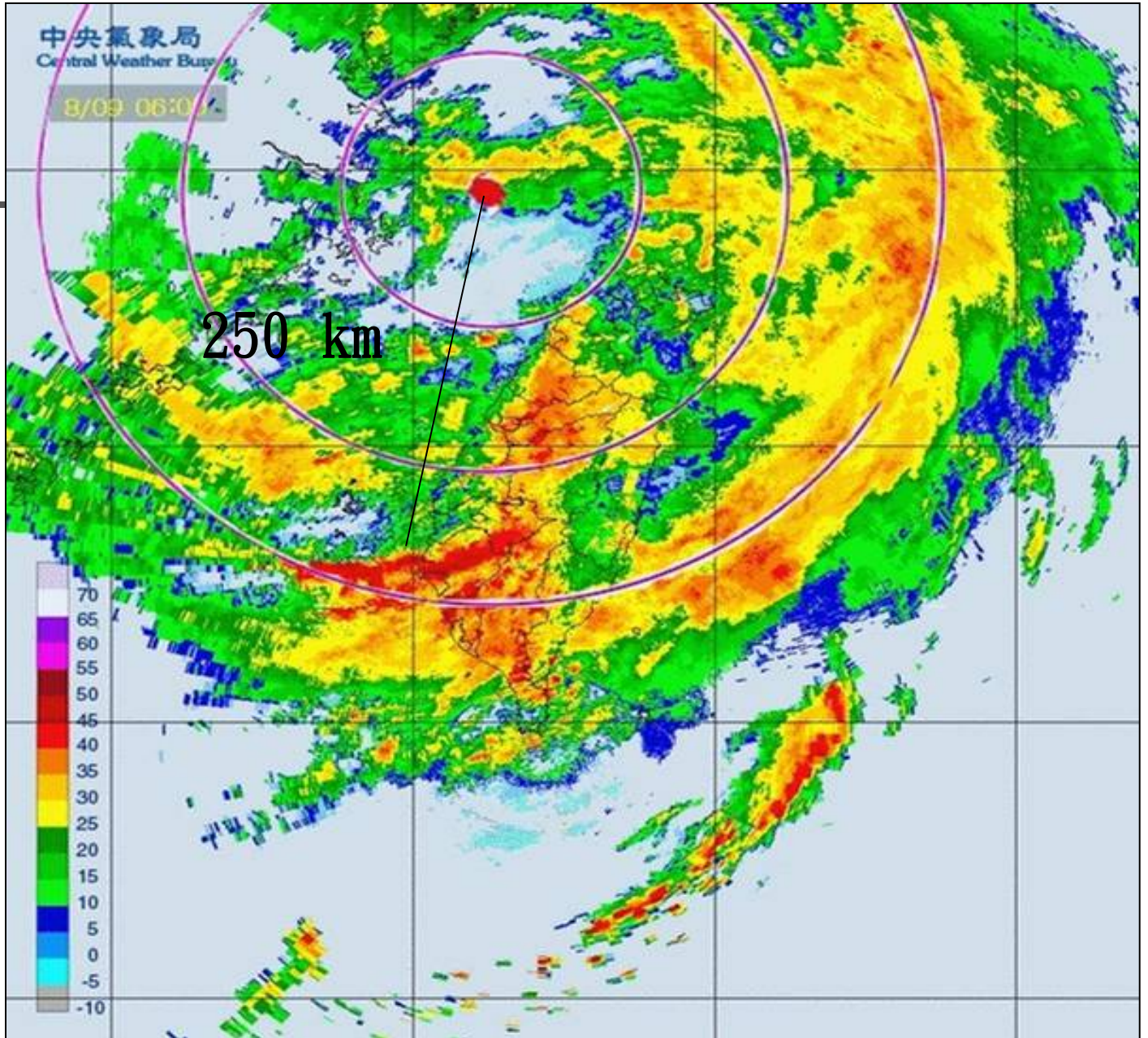
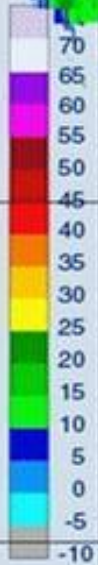


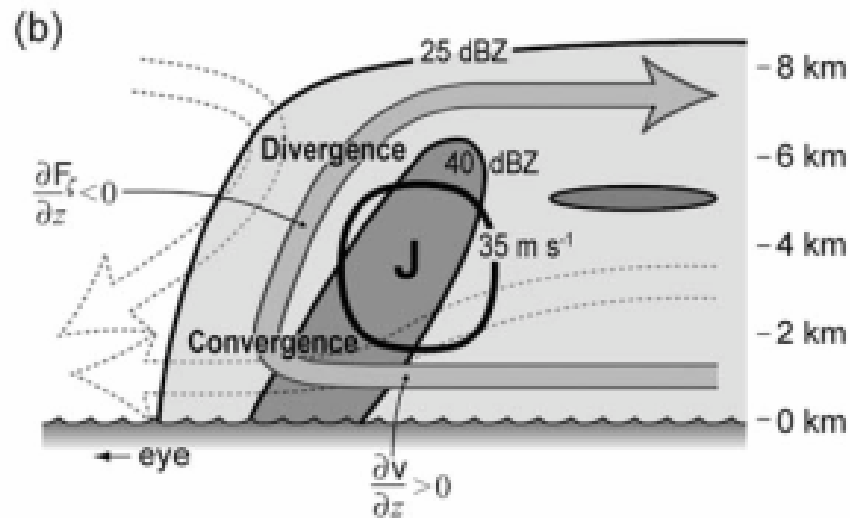
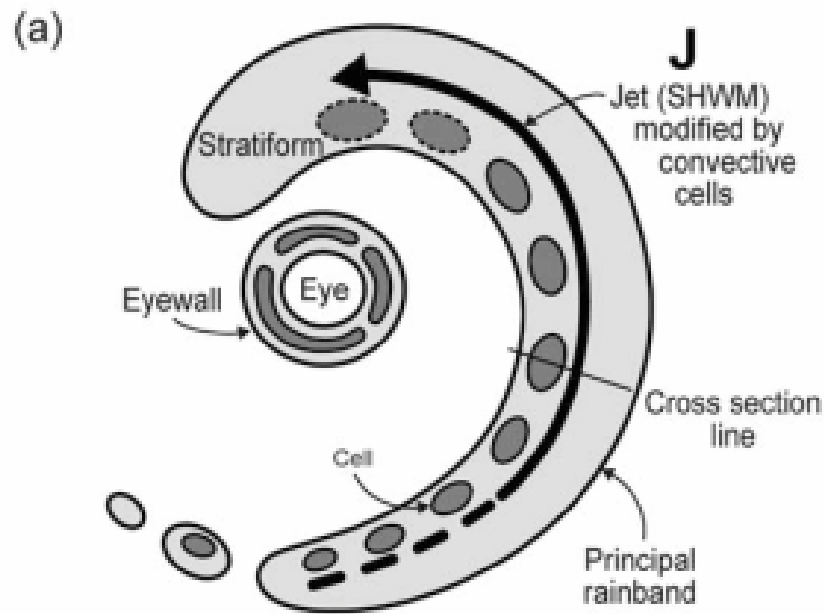
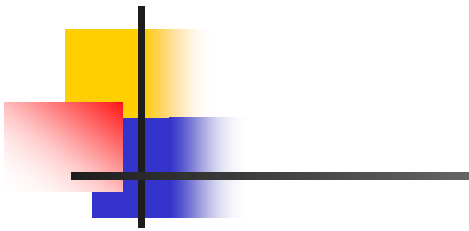
中央氣象局

Central Weather Bureau

8/09 06:00

250 km

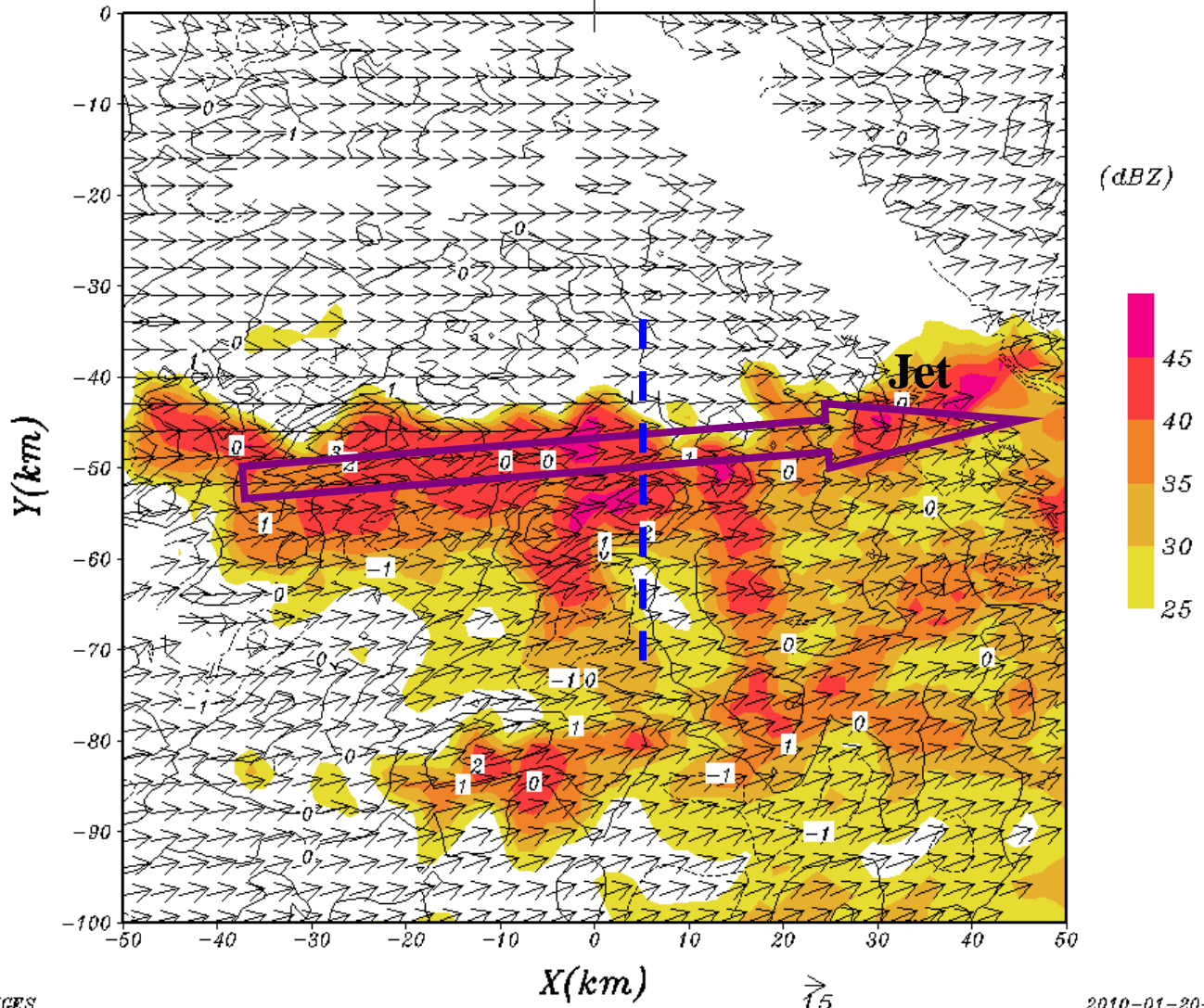


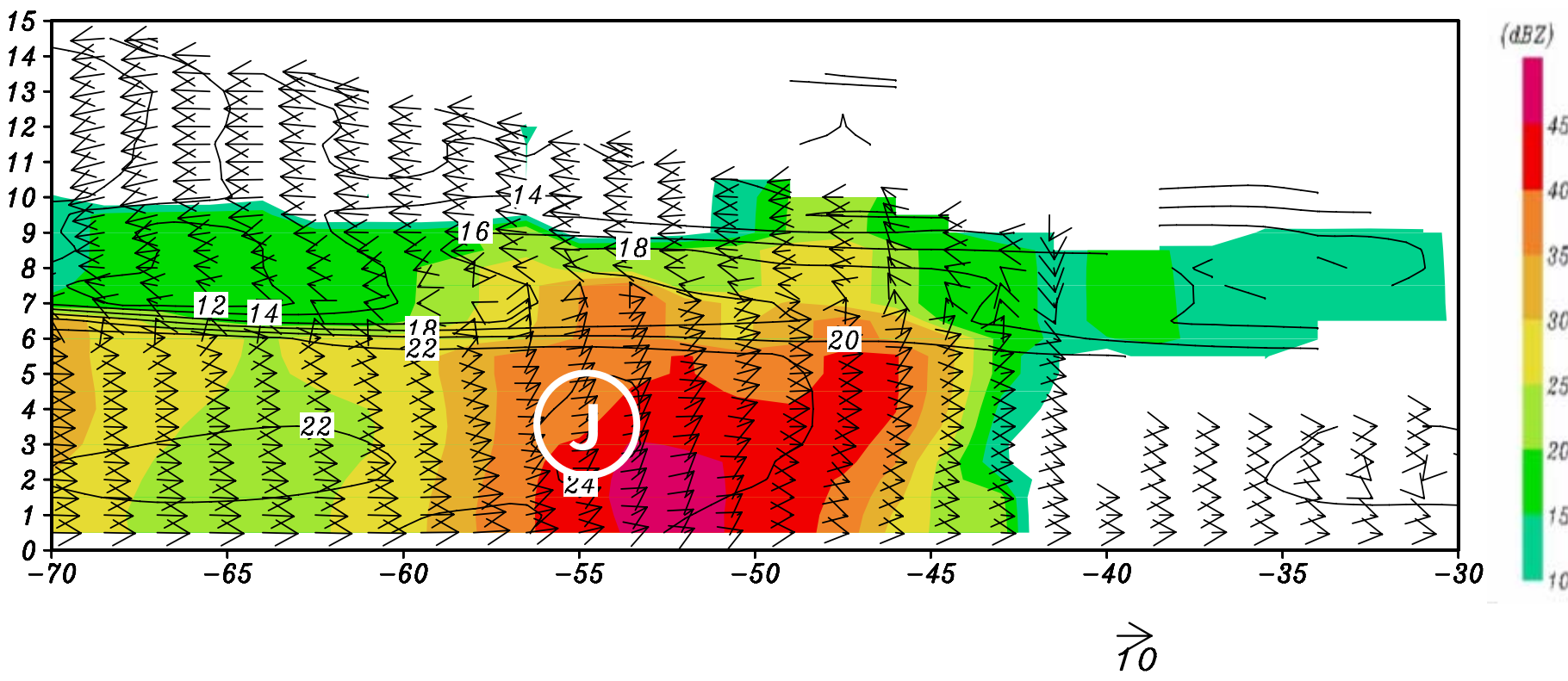
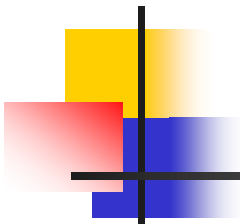


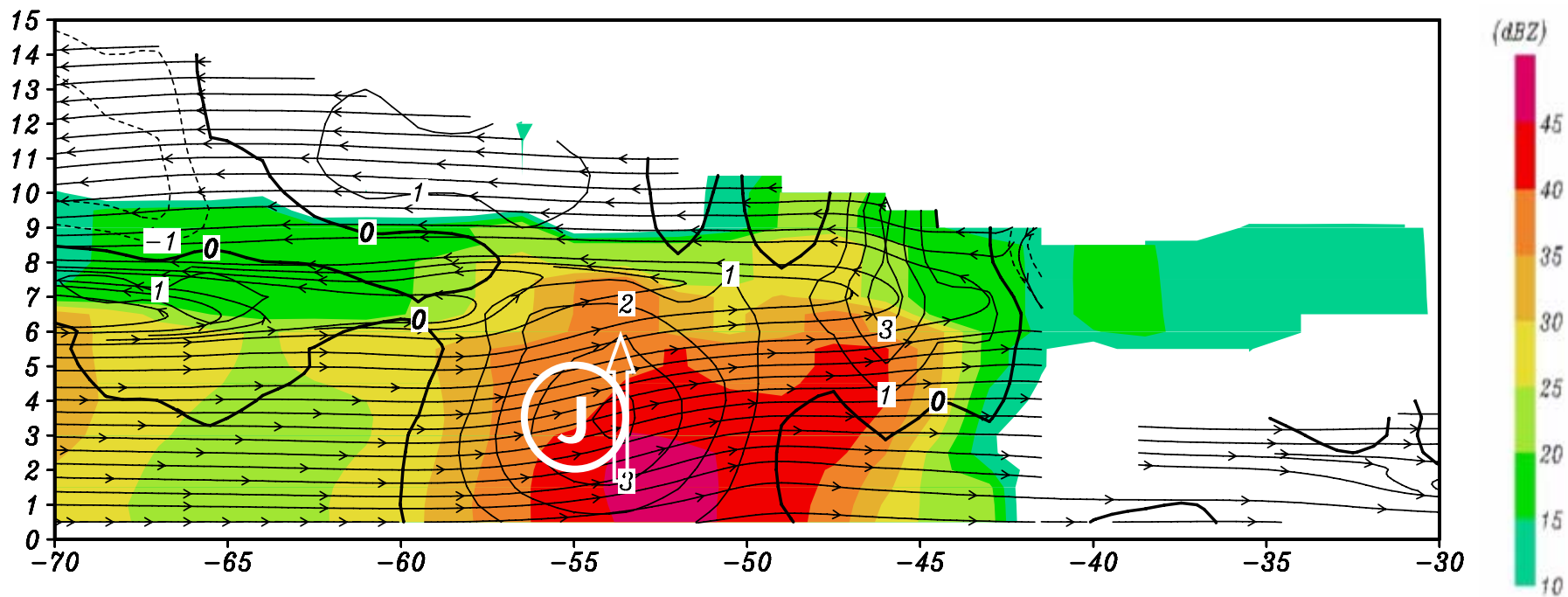
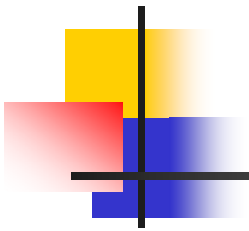
**Hence and Houze(2008)**



2009 AUG 08 22:01UTC 3km SYNTHESIZED WIND









# Summary

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- The increase of radial component of the VAD analyzed winds suggests the presence of the southwesterly at low levels
- The characteristics of rainbands is comparable with the conceptual model proposed by Hense and Houze (2008).



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Thank you for your attention

May the peace from God be with you