PACIFIC RESEARCH
FISHERIES CENTRE

COSMIC METHODS OF OCEAN RESEARCH LABORATORY

# One type of eddy development in the north–eastern Kuroshio branch

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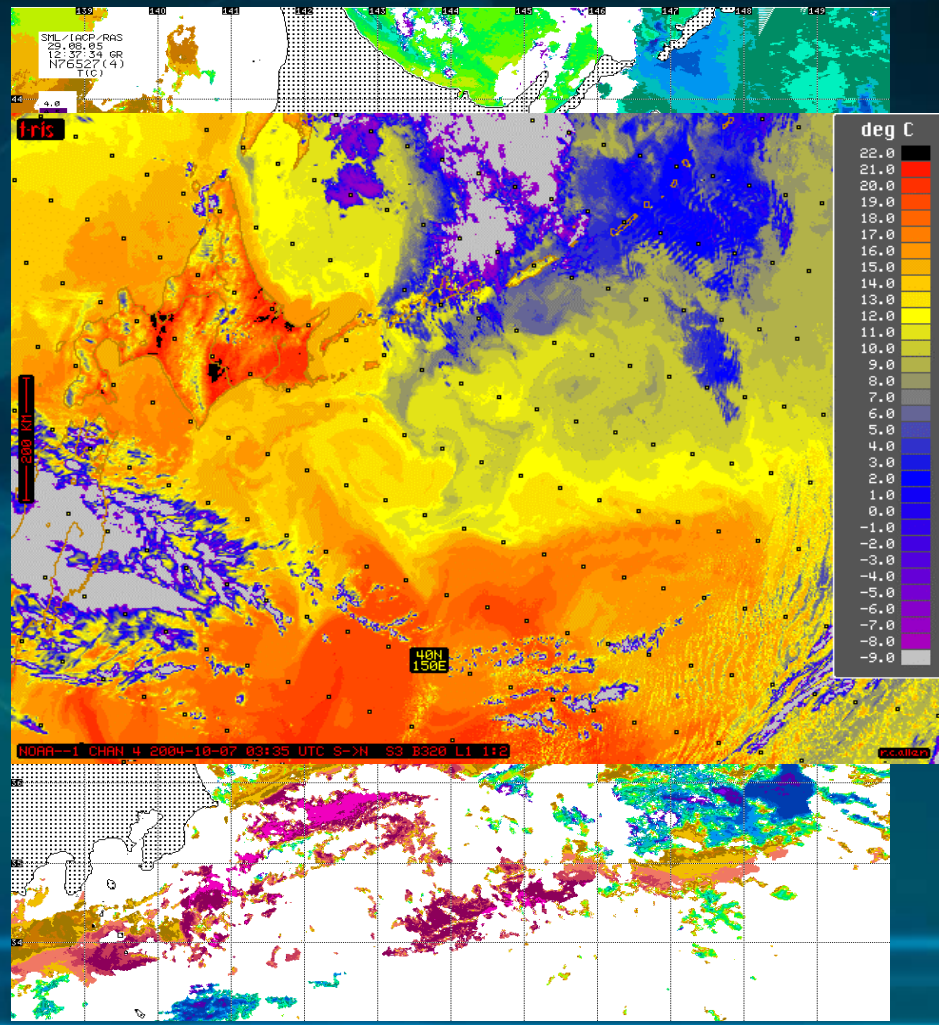
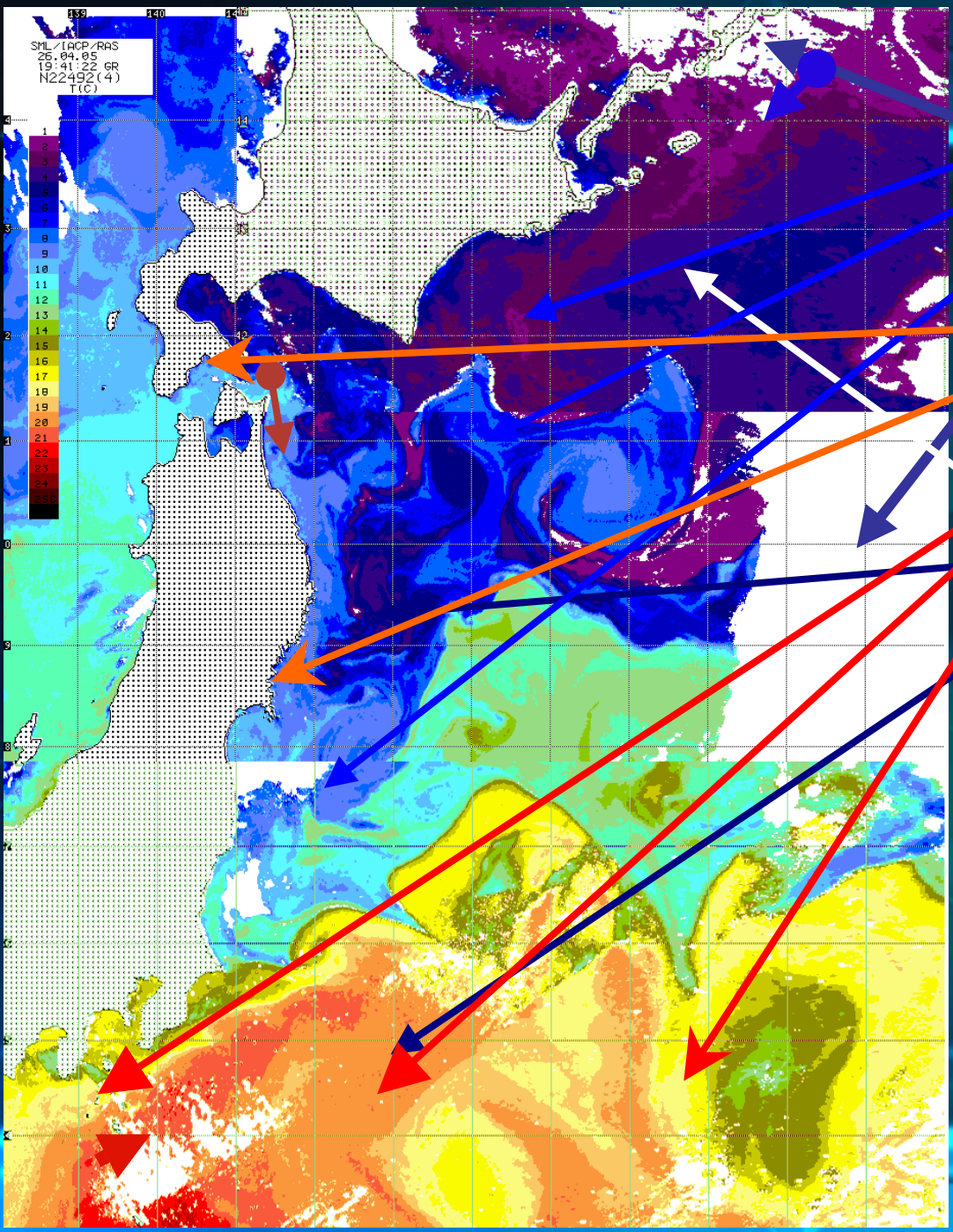
# OUR LABORATORY USES DATA IN THE FORMATS:

- **INFRA-RED AND TV IMAGES from satellite NOAA (obtain from Satellite Monitoring laboratory, institute of Automation and Control Processes and regional Khabarovsk Center DV RCPOD)**
- **Japanese fax charts**






OYASHIO water

clouds

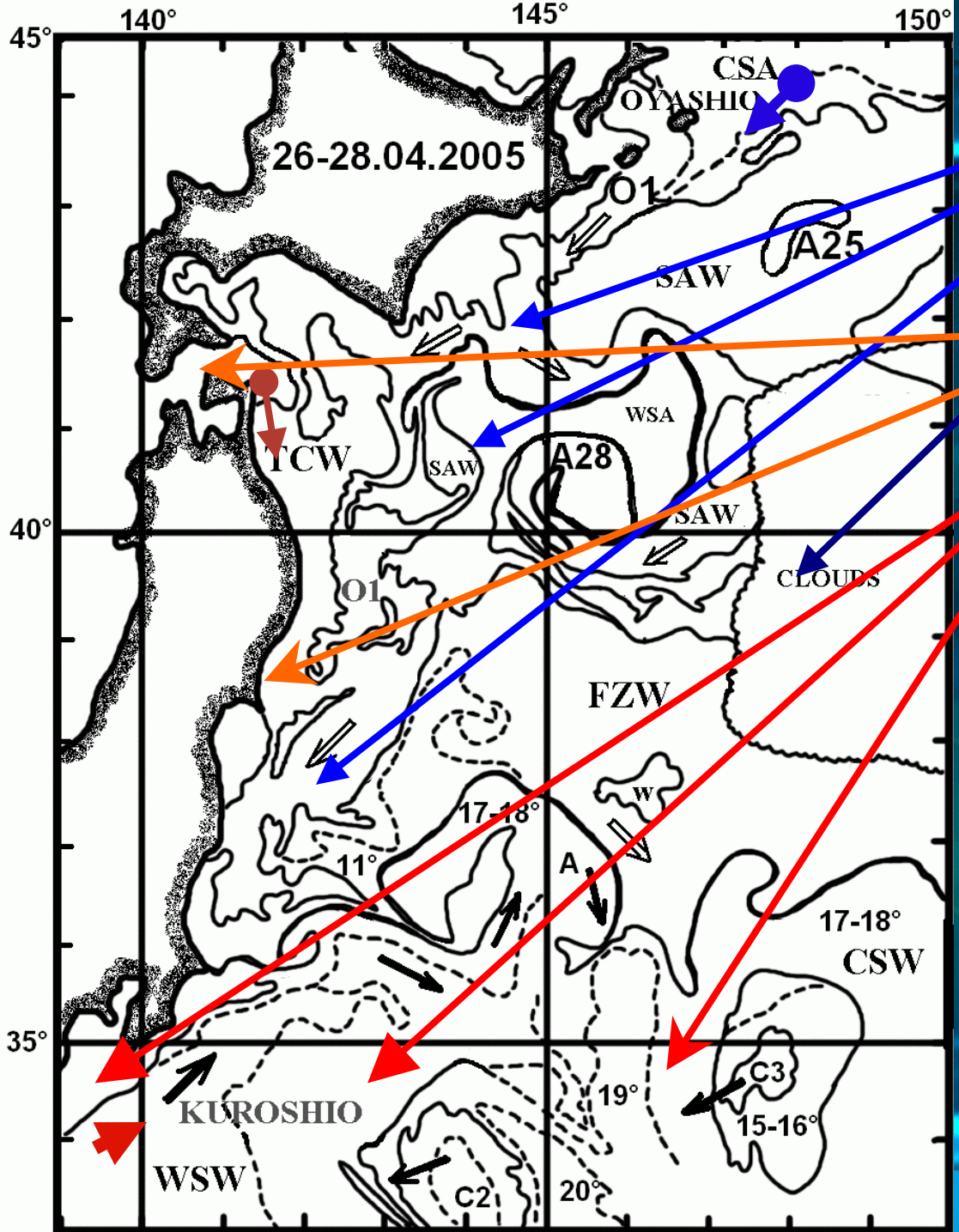
TSUGARY CURRENT

KUROSHIO water

WATER SURFACE

# SOURCE DATA

## INFRA-RED IMAGE 26-28.04.05




OYASHIO water

clouds

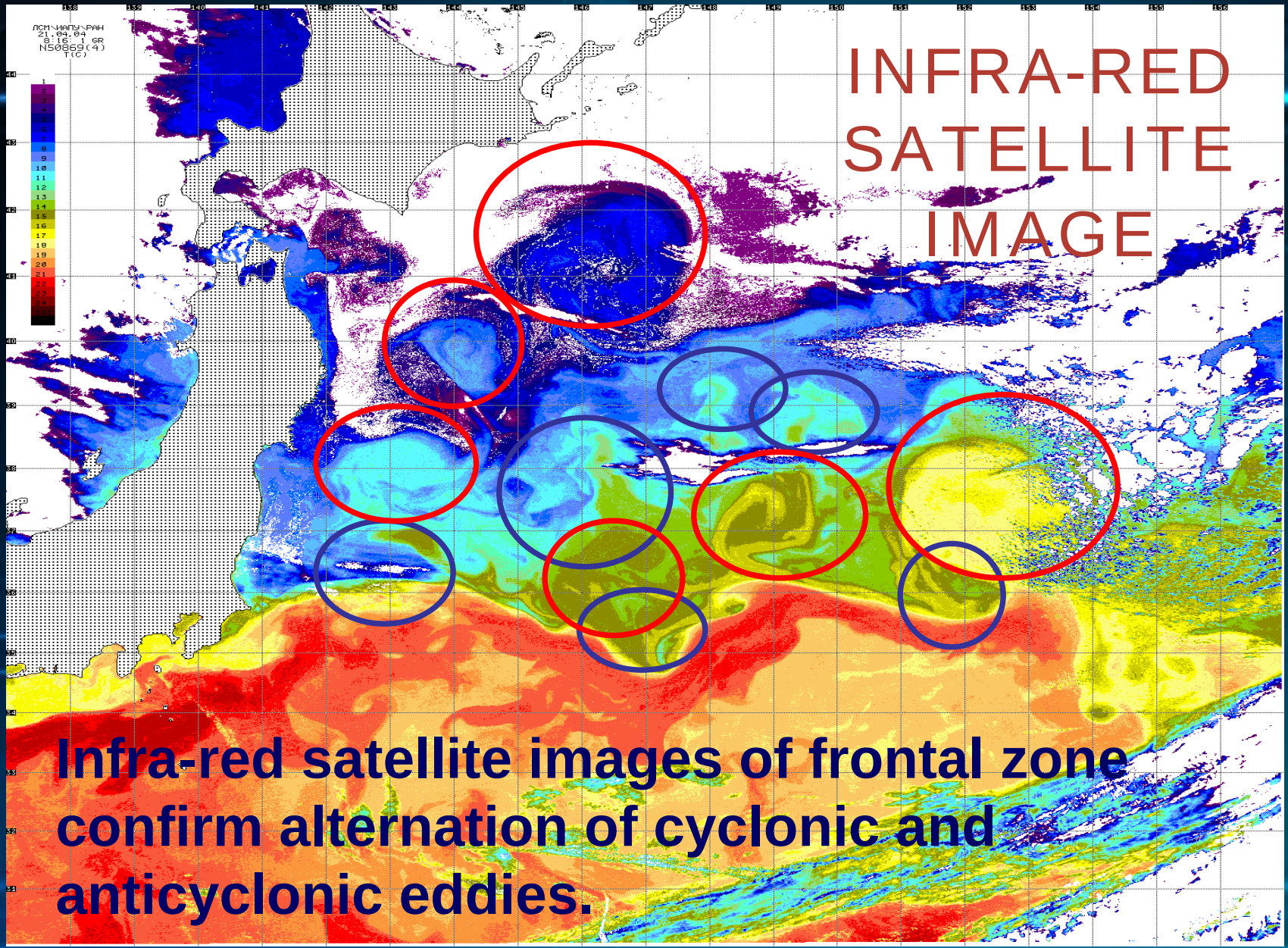
TSUGARY CURRENT

KUROSHIO water

# FRONTAL ANALISIS CHART

## 26.04.05- 28.04.05

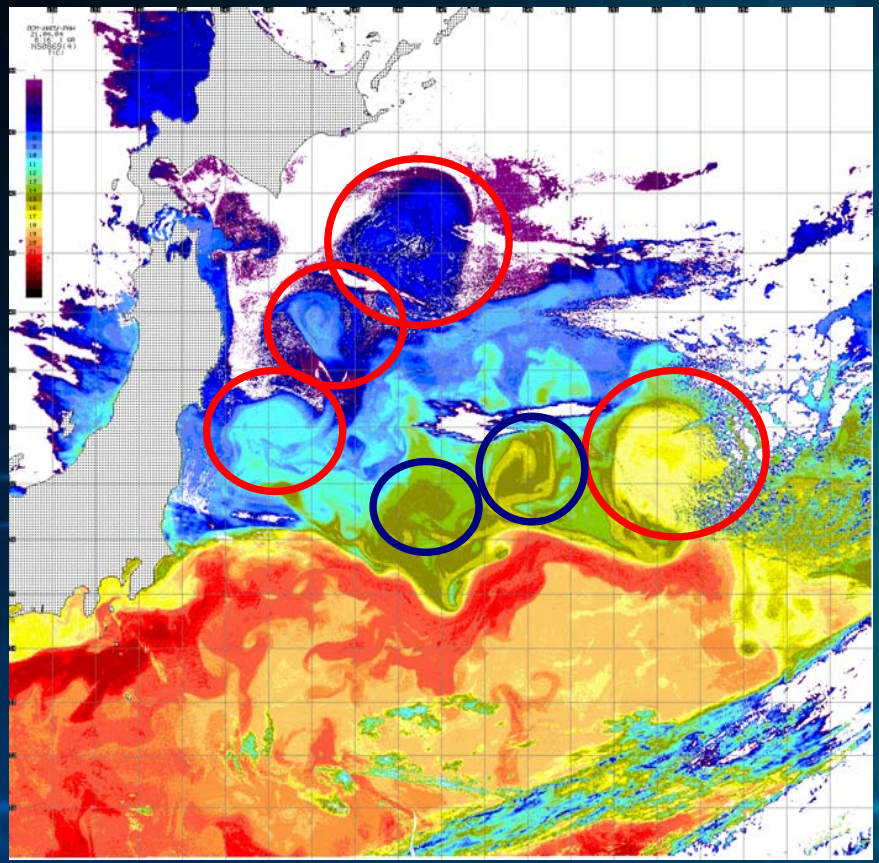
FRONTAL ANALYSIS CHART IS INTERPRETATION OF INFRA-RED IMAGES



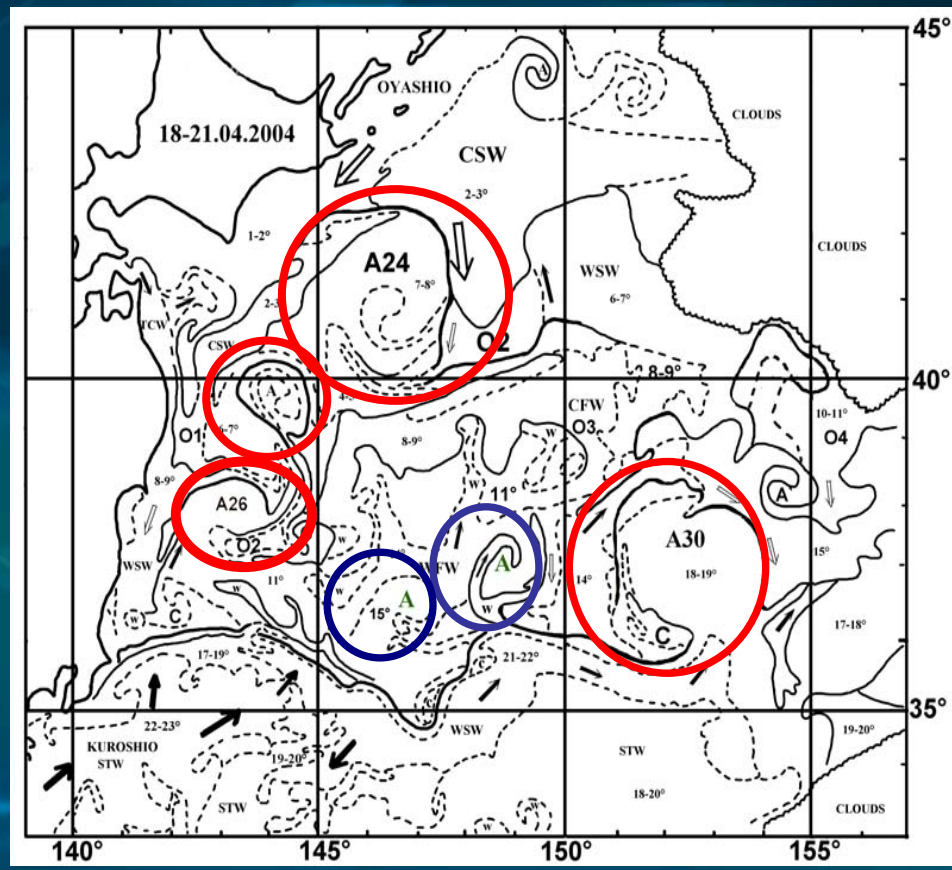

**Infra-red satellite images of frontal zone confirm alternation of cyclonic and anticyclonic eddies.**

# Infra-Red image (A) and Frontal Analysis Chart (B)

A

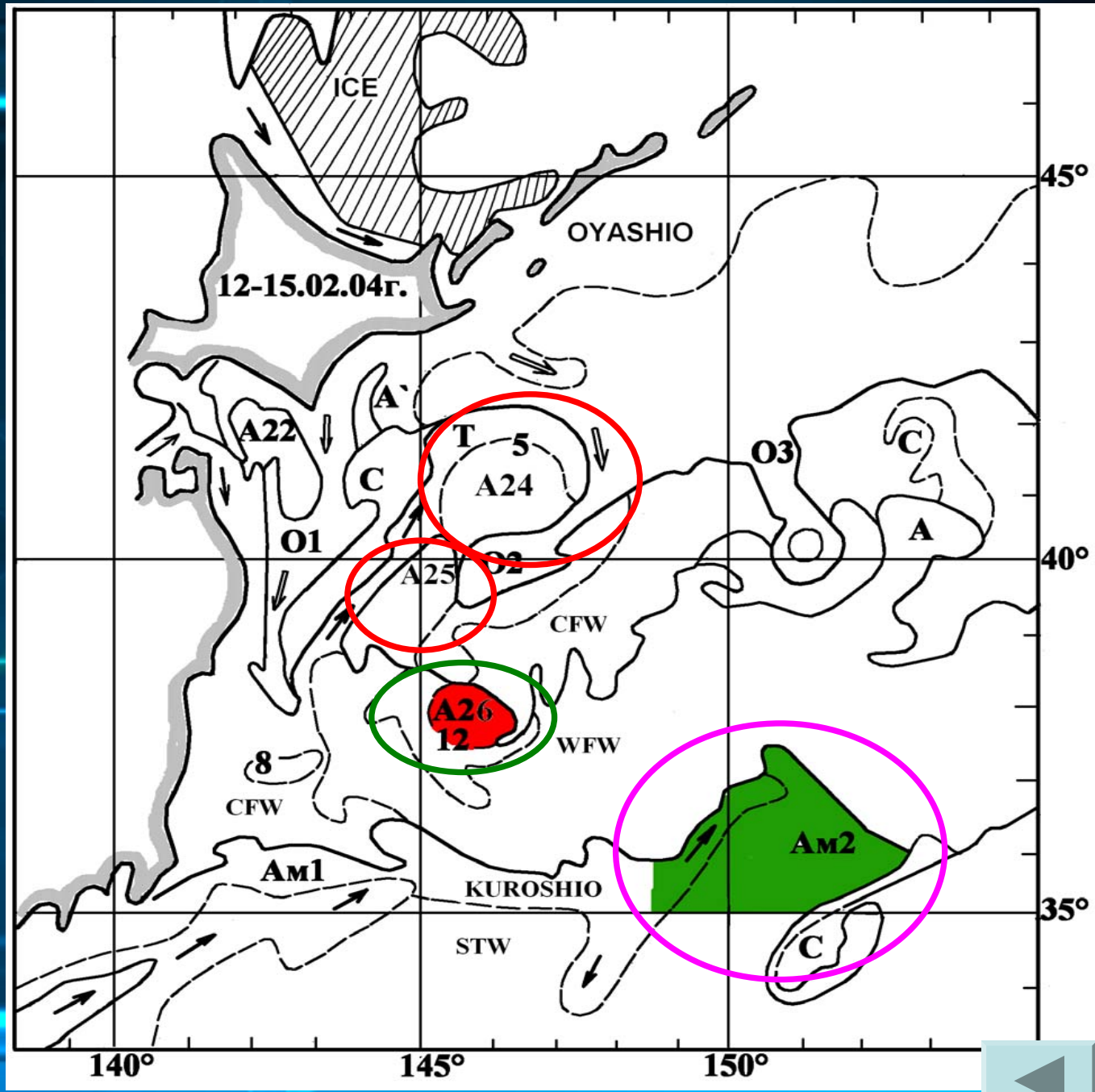


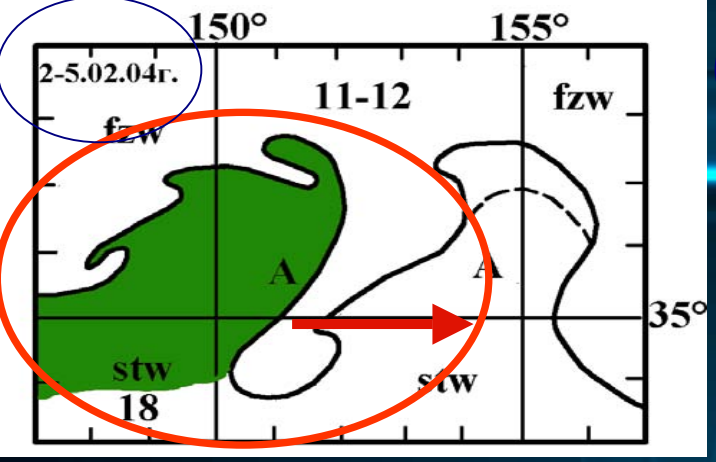
B

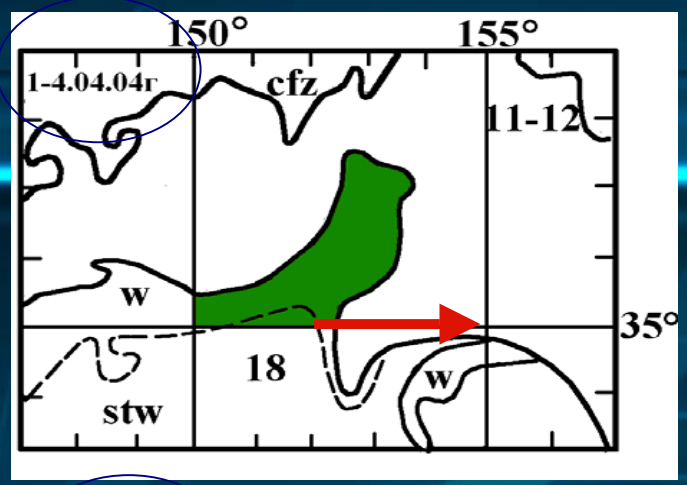


# FRONTAL ANALYSIS CHART

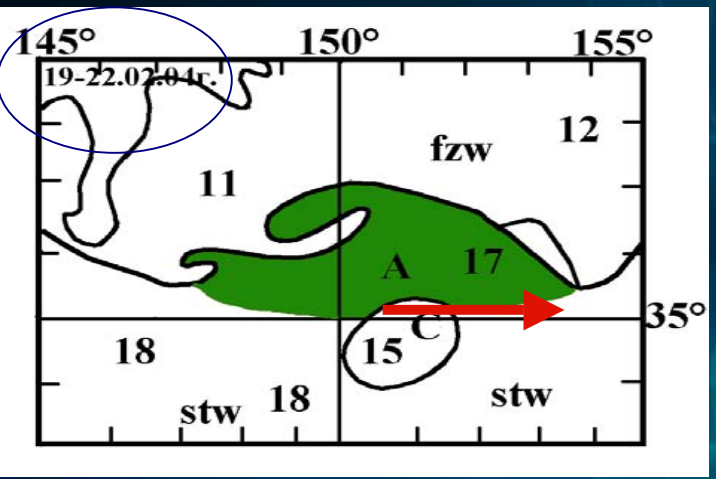
(WINTER 2004)

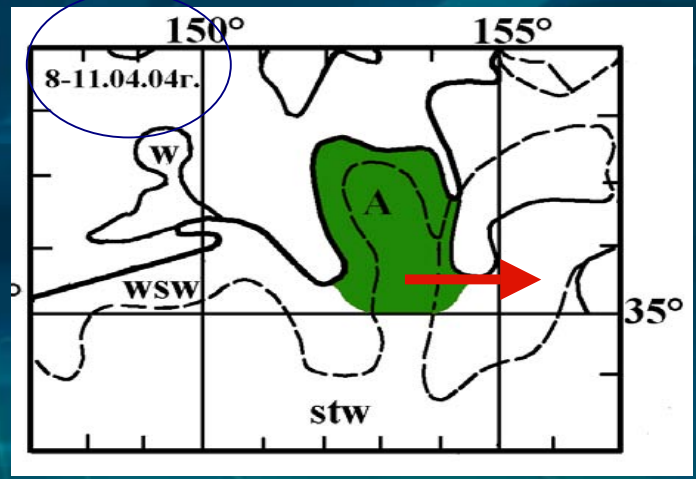


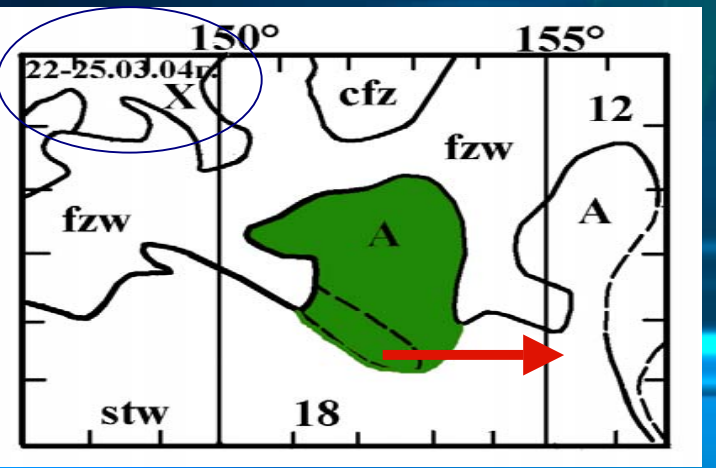


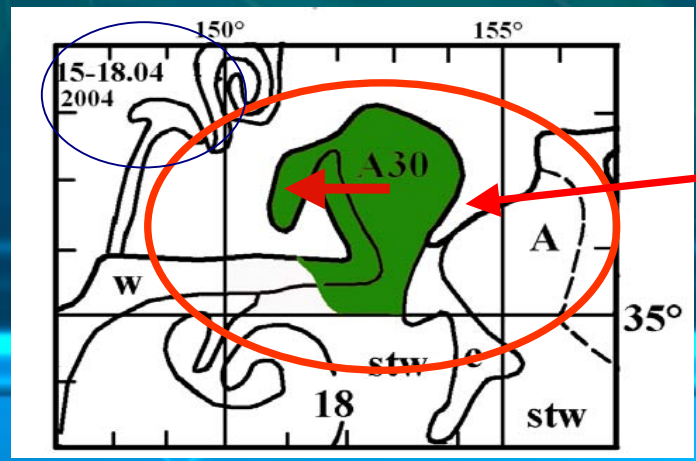




KUROSHIO meander and Eddy A30 formation



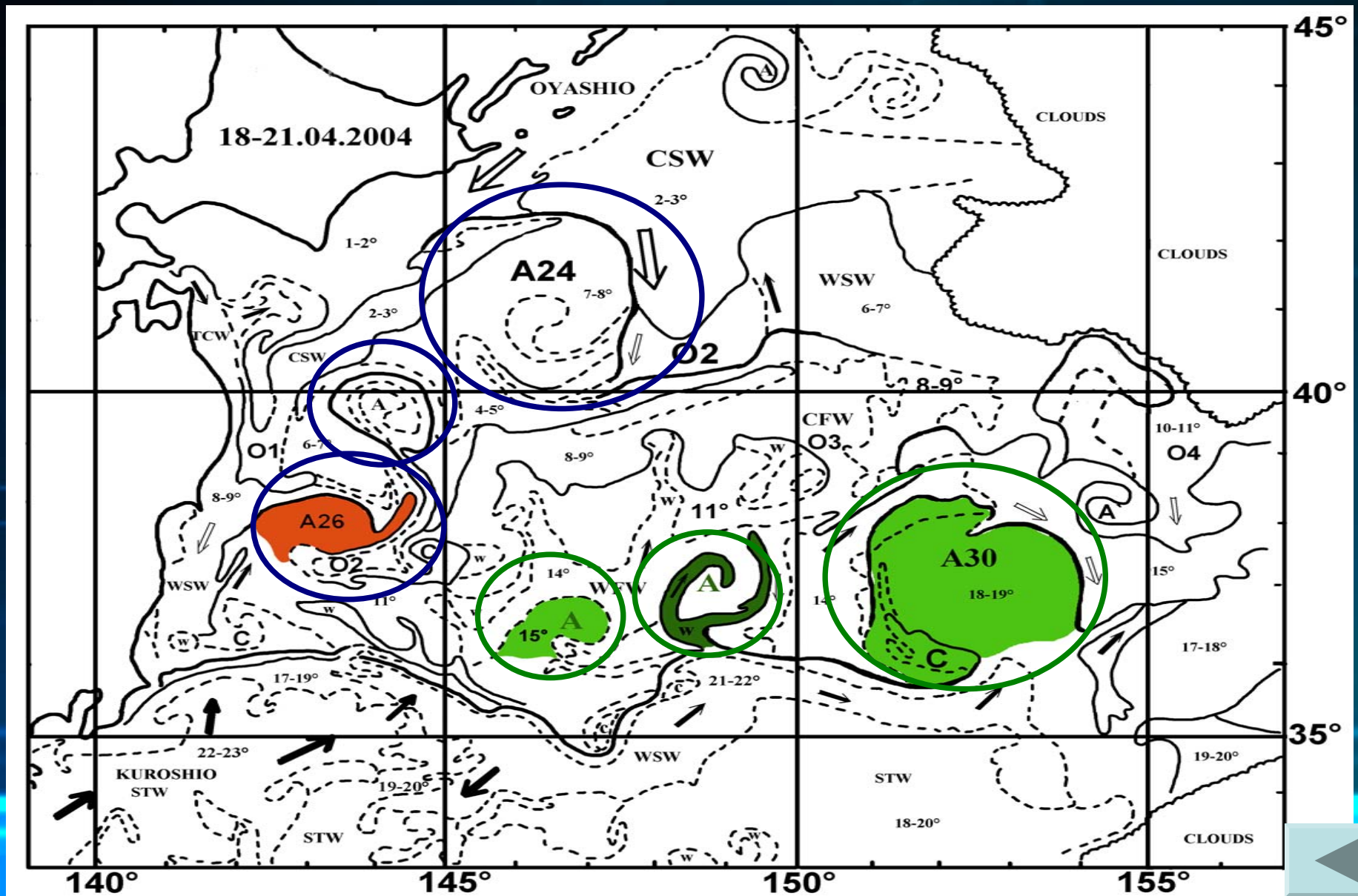



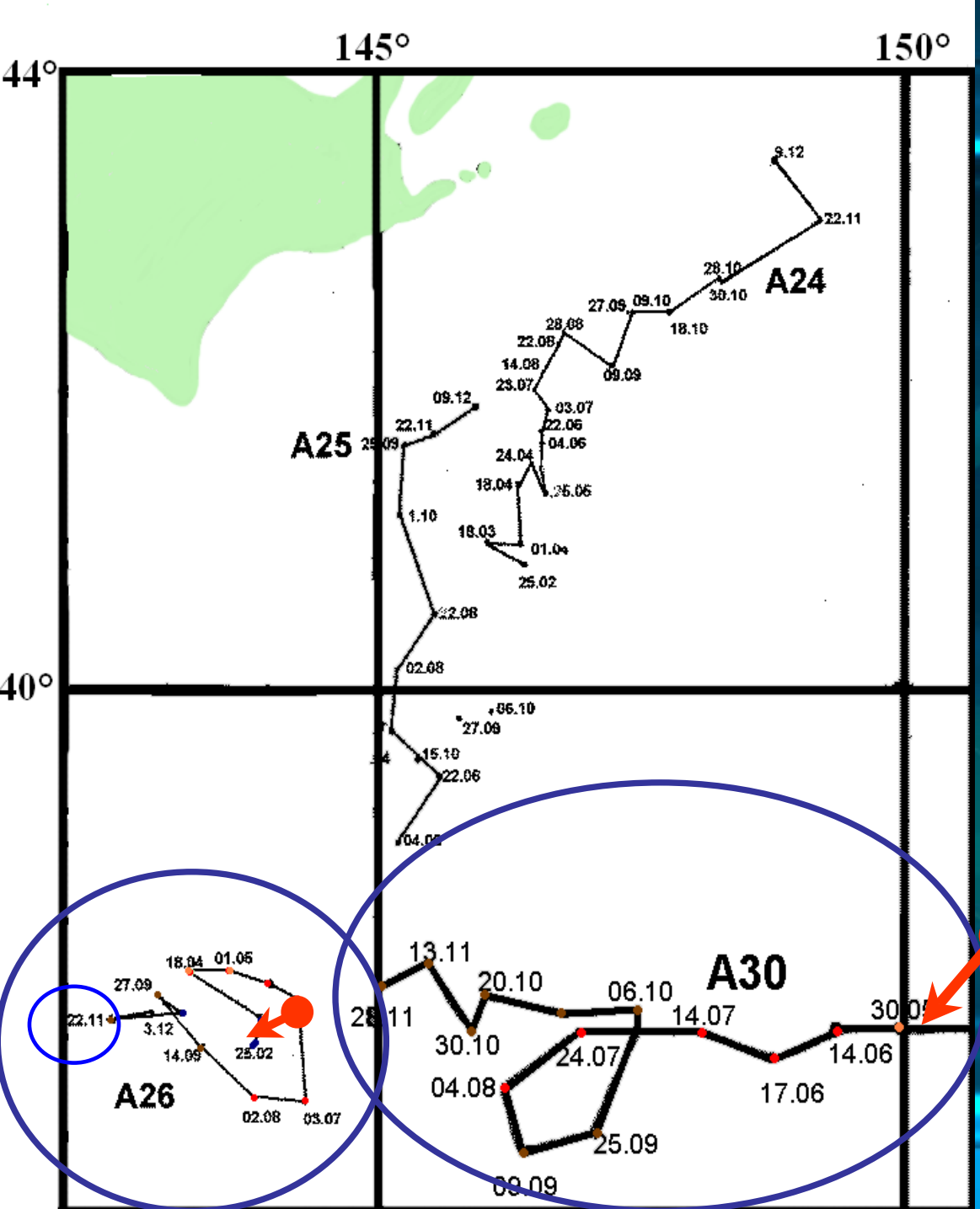



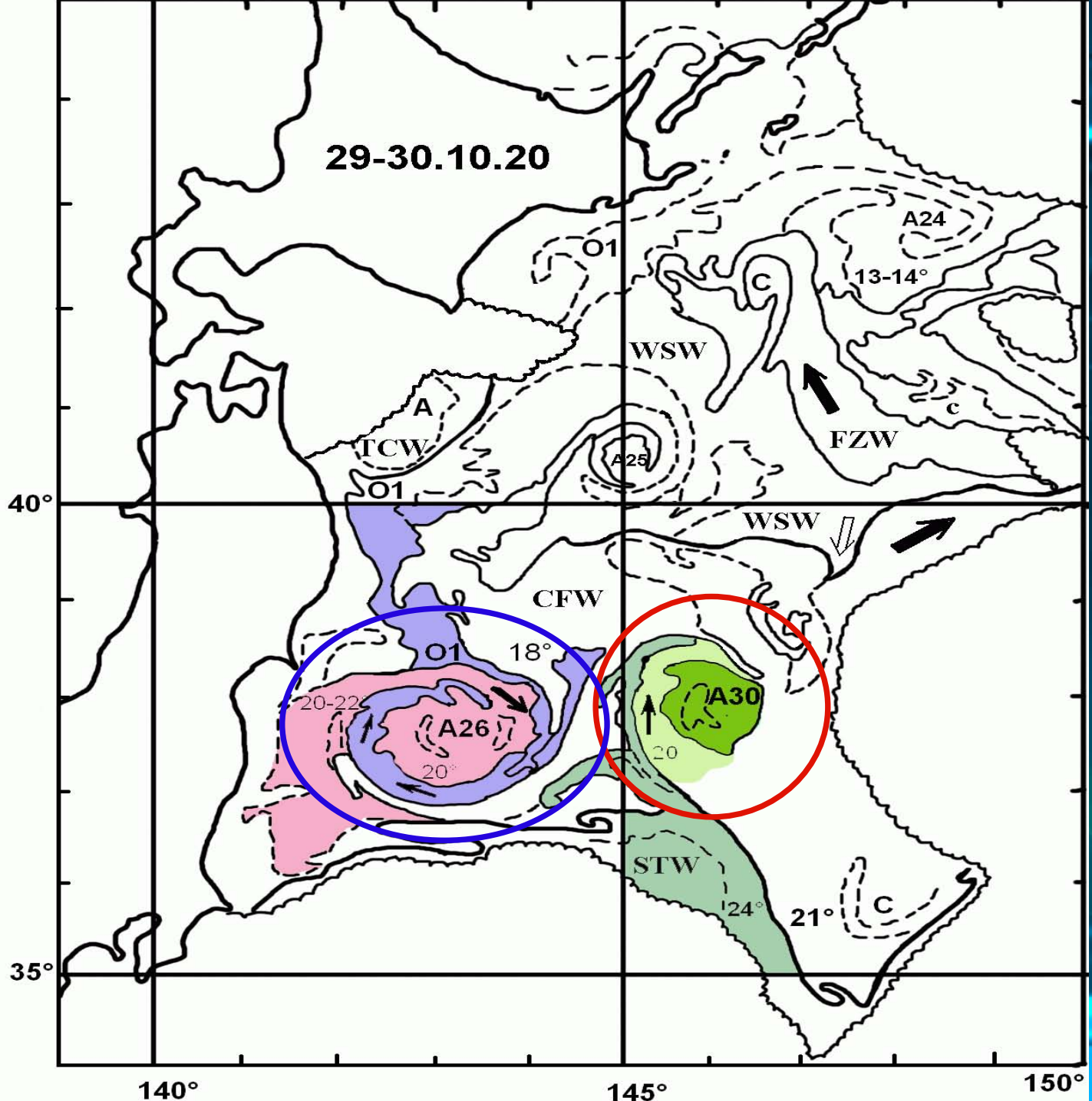

New eddy was formed

# FRONTAL ANALYSIS CHART
## (SPRING 2004)



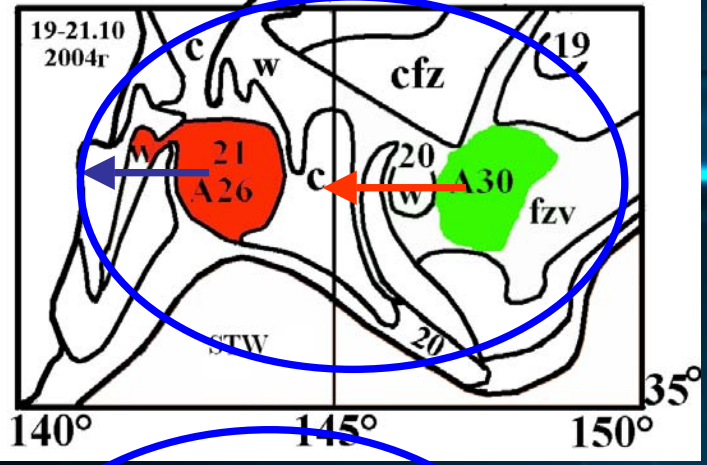


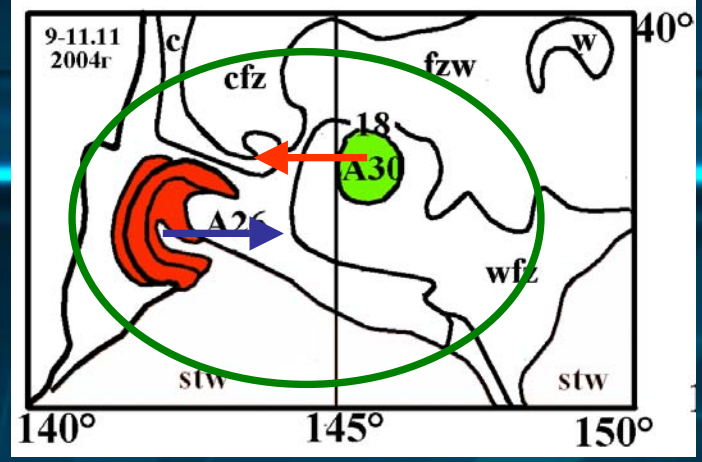

# Eddies movement during 2004

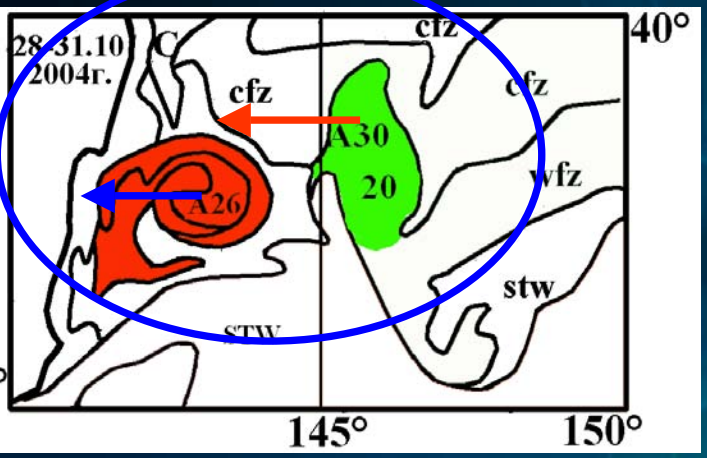


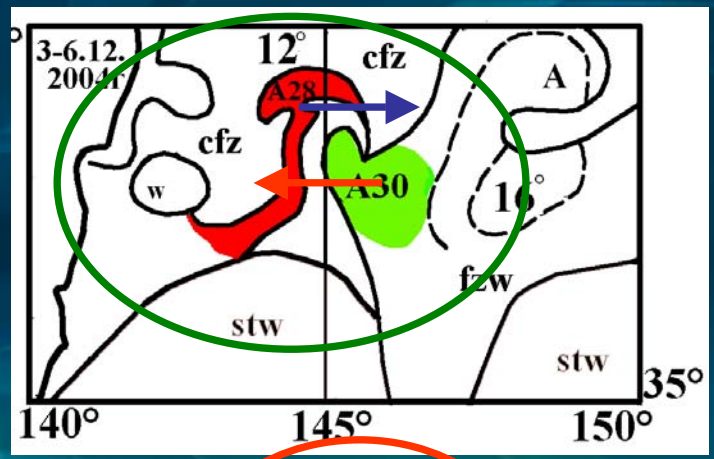

FRONTAL ANALYSIS CHART

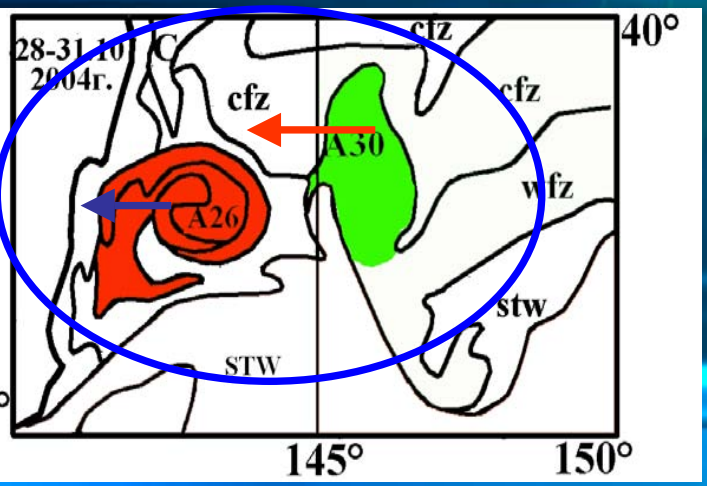
(fall 2004)

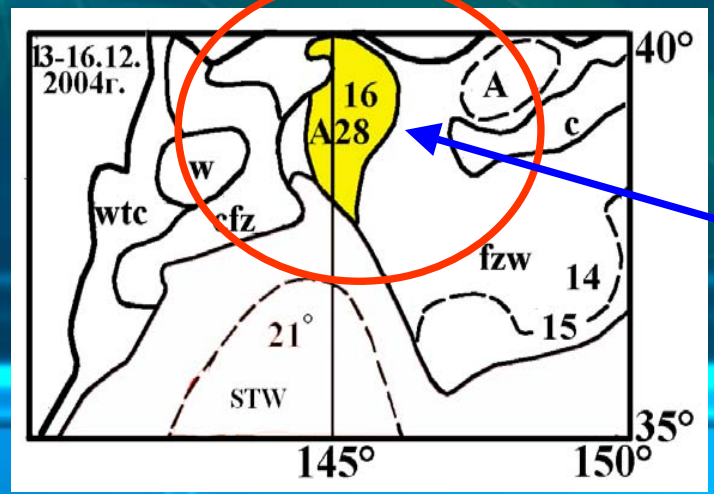


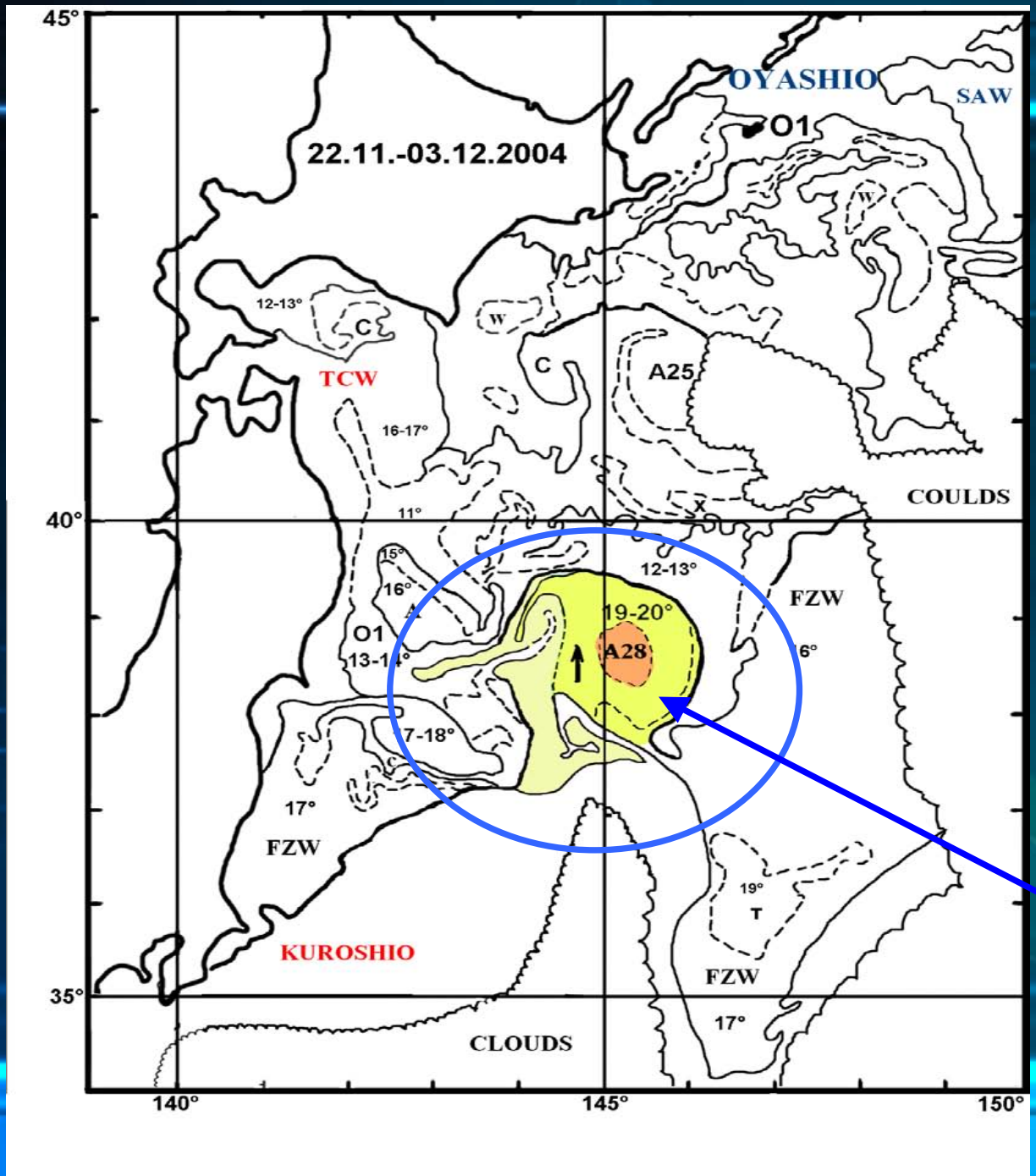




# Formation of the EDDY A28

(October – December 2004)

its result of the eddies interaction

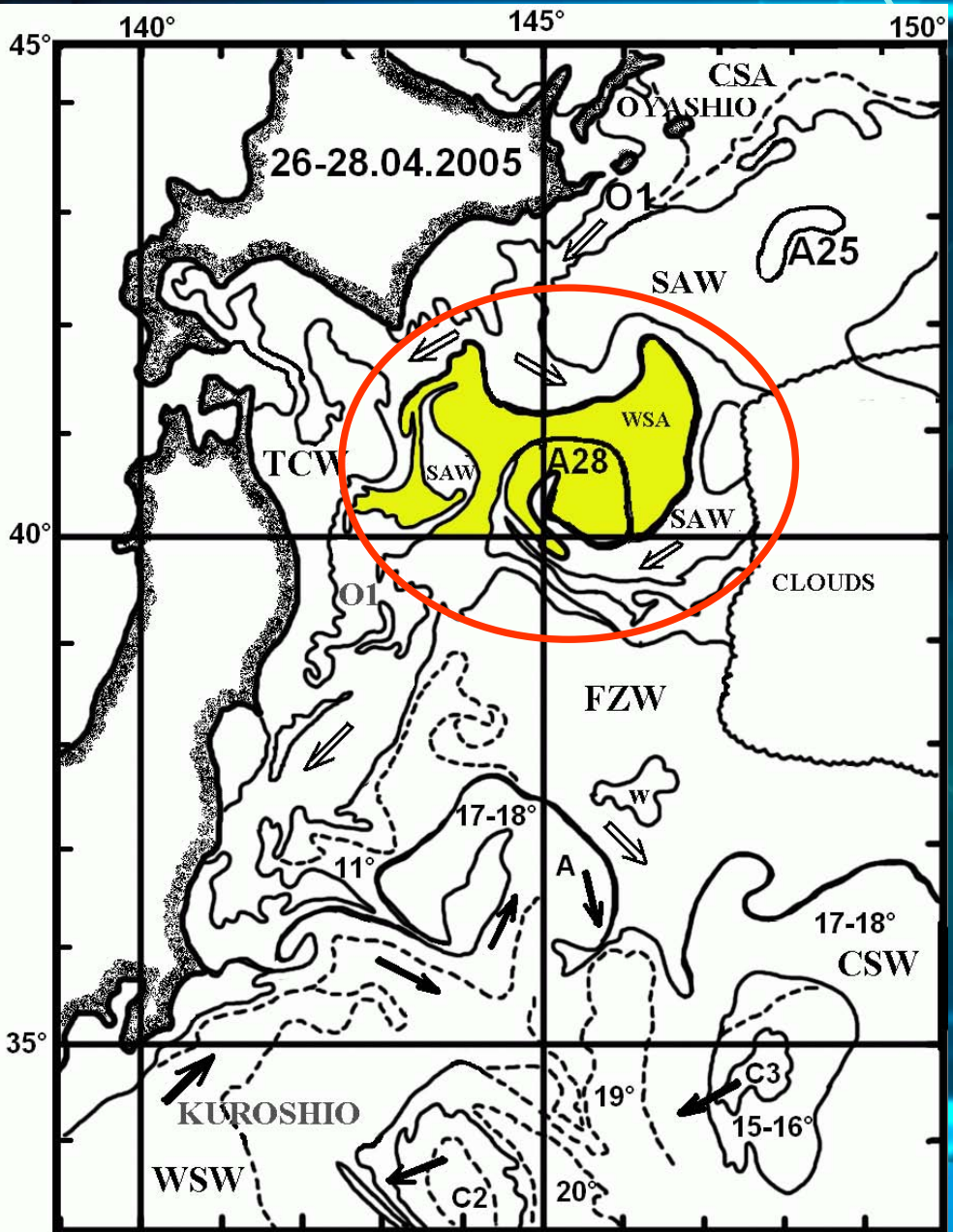



# FRONTAL ANALYSIS CHART

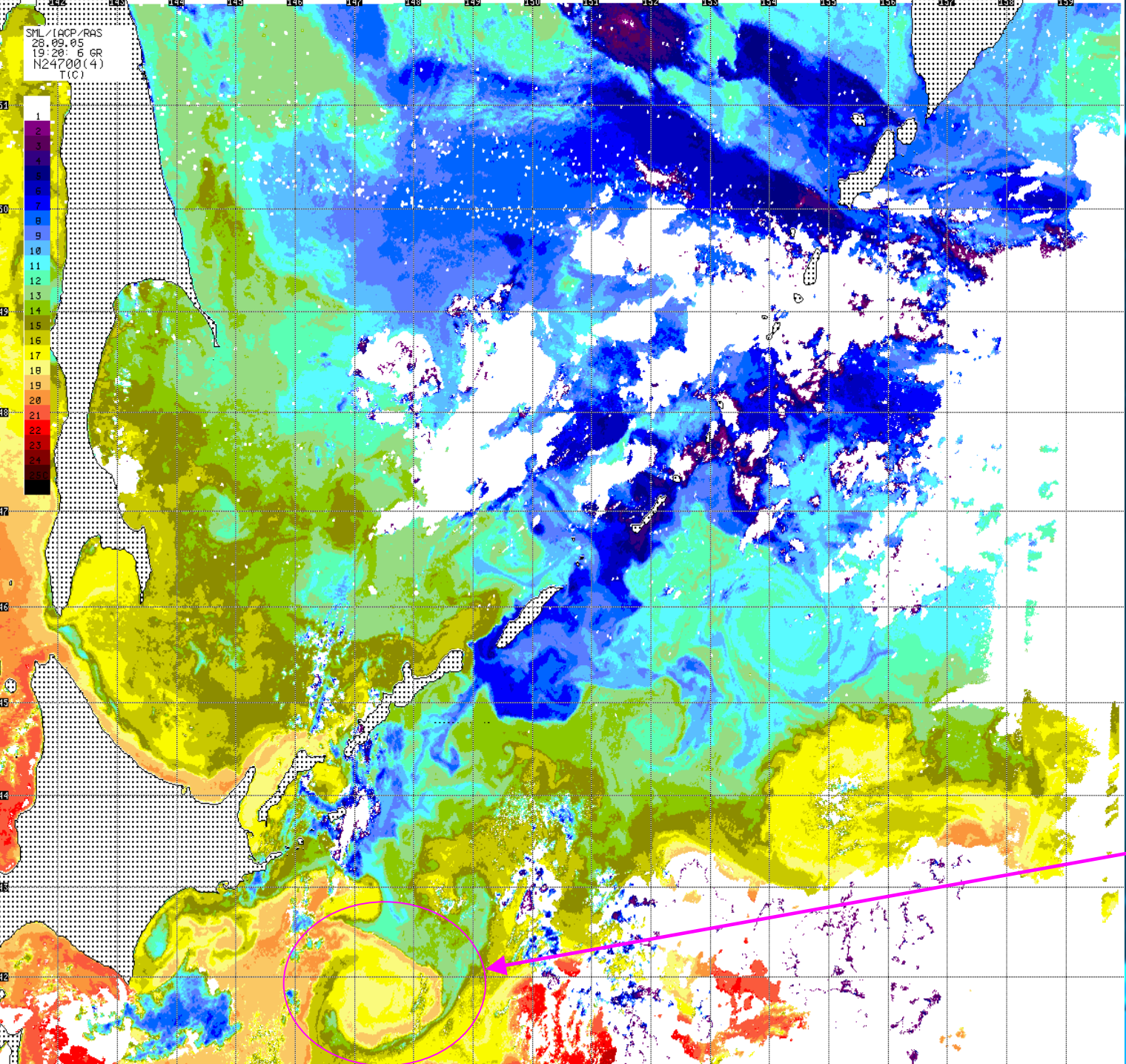
# (FALL - WINTER 2004)

its result of the eddies interaction

# FRONTAL ANALYSIS CHART (spring 2005)




The anticyclonic eddy A28 influenced hydrological conditions in the KURIL region in the spring 2005




infra-red image Kuril region 29.09. 2005

Eddy A28

# conclusions

Following hydrological processes were observed:

- The foundation of Kuroshio meander was narrow. After than Kuroshio warm ring was formed between 150° and 155 °.
- Anticyclonic eddies moved along the Kuroshio front.
- Spiral anticyclonic and cyclonic movement of the eddies centers.
- The eddy A26 movement can be considered as a wave reflecting from an obstacle.
- A new anticyclone A28 was formed as result of the eddies interaction .
- Planetary waves probably influence on the Kuroshio warm rings movement.

*Thank You*