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The Impact of intra-seasonal coastal Kelvin waves on SST in the eastern boundary upwelling systems of the Tropical Atlantic boreal winter is presented. We use a composite analysis of propagating events in the sea surface height and associated coastal SST and wind anomalies. The results obtained show that an SLA anomaly can reach an amplitude of 4 cm creating an SST anomaly disturbance of 0.3°C in upwelling systems. This wave is reinforced by a blow from the meridional wind anomaly in the upwelling zone and is accompanied by a positive (constructive) meridional wind anomaly contributing to the attenuation of the upwelling effect. These waves are each season accompanied by a constructive wind anomaly to the northern which induces the attenuation of the upwelling because the effect of the slowing down of the meridional wind anomaly will warm the surface waters.
Besides, the emphasis on the joint exploitation of in-situ data from the MELAX buoy (Pressure, Temperature, Wind) and satellite data (SLA, SST, Wind) shows that the comparison between the satellite SLA and the SSH buoy of the observatory station in the heart of the Senegalese upwelling over the period 2015-2017 reveals the passage of 2 to 3 intra-seasonal Kelvin waves of downwelling and upwelling per year. Offsets of 6-7 and 15 days maximum of the buoy SSH peaks concerning the satellite SLA peaks were noted.

Keywords :
- Impact
- Coastal Kelvin waves
- Intra-seasonal
- Boundary upwelling systems
- Composite analysis
- Boreal winter
- Tropical Atlantic
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