9ϕ18W-55 degree

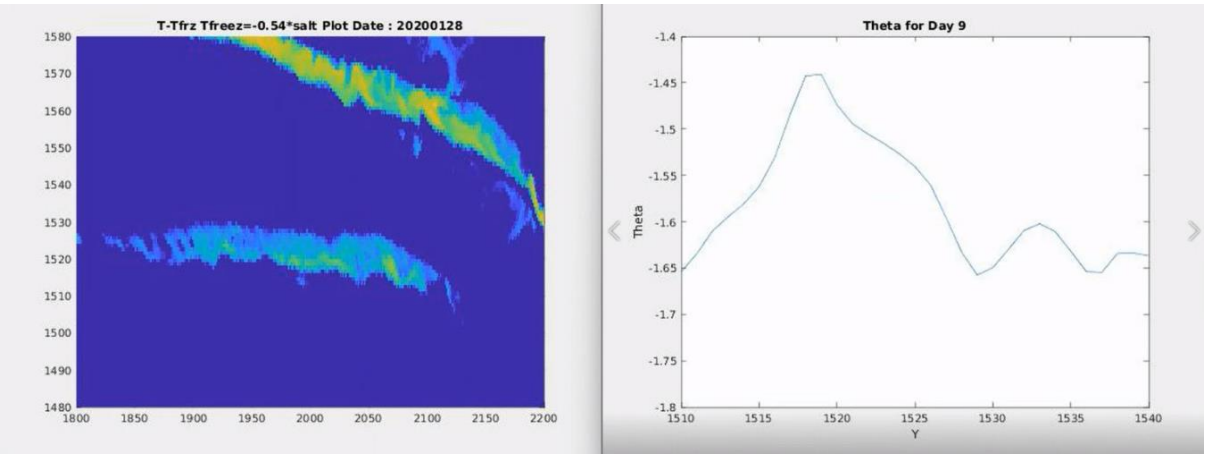
Warm lead

Mean temperature is less than surrounding.

Surrounding temperature decreases from

Temperature rises from -1.66 to -1.58

Lead seems to move upward from 1528 to 1532



During the formation small positive vorticity can be observed in the range of 0.02. Later it rises to negative at the lead and positive nearby and finally higher positive value greater than 0.1. So a band of positive and negative vorticity can be seen together along and near to the lead.

We found negative heat flux of magnitude greater than 15 along the lead and positive heat flux nearby. Later more portion along the lead become positive heat flux.

9ϕ17c

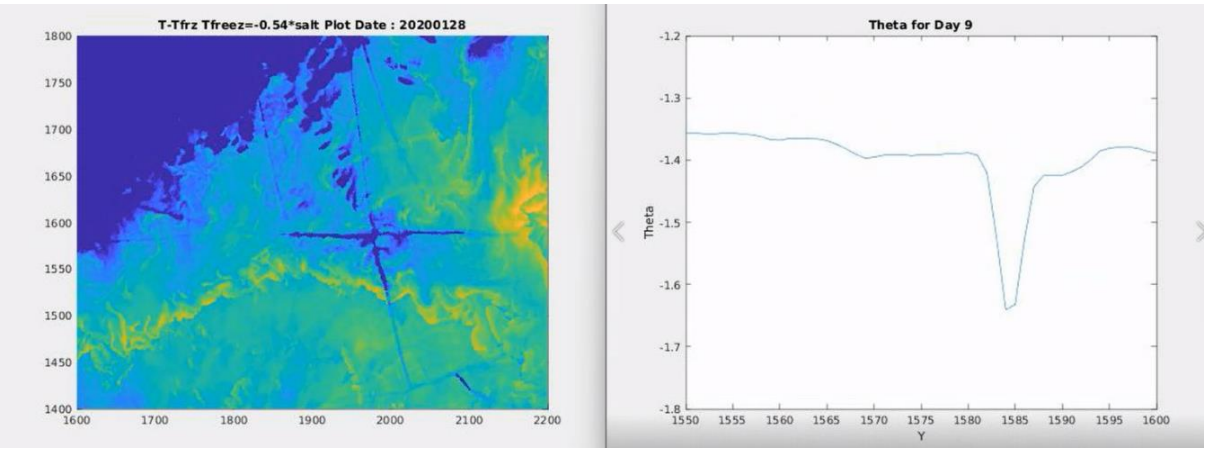
Cold lead

The mean temperature is less the than surroundings.

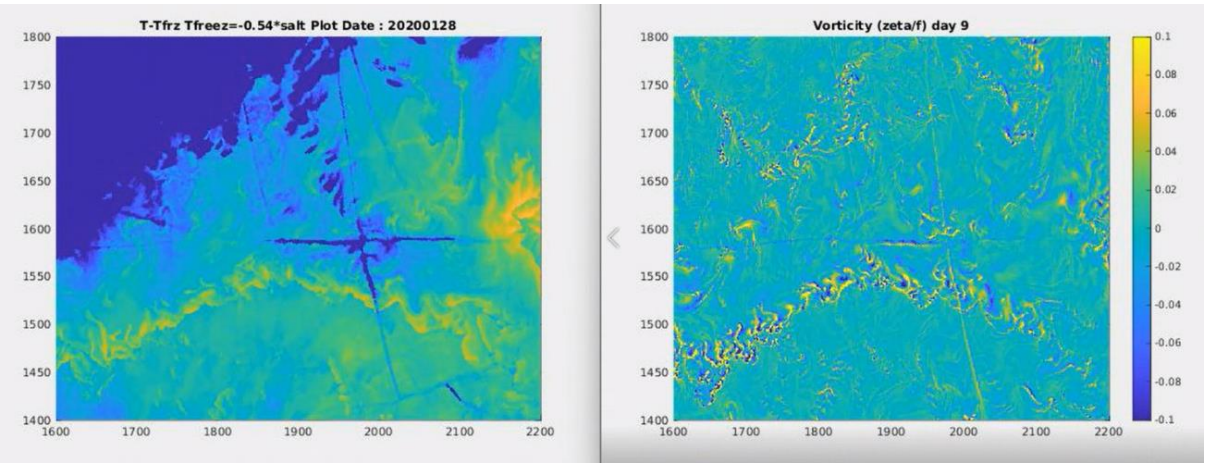
Surrounding temperature increases from -1.36 to -1.32

Lead temperature rises from -1.63 to -1.33

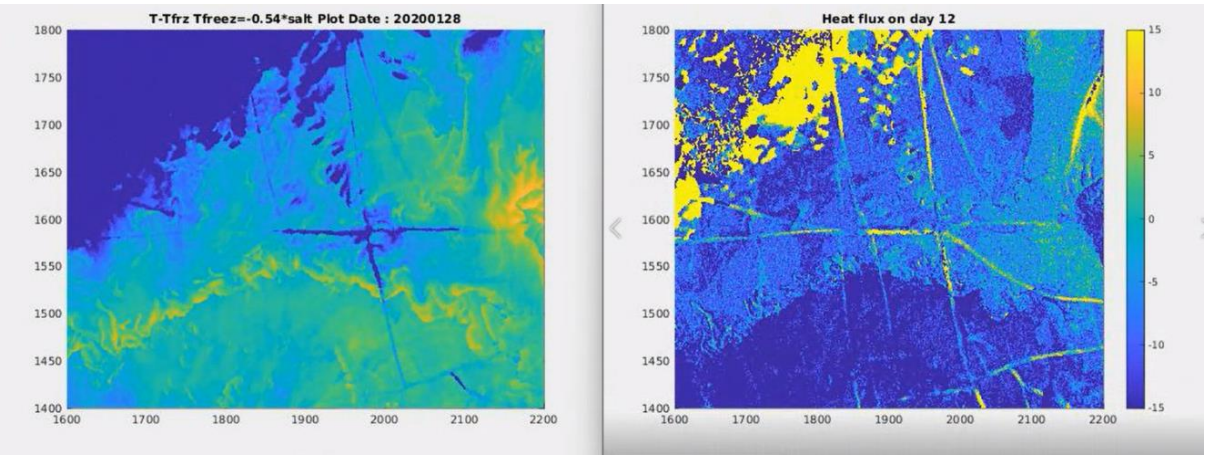
Lead is moving upward from 1585 to 1595



During the formation negative vorticity along the lead in the range of 0.1 which later rises to a positive value close to 0.02. band of negative and positive vorticity can be seen.



We found positive heat flux of magnitude greater than 15 along the lead and a negative heat flux nearby.



8ϕ18c

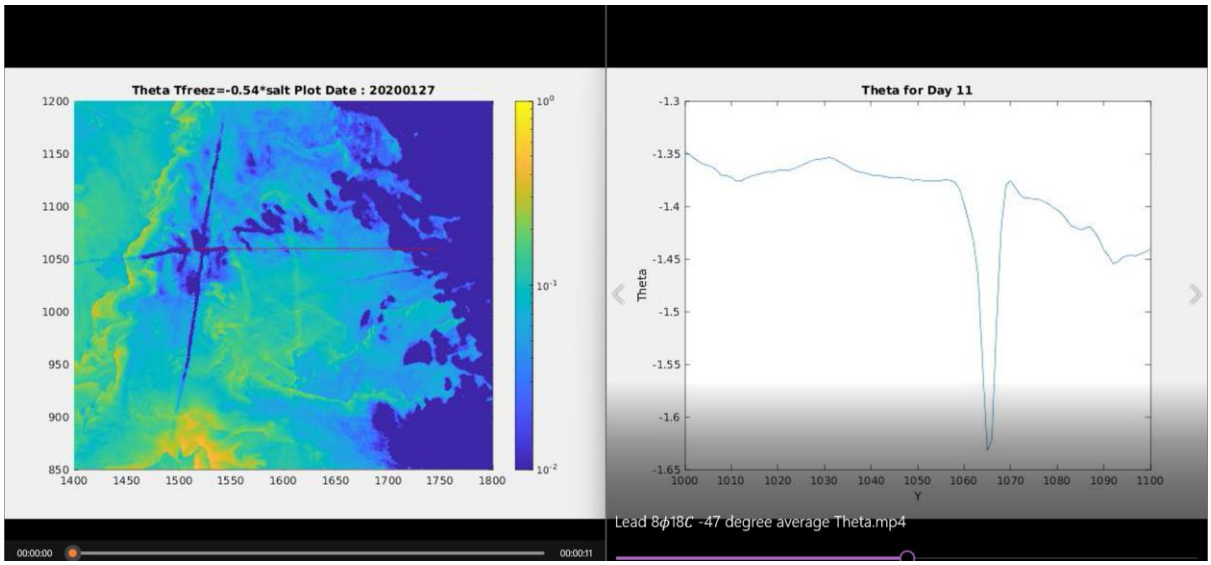
Colder lead

The mean temperature is less than the surrounding which developed from being in equivalence to the surrounding then become lesser at the lead opening and then again start raising.

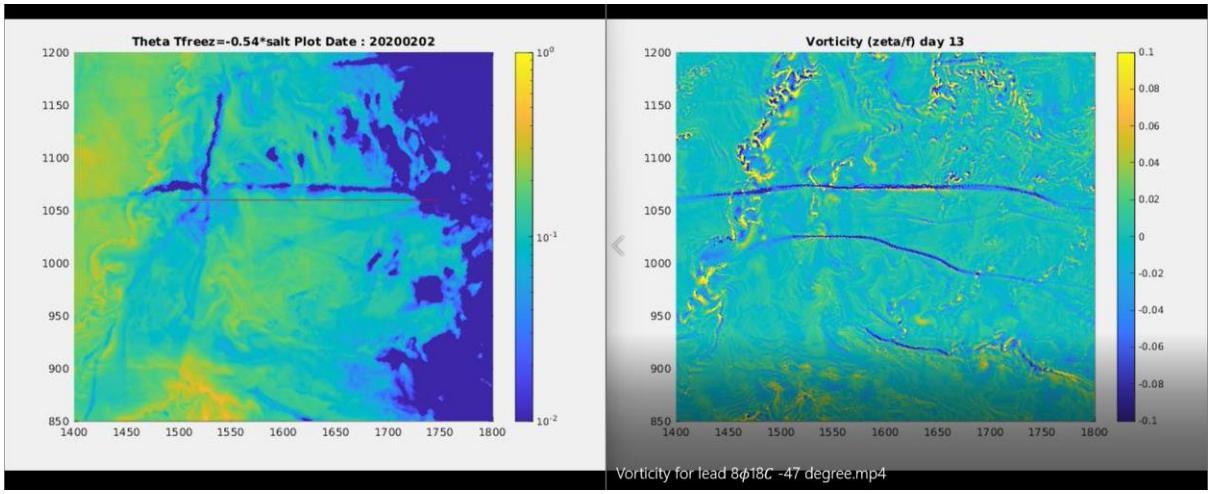
The surrounding temperature increased from -1.46 to -1.35 then settled down to -1.37

The Lead temperature decreases from -1.42 to -1.65 and finally settles down to -1.4

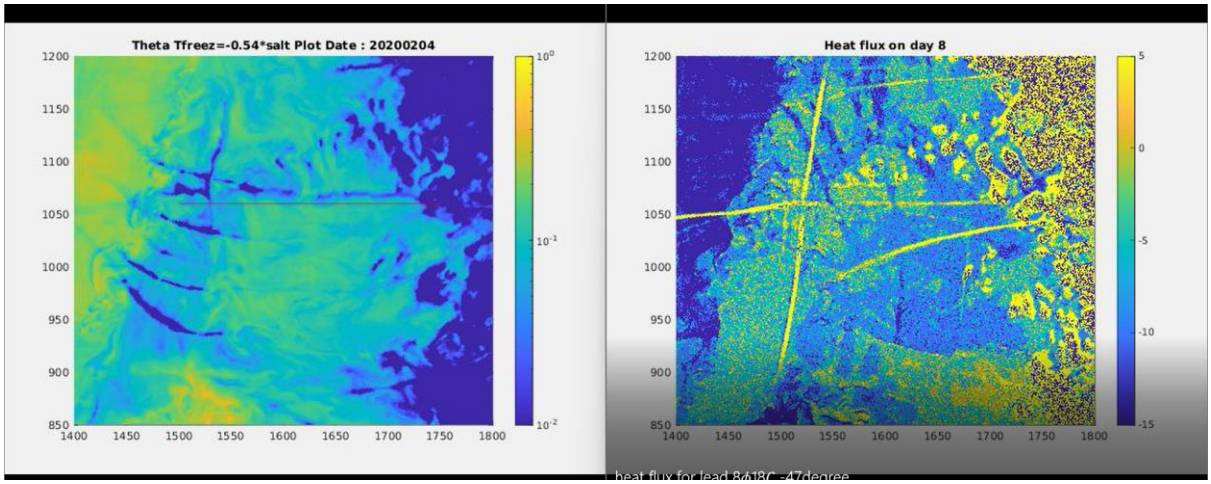
Lead seems to move upward from 1065 to 1070



During the formation, positive vorticity can be observed in the range of 0.1. Later it rises to negative at the lead and positive nearby and finally disappears. Also, a band of positive and negative vorticity can be seen together along and near the lead.



We found a positive heat flux of magnitude greater than 15 along the lead and a mild positive heat flux nearby. Later surrounding flix become negative.



10ϕ22W

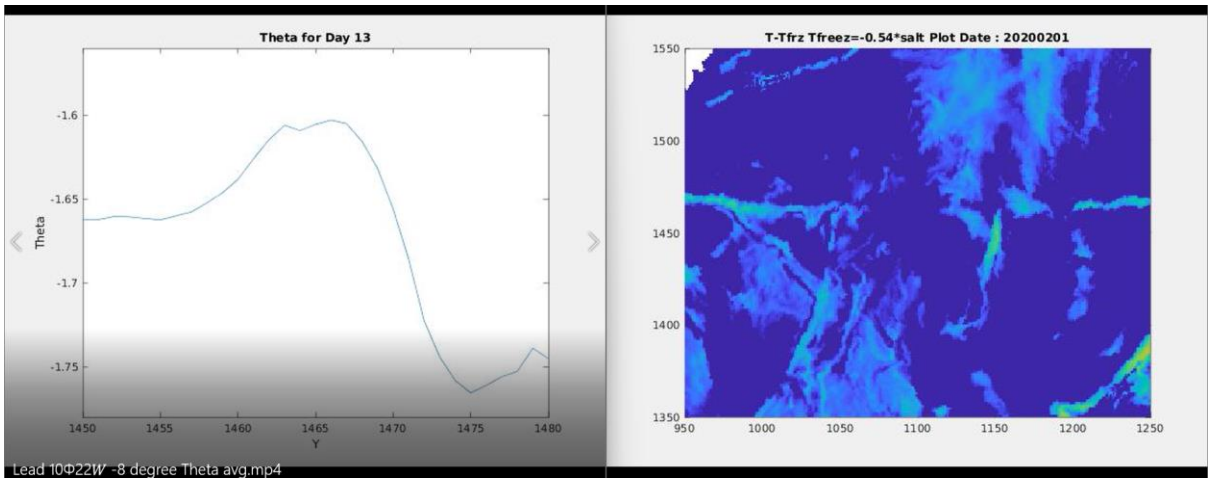
Warm lead

The mean temperature of lead is more than the surrounding.

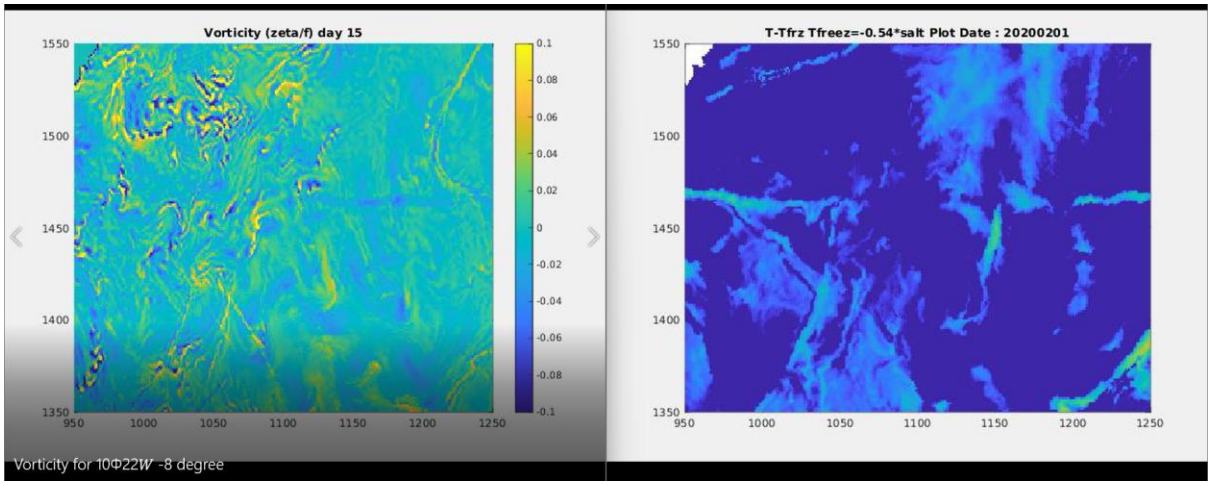
Lead temperature increases from -1.64 to -1.5

The temperature rises from -1.68 to -1.61 below lead which is warmer than the region above the lead which shows the change from -1.74 to -1.71

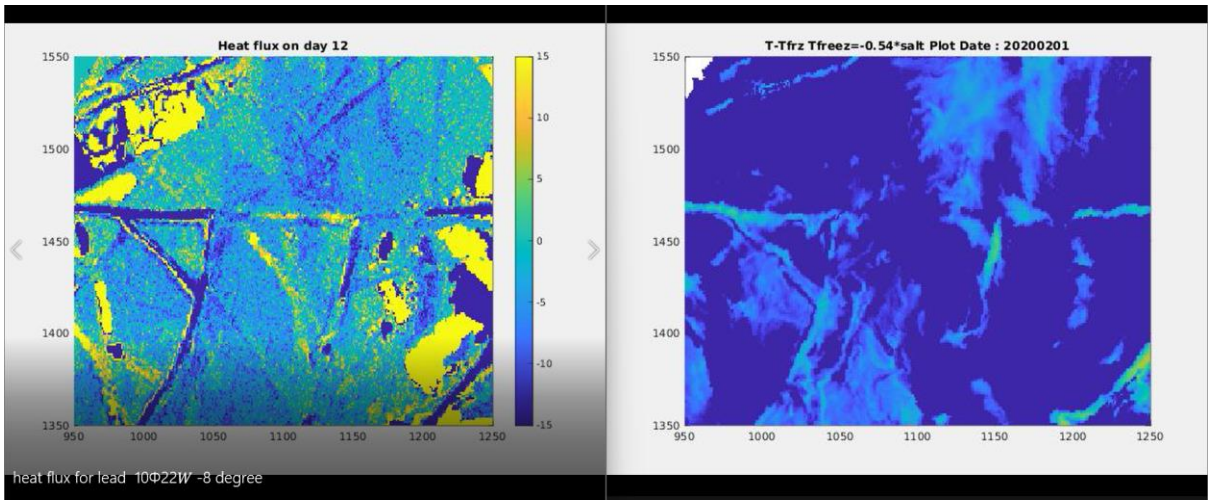
Lead seems to move downward from 1469 to 1460



During the formation, negative vorticity can be observed in the range of 0.1 and small positive vorticity nearby. Later it rises to small positive everywhere.



We found a higher negative heat flux of magnitude greater than 15 along the lead and a small positive heat flux nearby. Later lead flux becomes less negative and less positive nearby.



17ϕ22W

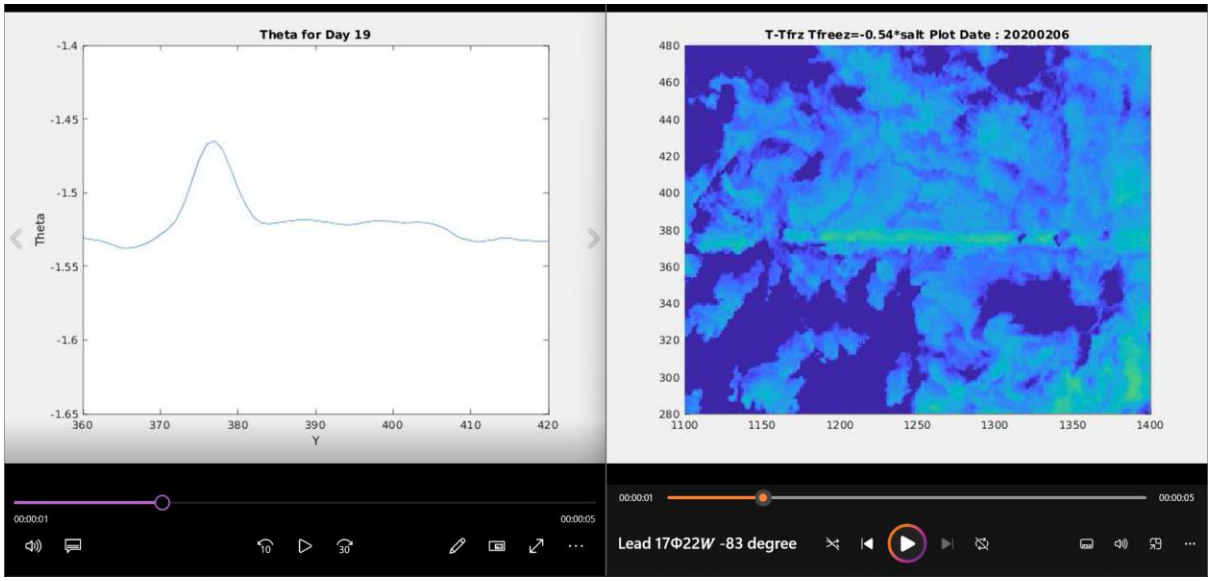
Warmer lead

The mean temperature is more than the surrounding

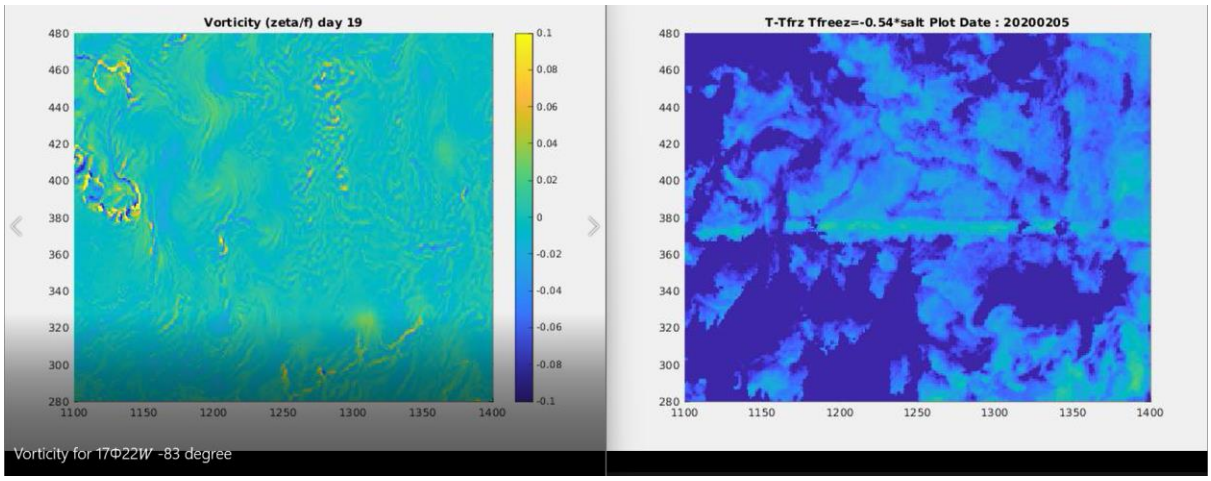
The surrounding temperature increased from -1.56 to -1.51 also the region below lead is a bit cooler than the region above.

The Lead temperature rises from -1.49 to -1.45

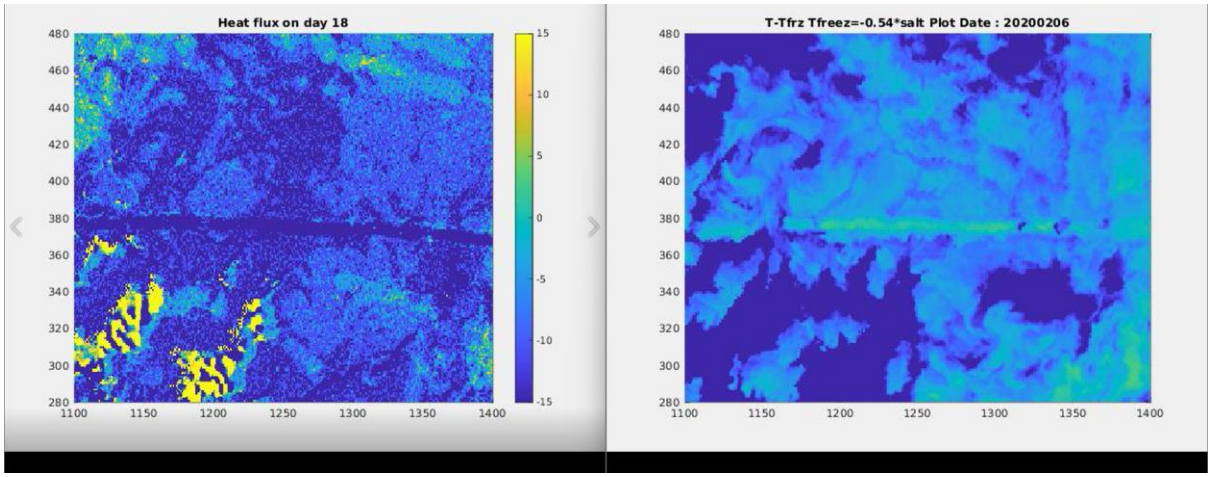
Lead seems to move upward from 374 to 380



During the formation, positive vorticity can be observed in the range of <0.01. Later it rises to around 0.02 at the lead and the same value nearby and finally disappears. The vorticity in this case is non-differentiable and is a very small value.



We found a higher negative heat flux of magnitude greater than 15 along the lead and a mild negative heat flux nearby. Later it becomes less negative. And later at the end the surrounding flux approach to positive.



8ϕ22W

Warmer lead