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Sally K. Ride Papers - STS-76 Earth Observations Training Manual [KidSat], (folder 1 of 2)

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Atlas Pg. 2, 12

Mississippi River Delta, Louisiana Deltas, distributary channels

Significance: Coastal Louisiana was created by the Mississippi River sediments. The river has shifted its course six times in the last 3000 years. After each shift, the river abandoned an aging, deteriorating delta, and built a new delta, each time adding land to the coastline. The Mississippi River's future route to the sea is the Atchafalaya River. The river began building a new delta at the mouth of the Atchafalaya River in the mid-19th century. After the great 1927 flood, the Army Corps of Engineers intervened with construction of the Old River Control Structure and other ancillary structures to contain the Mississippi River and allow no more than 30 percent of its flow into the Atchafalaya Basin. Even so, the Atchafalaya Delta continues growing and providing sediment that is rebuilding the Chenier Plain along the western Louisiana coast.

Many researchers believe that nature will win. The river will ultimately change its course. This scenario provides scientists with an opportunity to document and monitor with space photography the "death" and "birth" of major deltas.

Physical Characteristics: The "bird's foot" or digitate delta of the Mississippi River extends into the Gulf of Mexico. To the west is the Atchafalaya River Delta which is rapidly filling in the shallow Atchafalaya Bay. The eastern coastline is characterized by extensive tidal mudflats, marshlands and small tree-covered islands among the many bayous and distributary channels. Sandy beaches and mud flats fringe the western coastline.

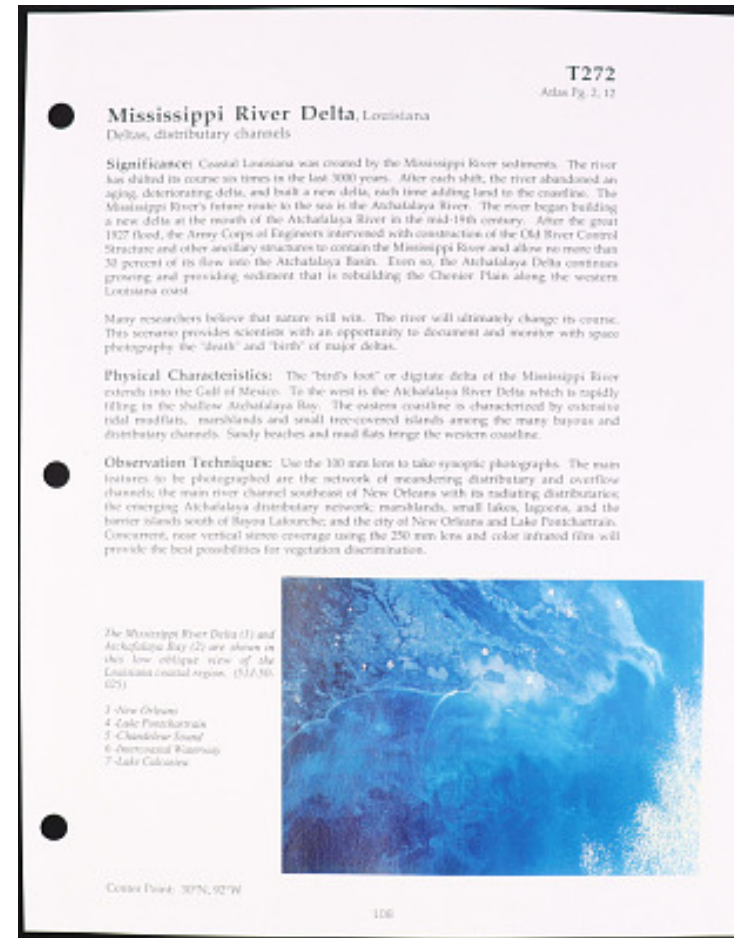
Observation Techniques: Use the 100 mm lens to take synoptic photographs. The main features to be photographed are the network of meandering distributary and overflow channels; the main river channel southeast of New Orleans with its radiating distributaries; the emerging Atchafalaya distributary network; marshlands, small lakes, lagoons, and the barrier islands south of Bayou Lafourche; and the city of New Orleans and Lake Pontchartrain. Concurrent, near vertical stereo coverage using the 250 mm lens and color infrared film will provide the best possibilities for vegetation discrimination.

The Mississippi River Delta (1) and Atchafalaya Bay (2) are shown in this low oblique view of the Louisiana coastal region. (51J-50-025)

[[image]]

- 3 -New Orleans
- 4 -Lake Pontchartrain
- 5 -Chandeleur Sound
- 6 -Intercoastal Waterway
- 7 -Lake Calcasieu

Center Point: 30° N, 92° W



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