

7/20/05:

Yoyo control was implemented in the 2 scenarios in file sound\_faf05\_jul20\_02\_day1.1.5\_sec1.mat.

**Optimal: points=30, threshold=0.1 for morning 7/21/05**

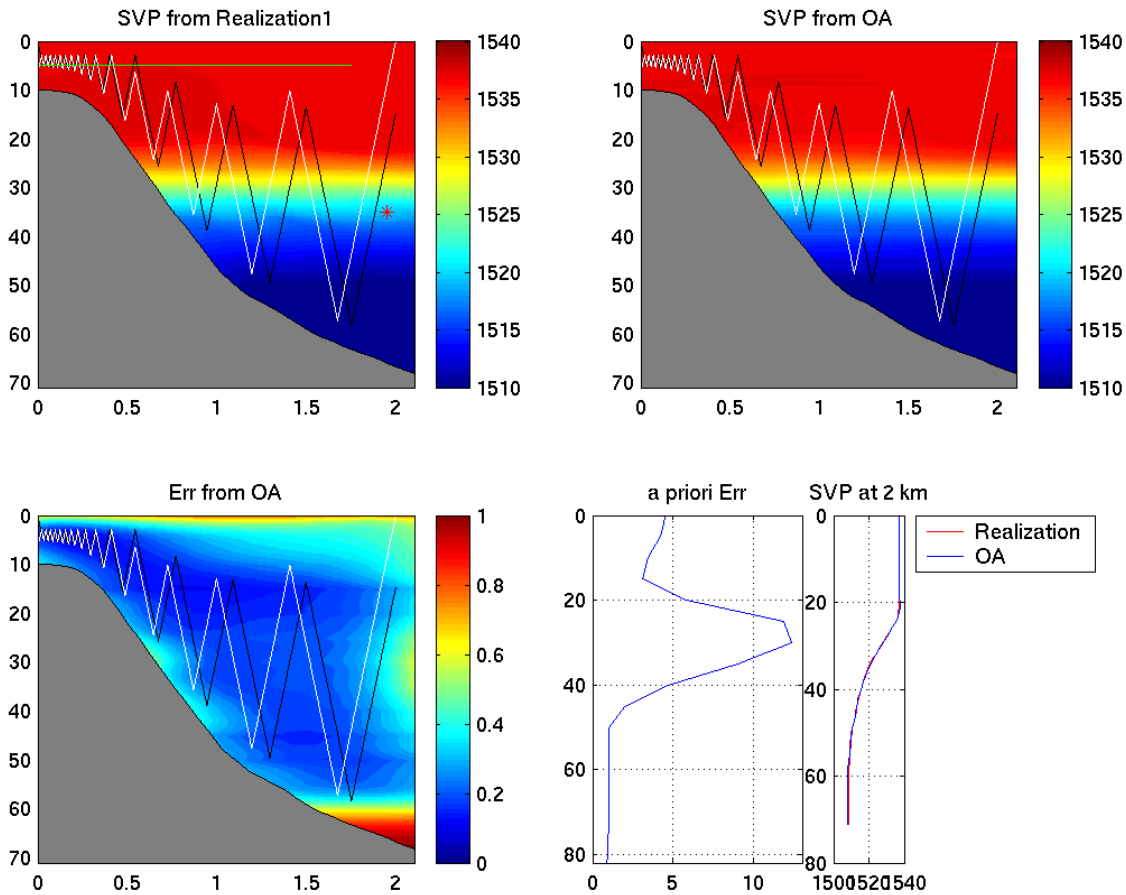


Figure 17: Yoyo control implementation. Morning 7/21/05. sound\_faf05\_jul20\_02\_day1.1.5\_sec1.mat. Black line is the forward path; White line is the backward path; Red star is the sound source location; Green line is receivers' location. Note that to avoid bottom AUV turns around at 5 m above bottom.

**Optimal: points=30, threshold=1000 for afternoon 7/21/05**

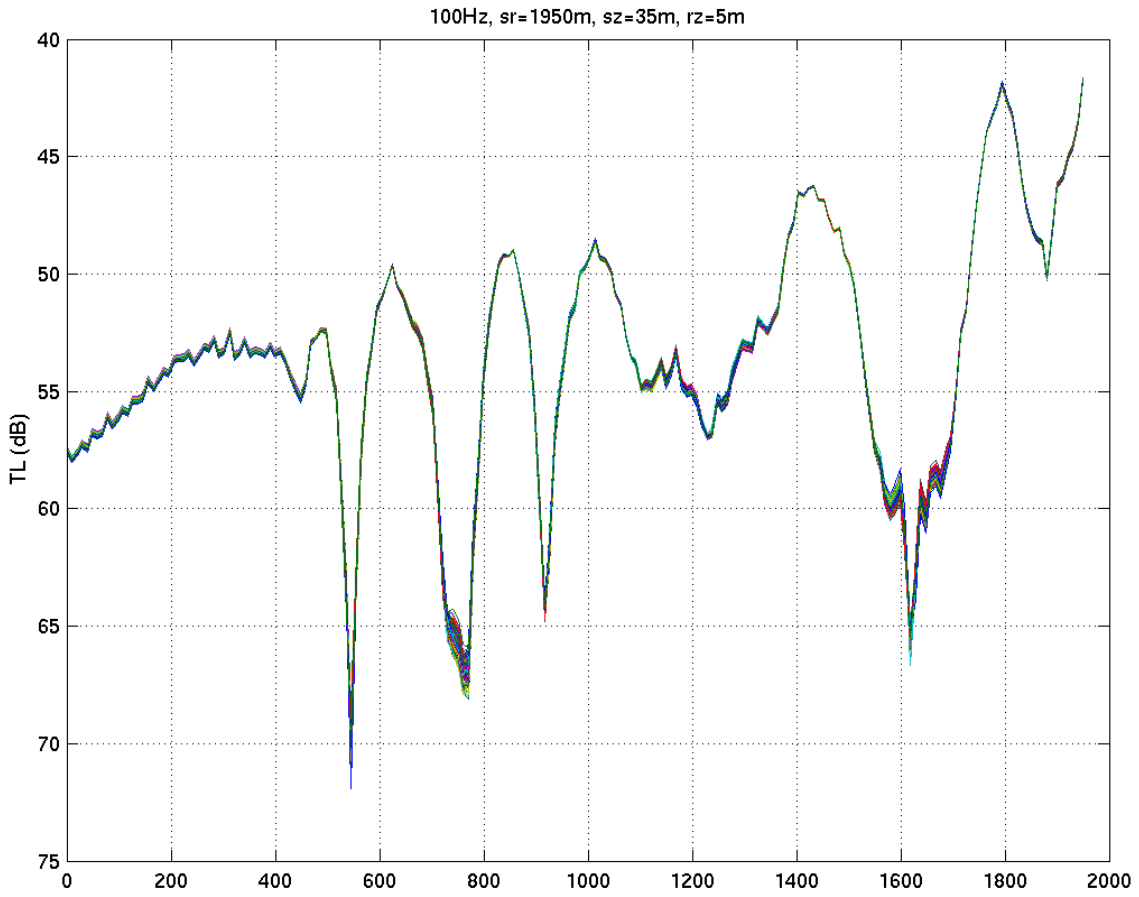


Figure 18: Morning 7/21/05. sound\_faf05\_jul20\_02\_day1\_1.5\_sec1.mat.

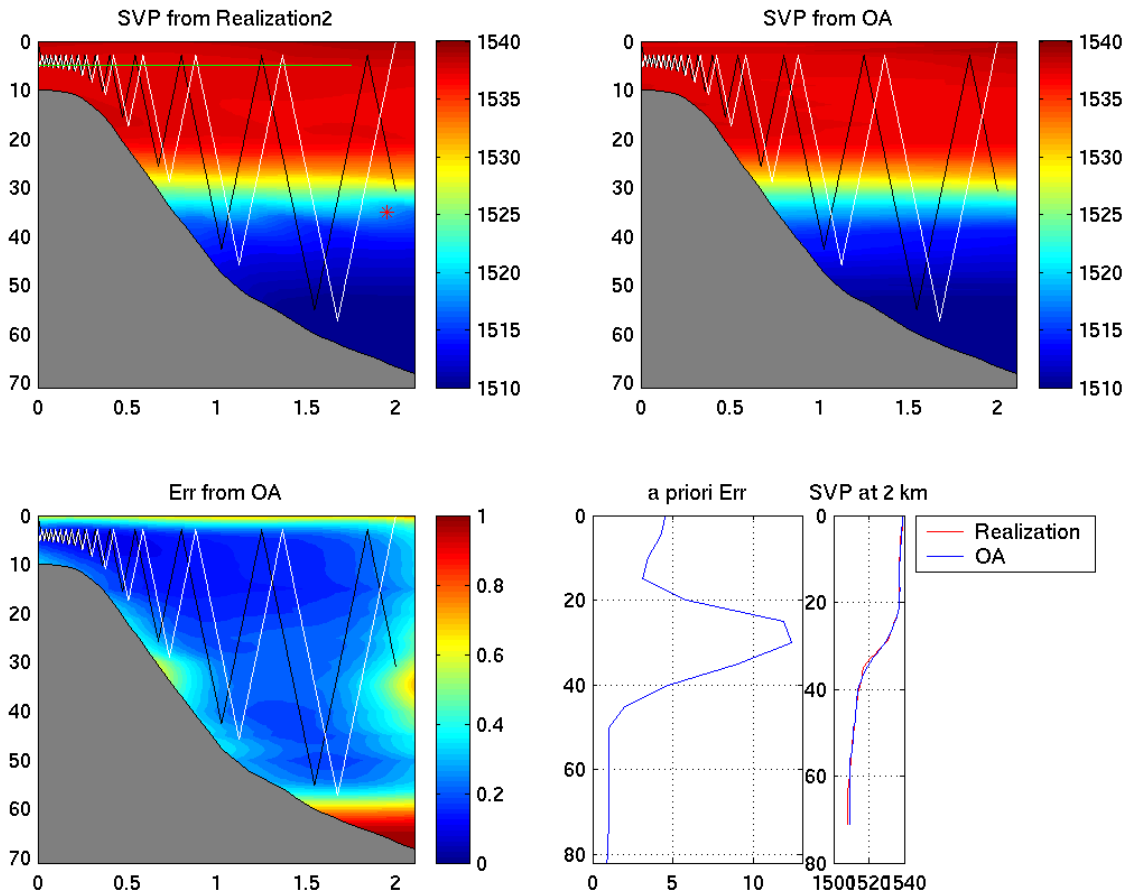


Figure 19: Yoyo control implementation. Afternoon 7/21/05. sound\_faf05\_jul20\_02\_day1\_1.5\_sec1.mat. Black line is the forward path; White line is the backward path; Red star is the sound source location; Green line is receivers' location. Note that to avoid bottom AUV turns around at 5 m above bottom.

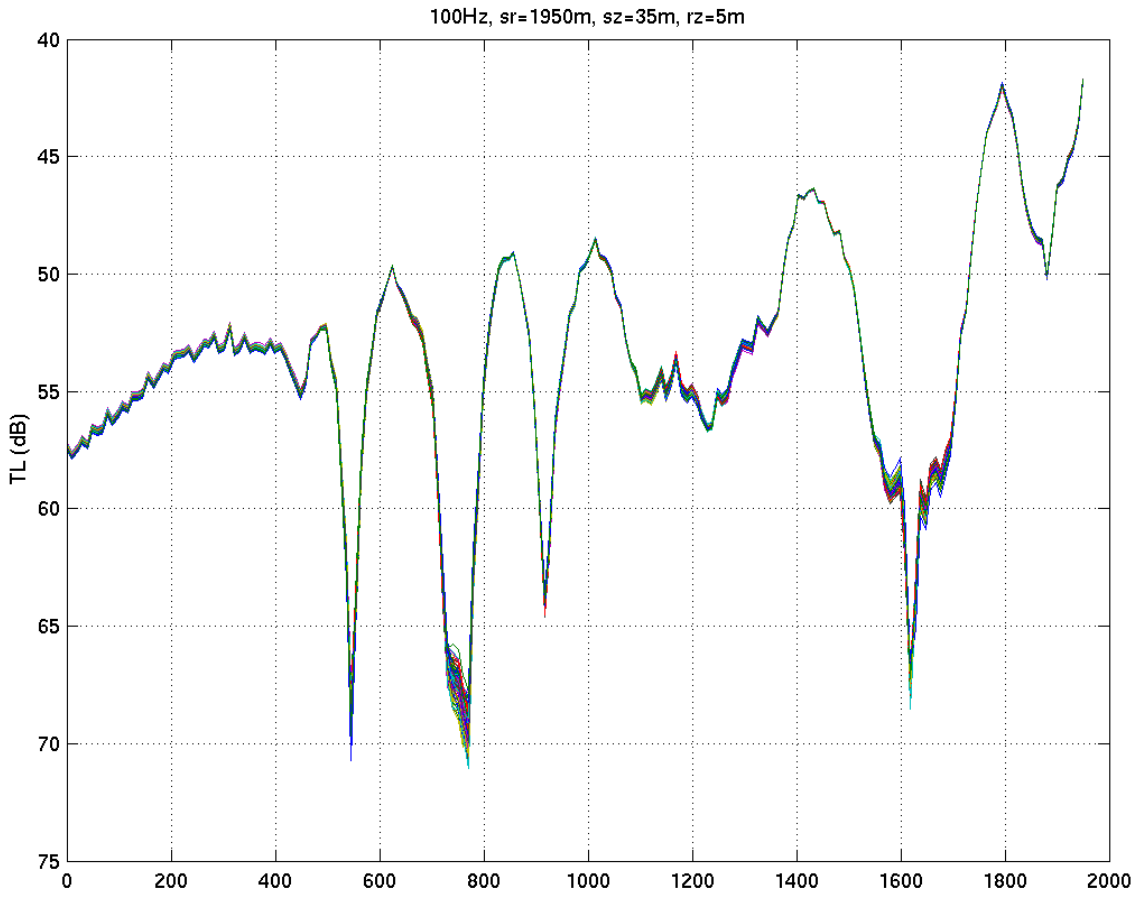


Figure 20: Afternoon 7/21/05. sound\_faf05\_jul20\_02\_day1\_1.5\_sec1.mat.