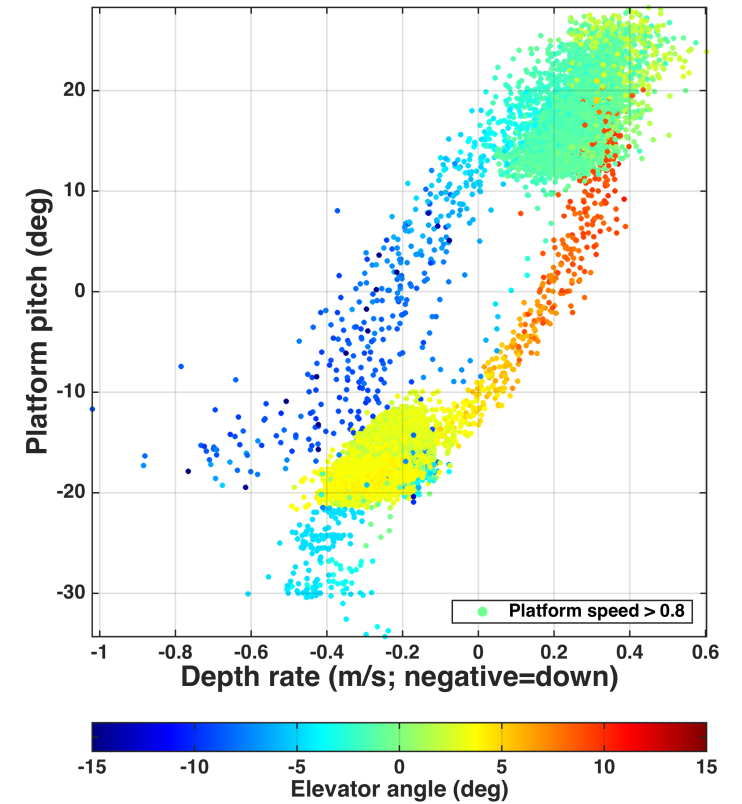
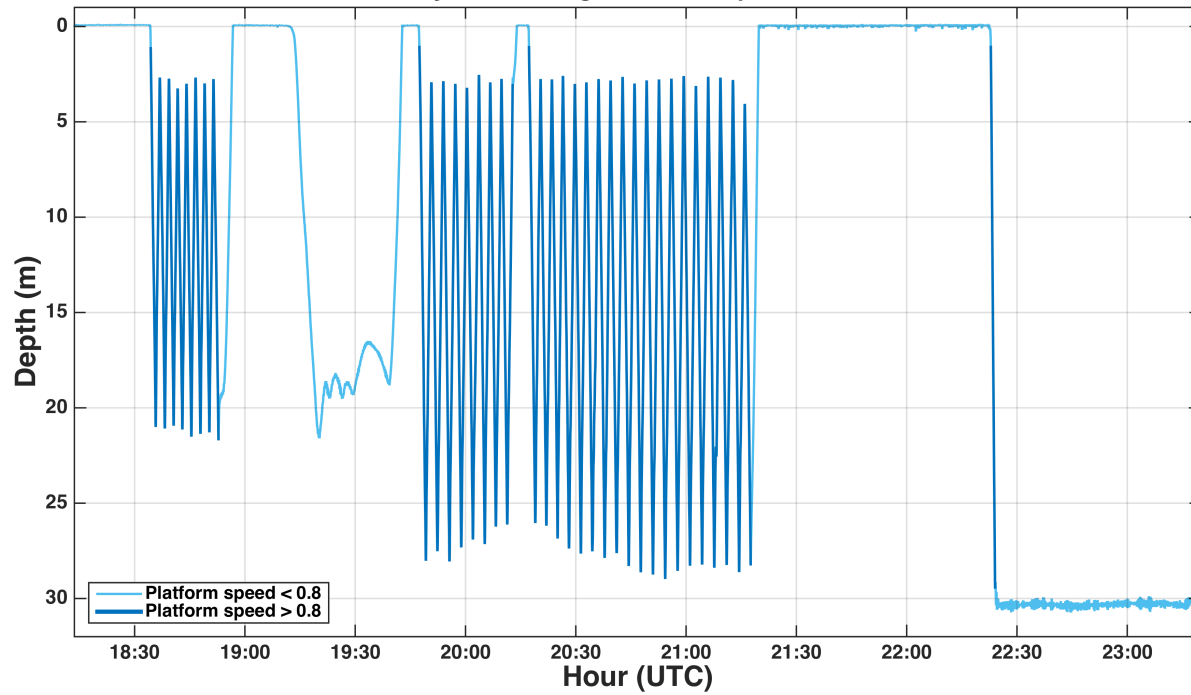
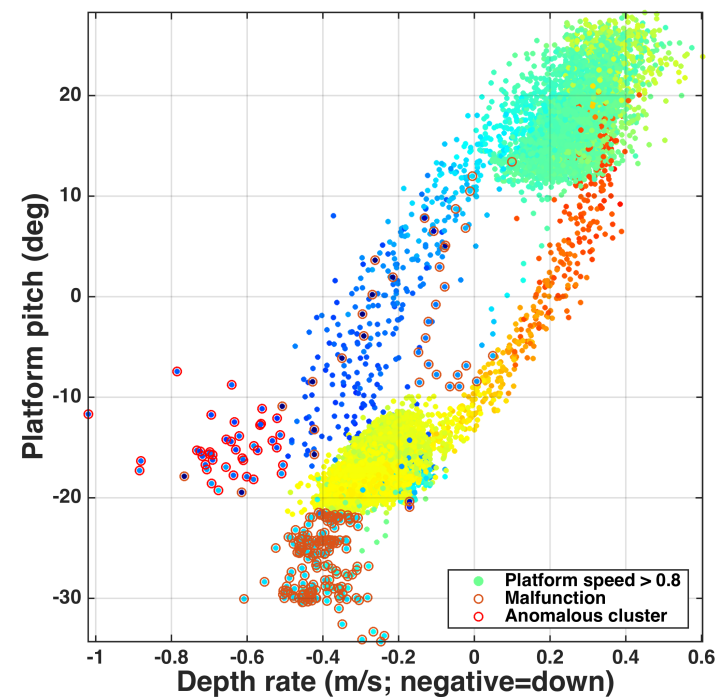
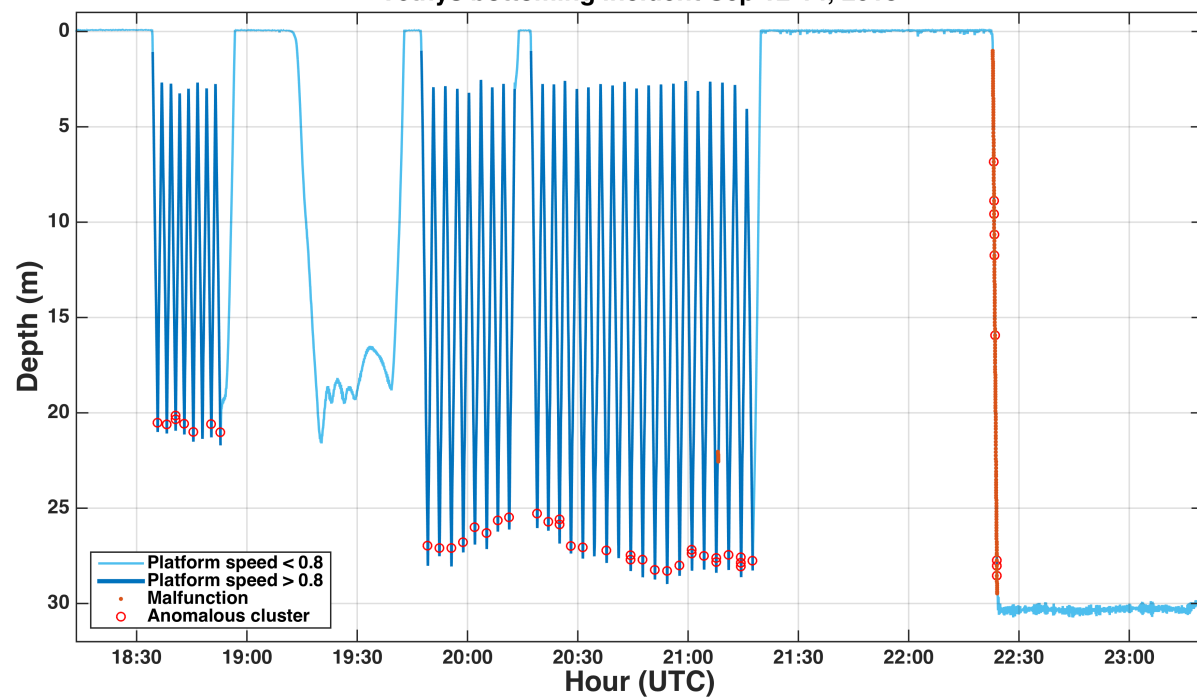


Tethys bottoming incident Sep 12-14, 2013



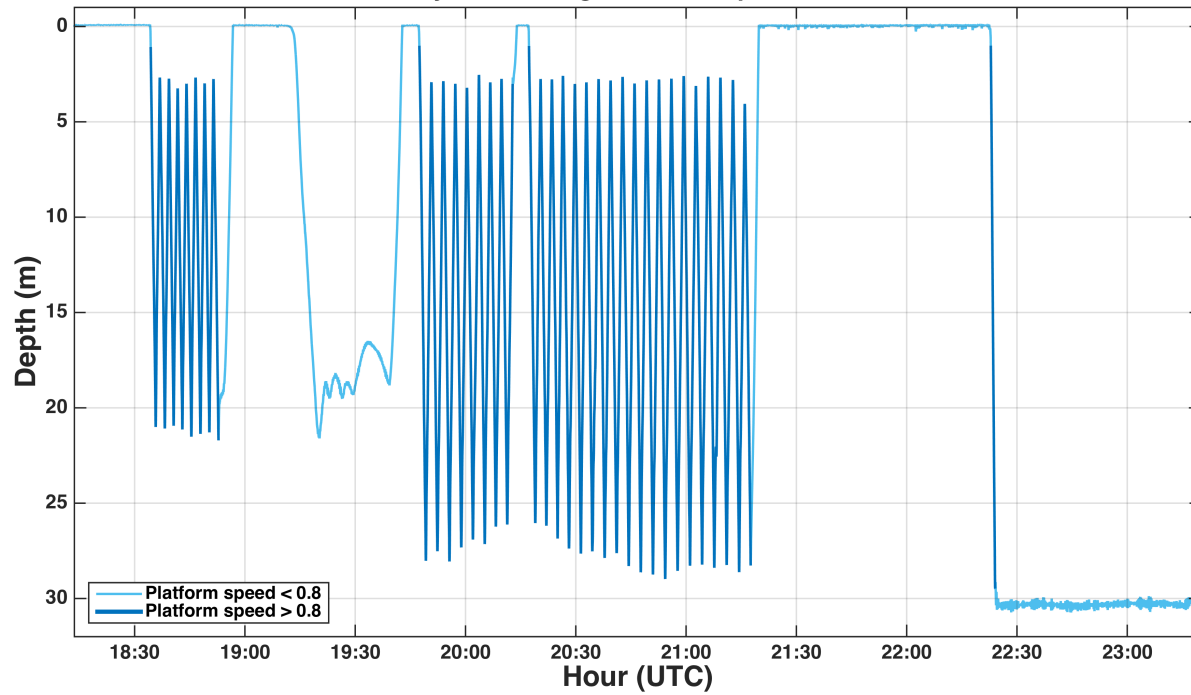
Tethys bottoming incident Sep 12-14, 2013



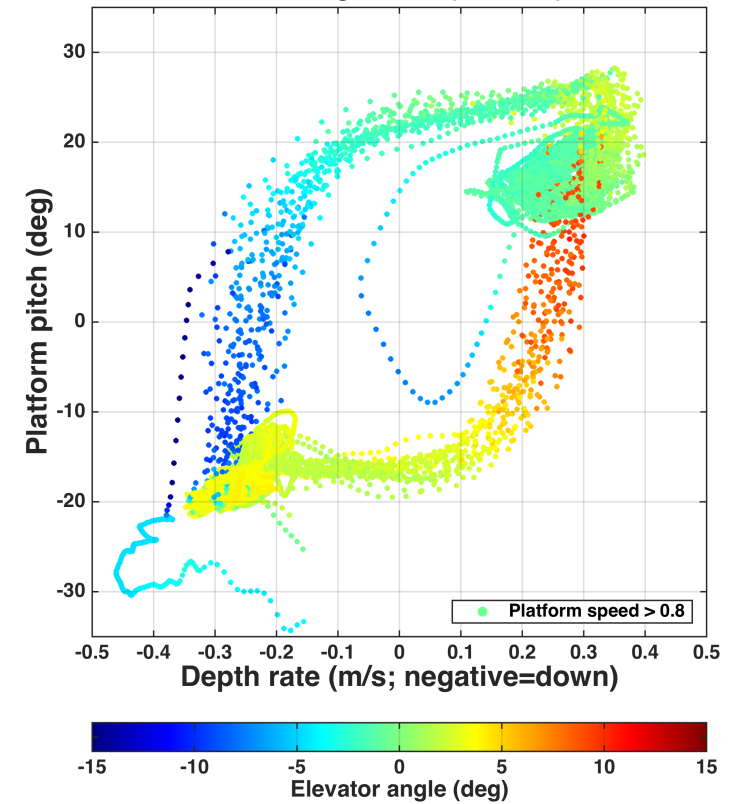
Known malfunctions and anomalous depth-rate cluster are superimposed:

- Malfunction cluster associated with extreme pitch angle but also mixed in with “normal data”
- Anomalous depth-rate cluster associated with yo-yo transitions

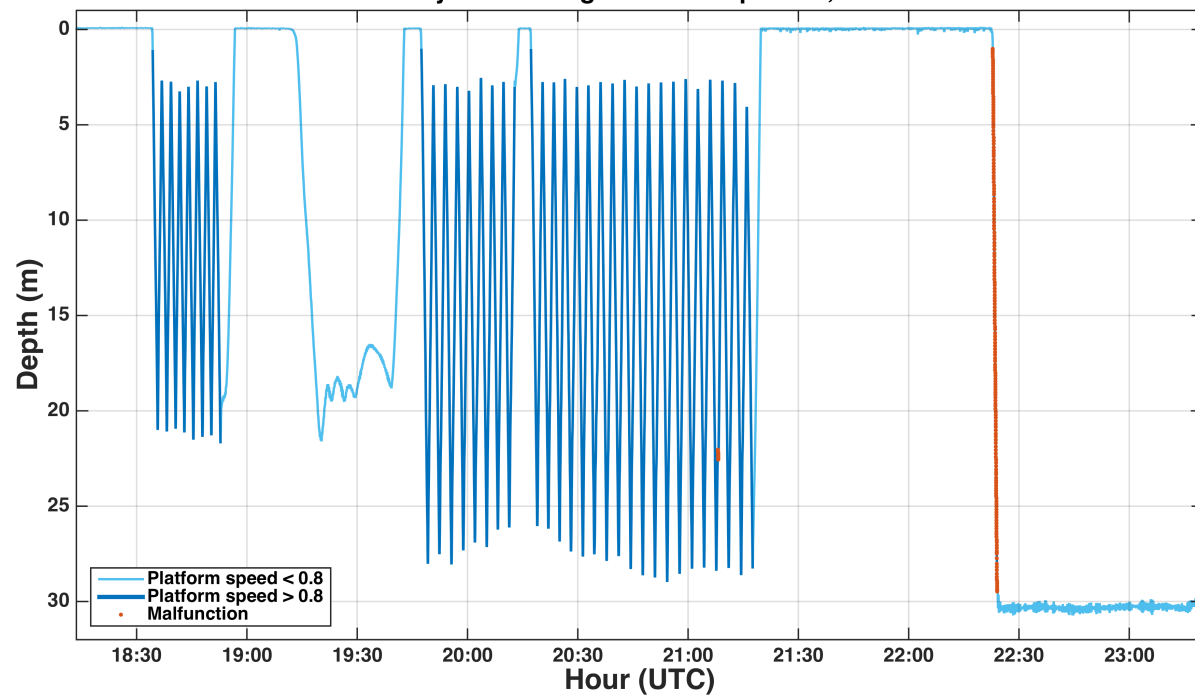
Tethys bottoming incident Sep 12-14, 2013



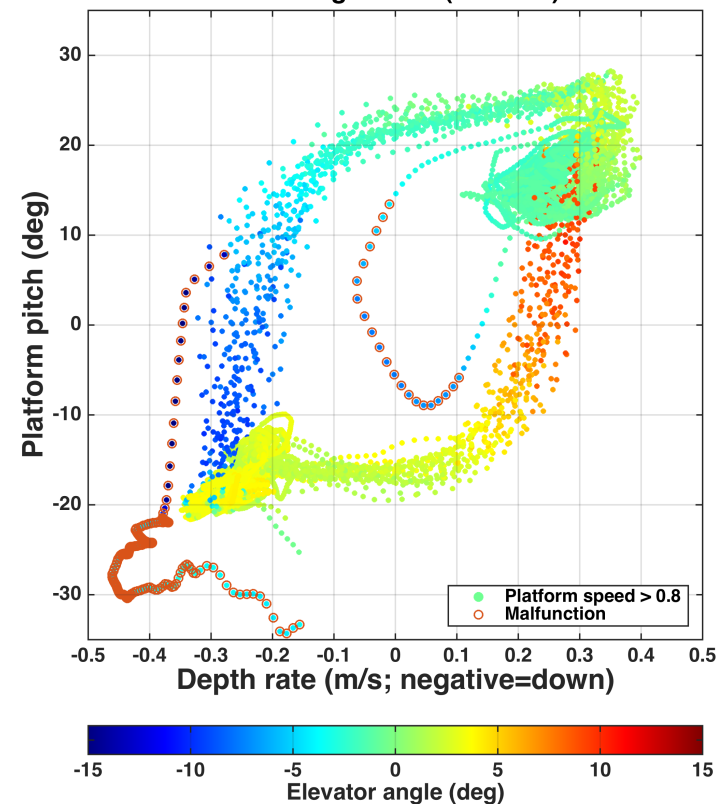
Bin avreged data (5.39 sec)



Tethys bottoming incident Sep 12-14, 2013



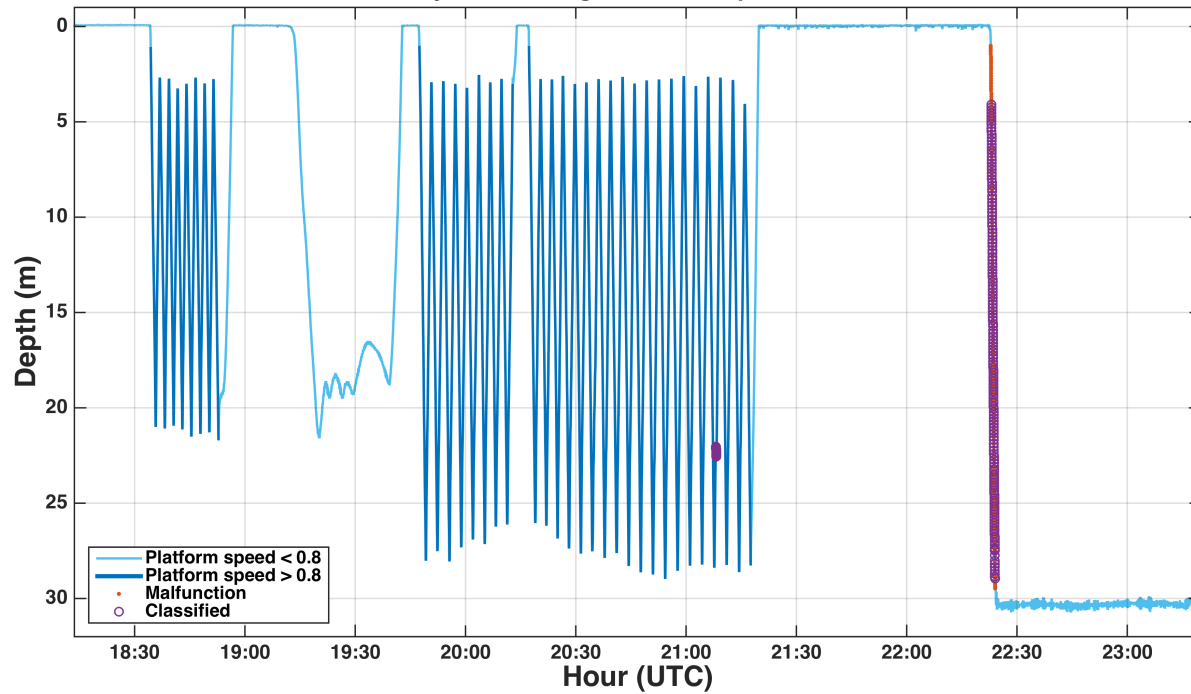
Bin avreged data (5.39 sec)



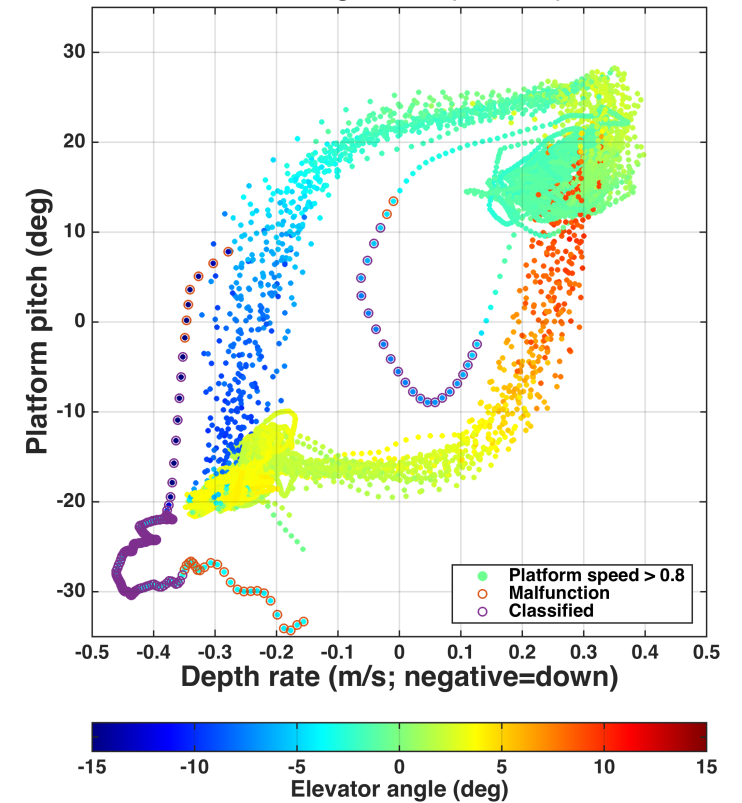
Known malfunctions are superimposed:

- Good separation from “normal data”
- Anomalous depth-rate cluster associated with yo-yo transitions is averaged out

Tethys bottoming incident Sep 12-14, 2013



Bin avreged data (5.39 sec)



Classification filtering criteria:

- 1) elevator angle < -5 & depth rate > 0.1 or...
- 2) elevator angle > 5 & depth rate < 0.1 or...
- 3) elevator angle < 0 & depth rate < -0.35