# Work report

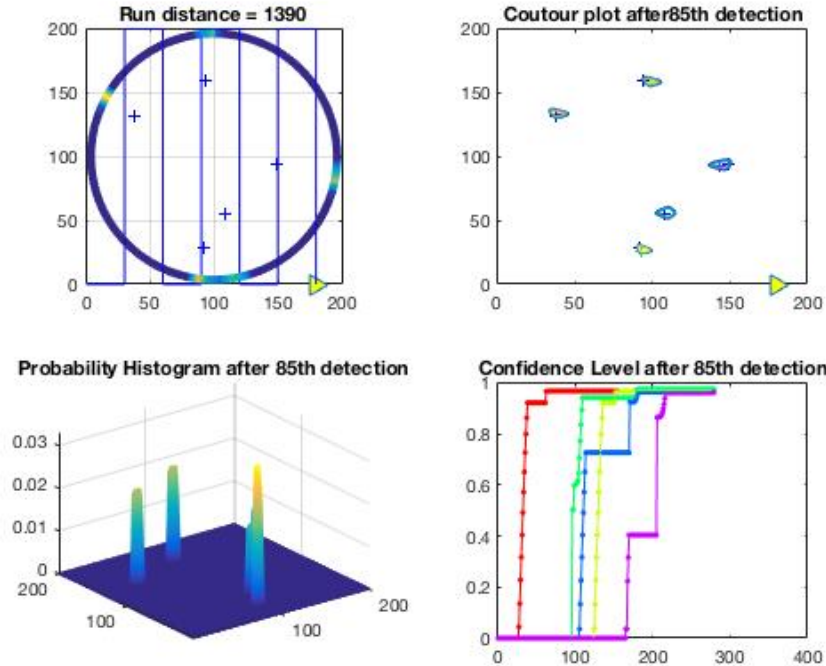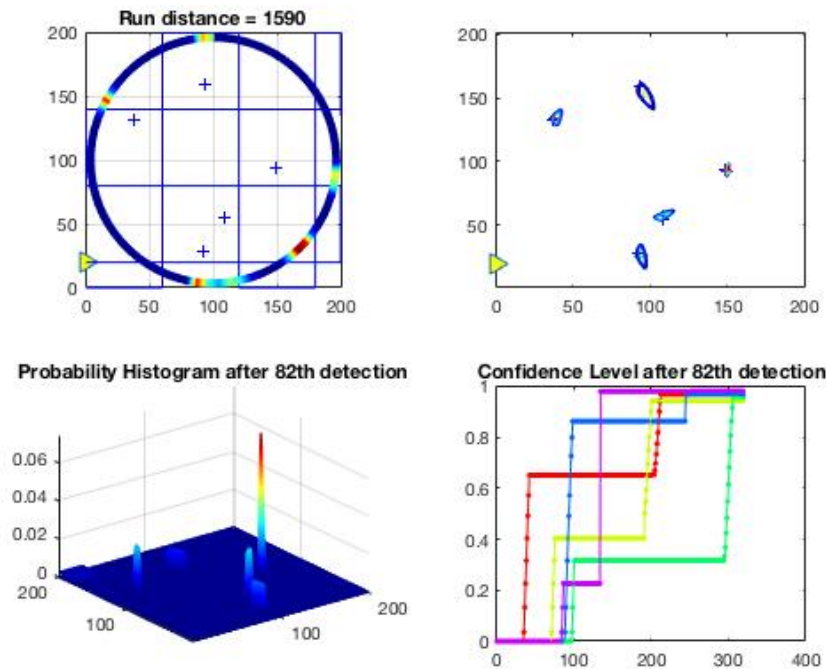**"Compass" implement compare with previous result:**
**Simple path planning:**
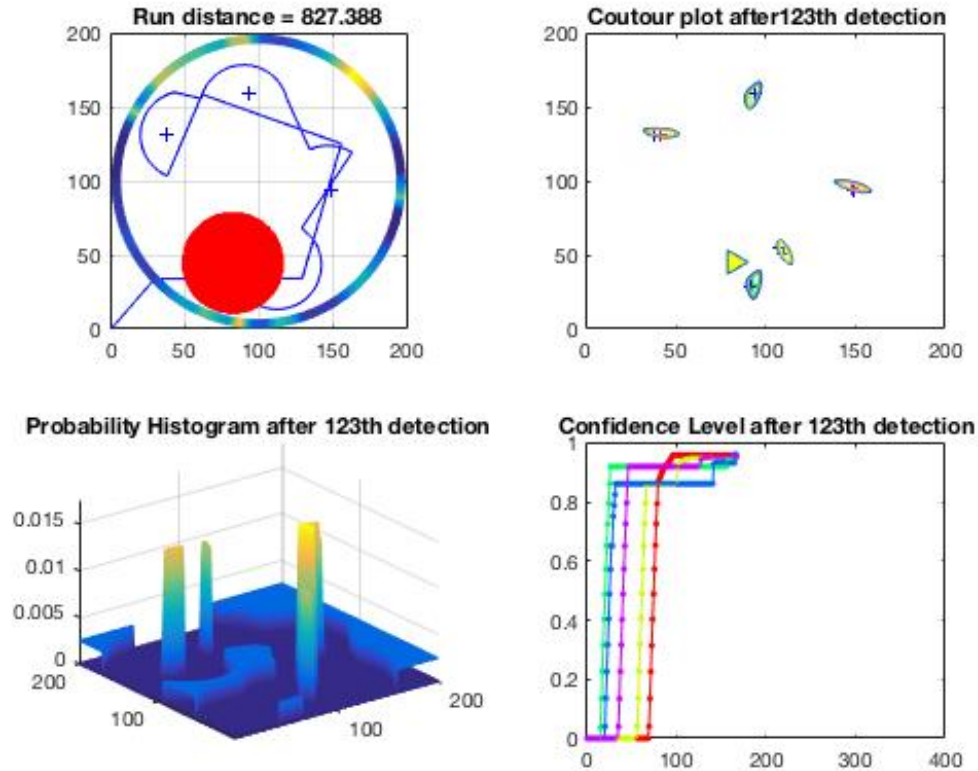**Scan: resolution 30**



**Double scan: Resolution 60**
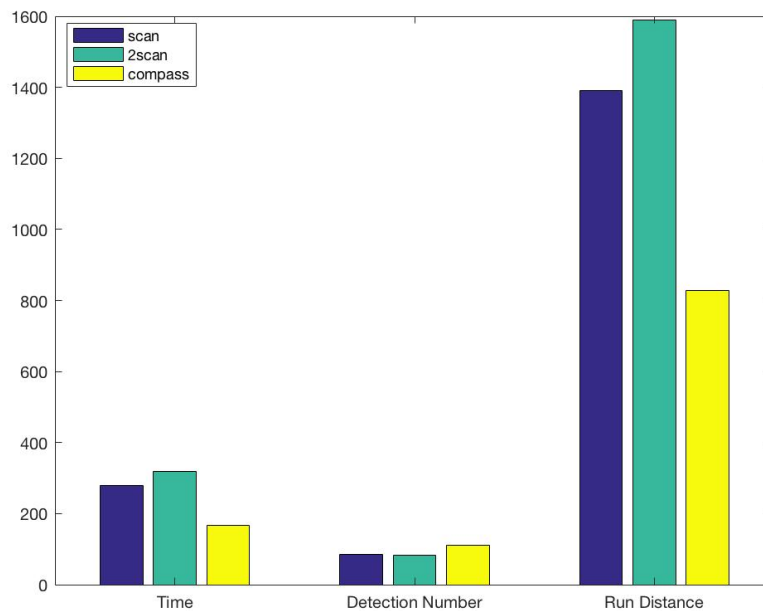
**Control     boat     based     on     the     "compass     and     new     strategy**



Run distance = 827.388

Coutour plot after123th detection

Probability Histogram after 123th detection

Confidence Level after 123th detection

**Actually detection number is 110**. **Because the code is not totally completed.**

**Result compare:**

**Average confidence level:**
**Scan:         0.9679**
**2scan:        0.9667**
**compass:   0.9561 (I set stop running until all confidence level above 0.95)**

**Conclusion:**
1. **"compass" controlled boat can dramatically reduce run distance with all sensor confidence level above 95%.**
2. **"compass" nearly use half time to complete localization**
3. **we can conclude that "compass" has highest efficiency from the result of Detection number.**


<mark>**What I need Dr. Becker to do:**</mark>
**I want to schedule a <mark>meeting</mark> with you to talk about starting write M.S thesis.**