Cubic sensor

Question: Given the following state model:

Show that EKF performances deteriorate for low values of . And the algorithm fails for .

רמז: צריך לקבל גרפים בערך כמו בהמשך

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### Simulation Parameters

betta=1;

Tf=10;

phi=0.9;

Q=10;

Rc=0.1;

### Results













### Conclusions

* The error covariance is greater for
* For the EKF fails when it reaches zero. This occurs since when we get , and as a result and and hence and so on.