

***Status Update of the aLIGO lock acquisition simulation
2013/May/31***

General Status:

- Instable DRMI solved (-ish)
- Crosscheck ongoing
- Preliminary results presented at Elba

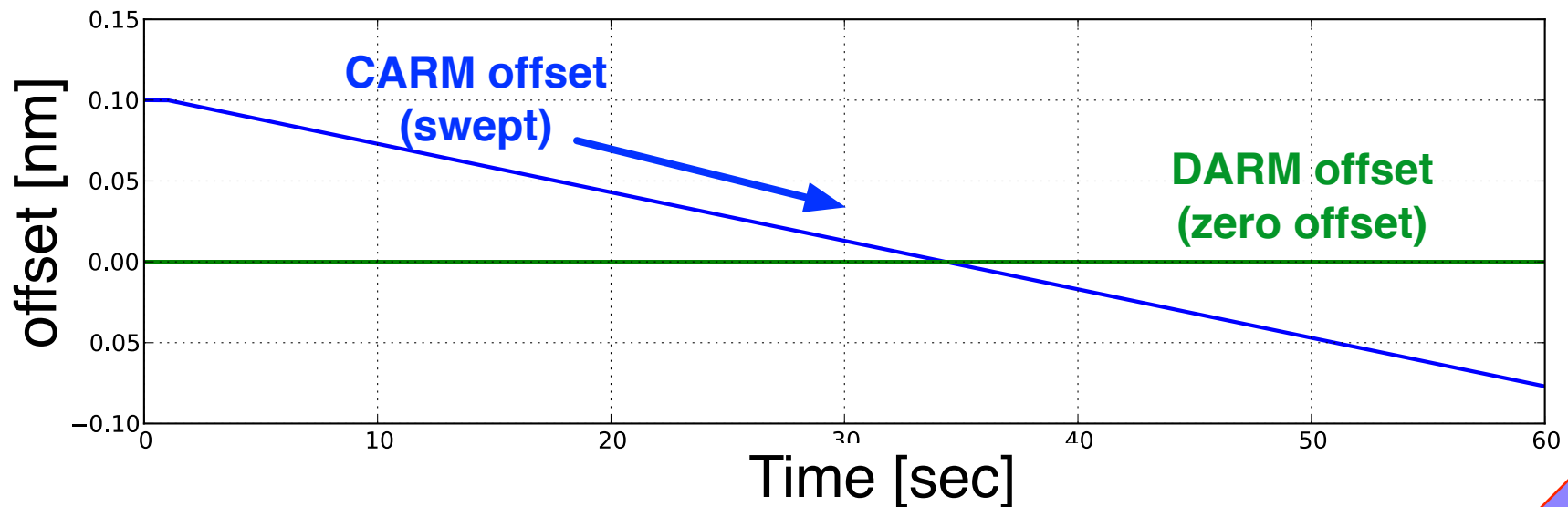
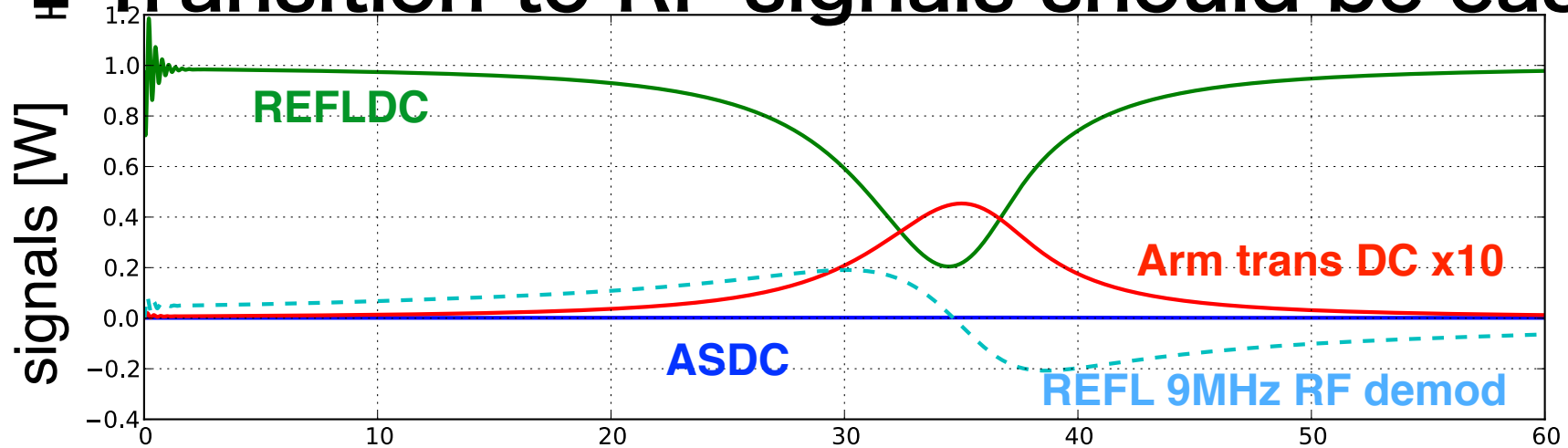
Instable DRMI

- Some SBs diverge to infinity
(12 x f1 and 14 x f1)
- Likely due to the summation
DRMI approximation
- Mitigated by removing the
problematic SBs

In an ideal world

Assume ALS well-stabilises the arms

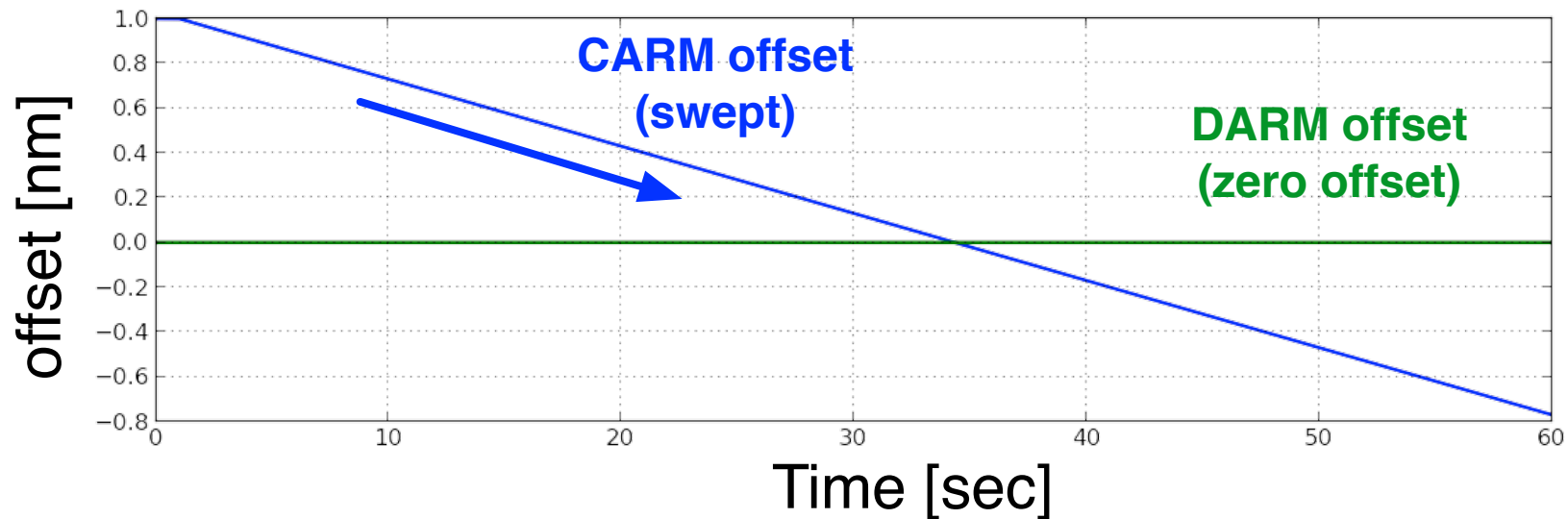
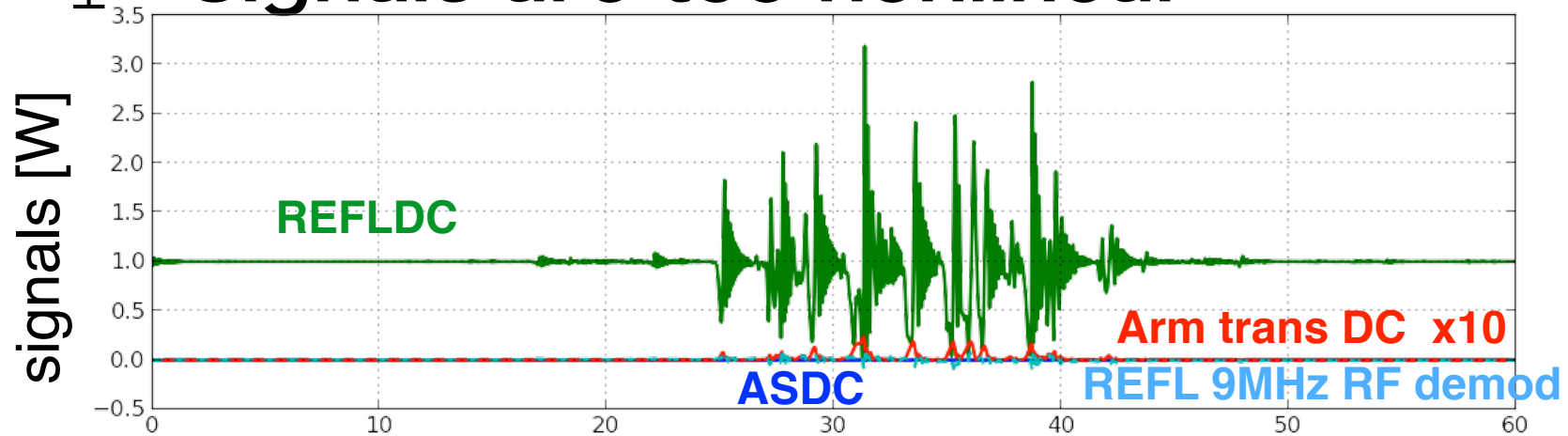
Transition to RF signals should be easy



Real world is more like this

■ Arm stability ~ 100 pm in rms

■ Signals are too nonlinear



Use of DC signals

- DC signals serve as arm sensors with DARM offseted
- Suggested in early simulation work by L. Barsotti

