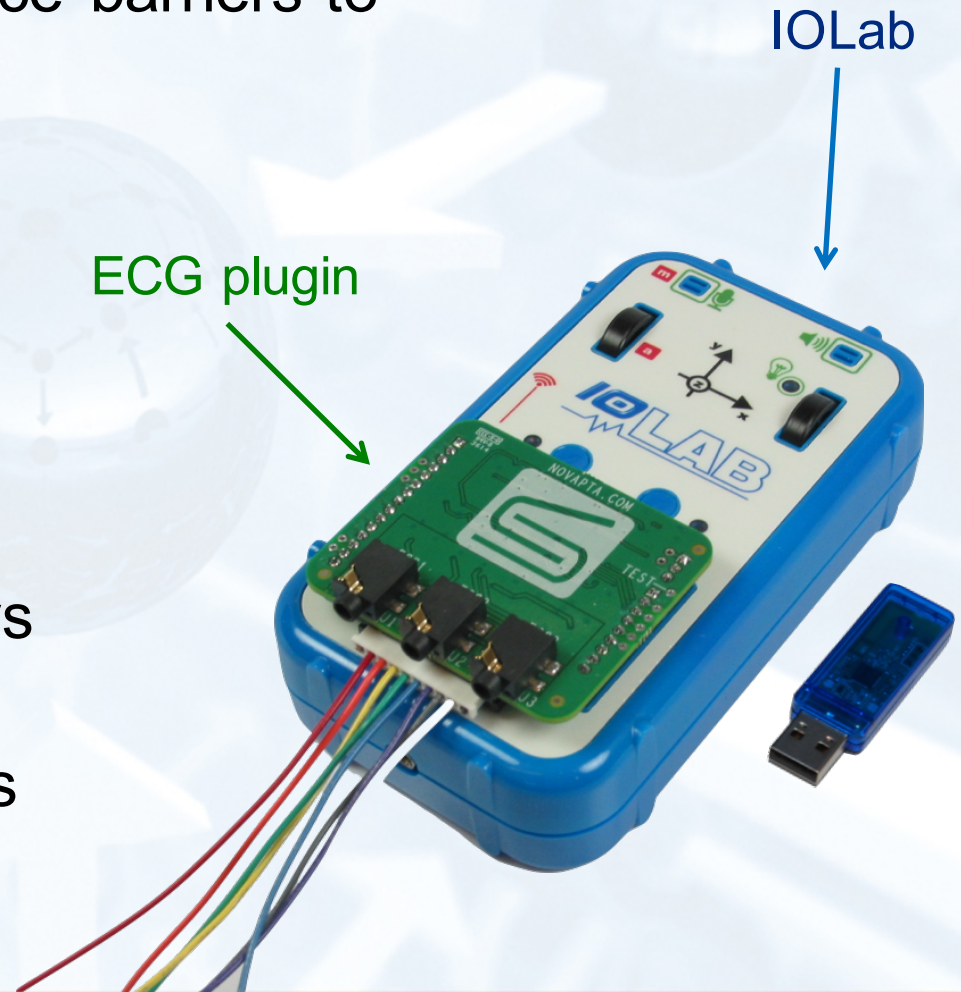


Background and Motivation

- About a hundred young athletes suffer Sudden Cardiac Death (SCD) each year in the US.
- High cost and inconvenience barriers to widespread screening.

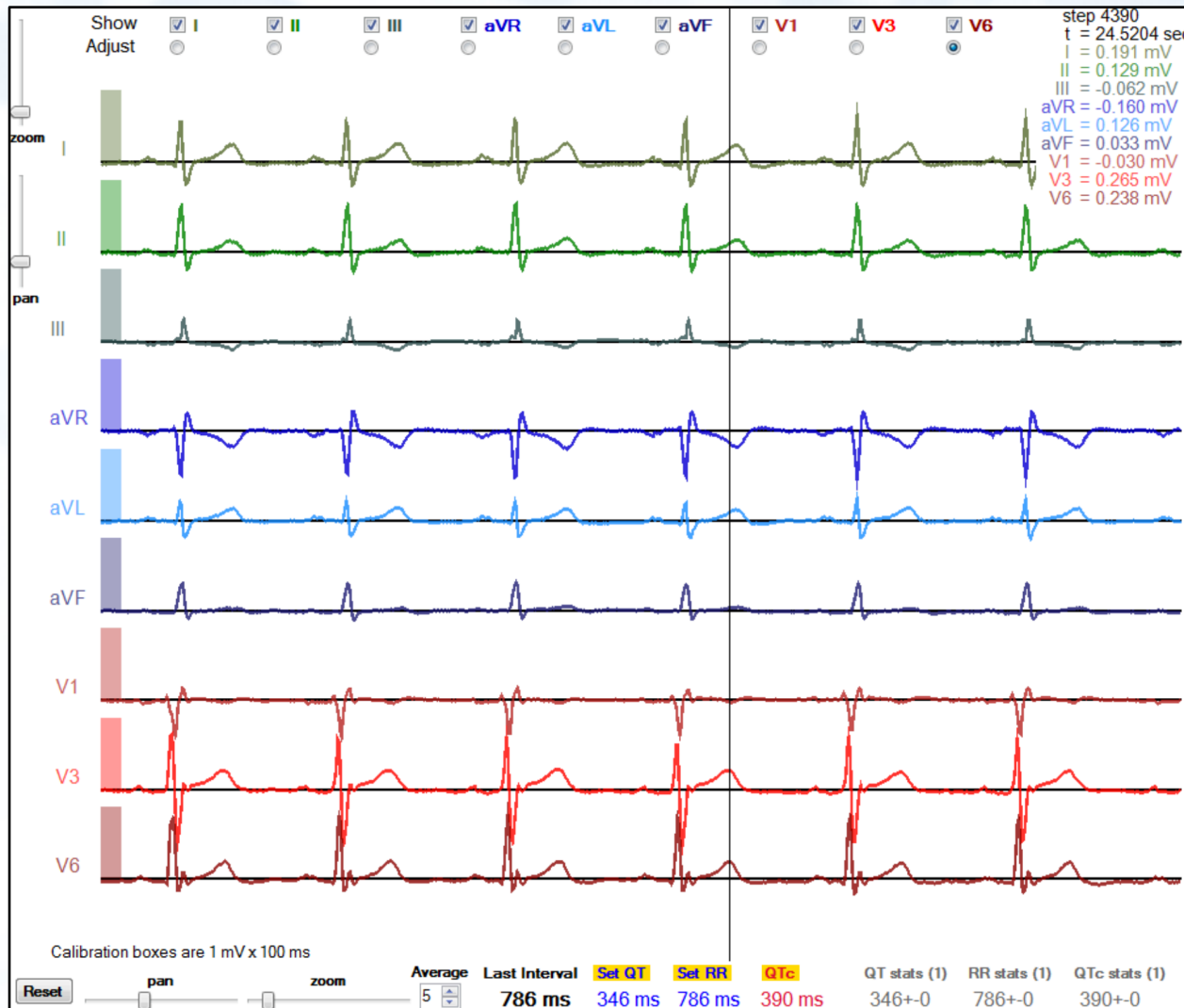
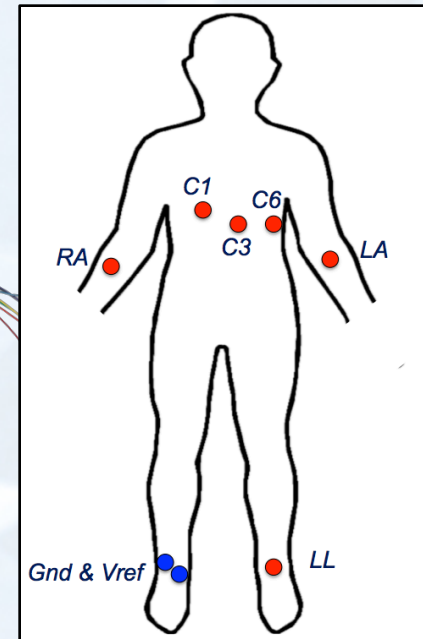
Our Goal:

- Develop inexpensive ECG hardware and explore ways to simplify screening.
- Use system in clinical tests as well as for teaching.



System Performance

Clinical study results published in
Cho et al. BMC Res Notes (2015) 8:342



Lead	Calculation
I	$V_{LA} - V_{RA}$
II	$V_{LL} - V_{RA}$
III	$V_{LL} - V_{LA}$
aVR	$V_{RA} - (V_{LA} + V_{LL})/2$
aVL	$V_{LA} - (V_{RA} + V_{LL})/2$
aVF	$V_{LL} - (V_{RA} + V_{LA})/2$
V1	$V_{C1} - (V_{RA} + V_{LA} + V_{LL})/3$
V3	$V_{C3} - (V_{RA} + V_{LA} + V_{LL})/3$
V6	$V_{C6} - (V_{RA} + V_{LA} + V_{LL})/3$