



Strip Sensor Meeting 16.01.2014

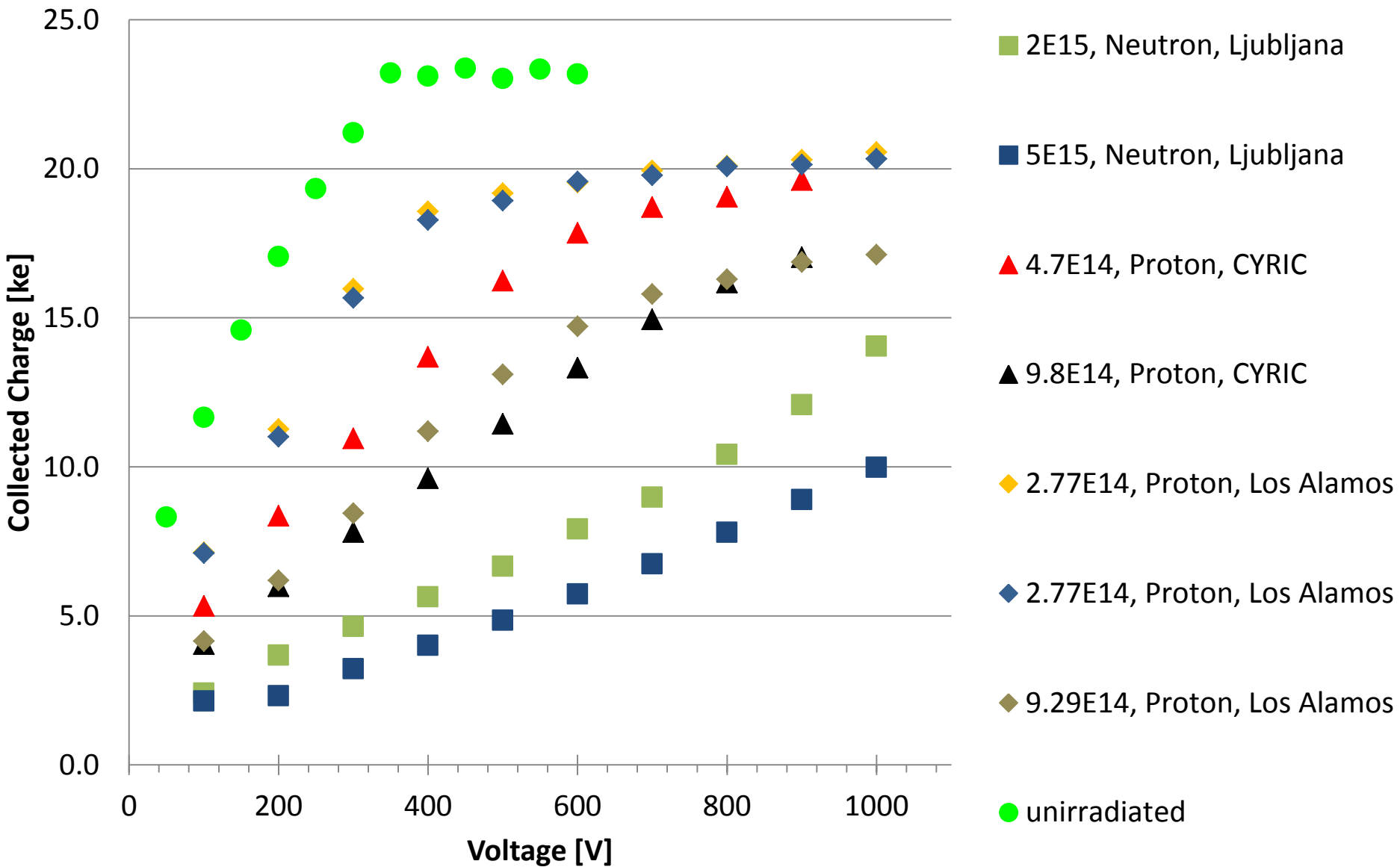
Liverpool – Charge Collection

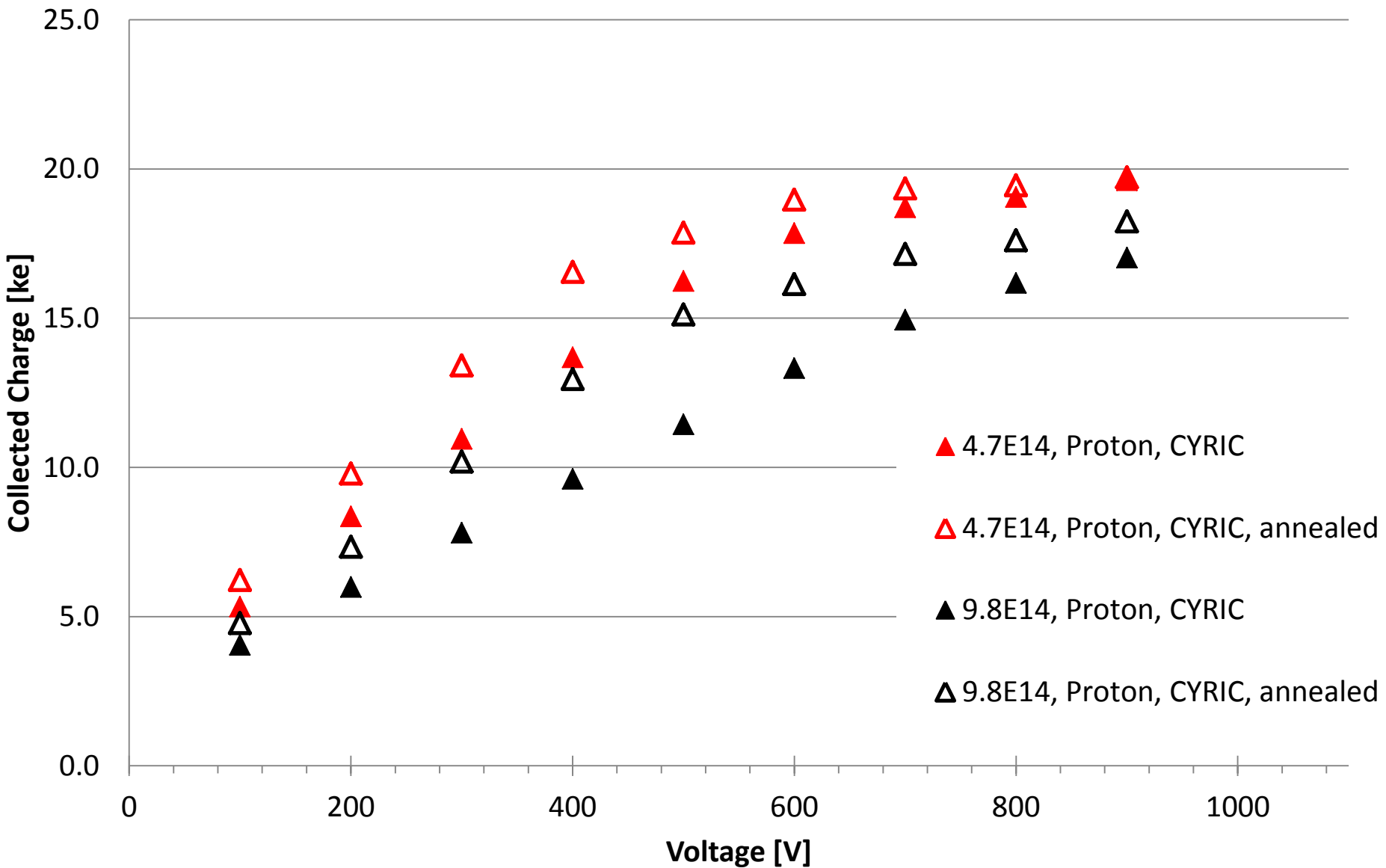
Anthony Affolder, Philip Allport, Gianluigi Casse, Paul Dervan, Mike Wormald, Sven Wonsak

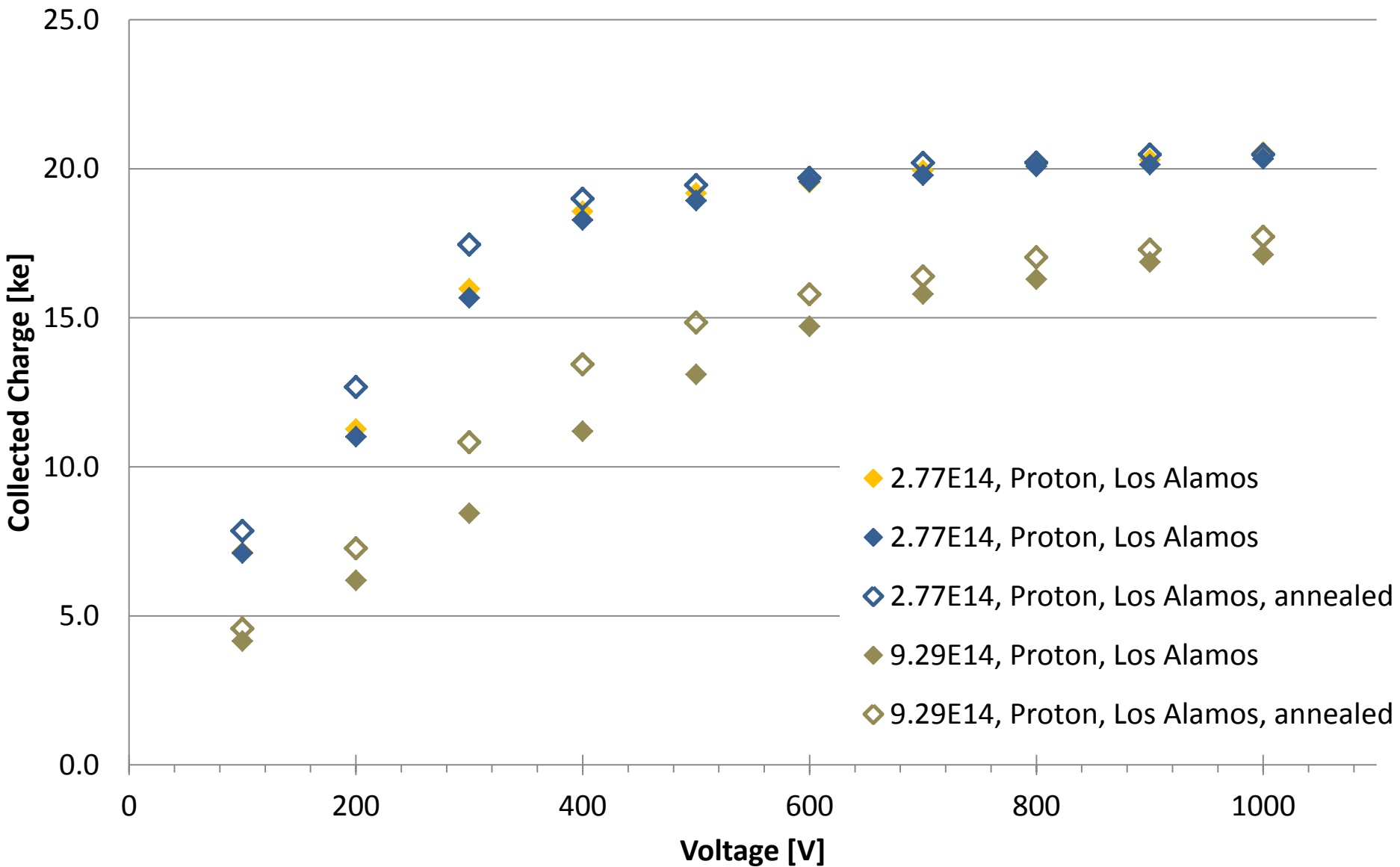


Device	Dose [n_{eq}/cm^2]	Particle	Irradiation Facility
W619-BZ3C-P14	2E15	Neutron	Ljubljana
W616-BZ3C-P12	5E15	Neutron	Ljubljana
W620-BZ3C-P2	4.7E14	Proton	CYRIC
W639-BZ3C-P2	9.8E14	Proton	CYRIC
W639-BZ3C-P4	2.77E14	Proton	Los Alamos
W621-BZ3F-P3	2.77E14	Proton	Los Alamos
W639-BZ3C-P4	9.29E14	Proton	Los Alamos
W620-BZ3C-P15	unirradiated		

- **Bold: tested before and after annealing (80min at 60°C)**
- W639-BZ3C-P4: measurement after annealing show unexpected behaviour

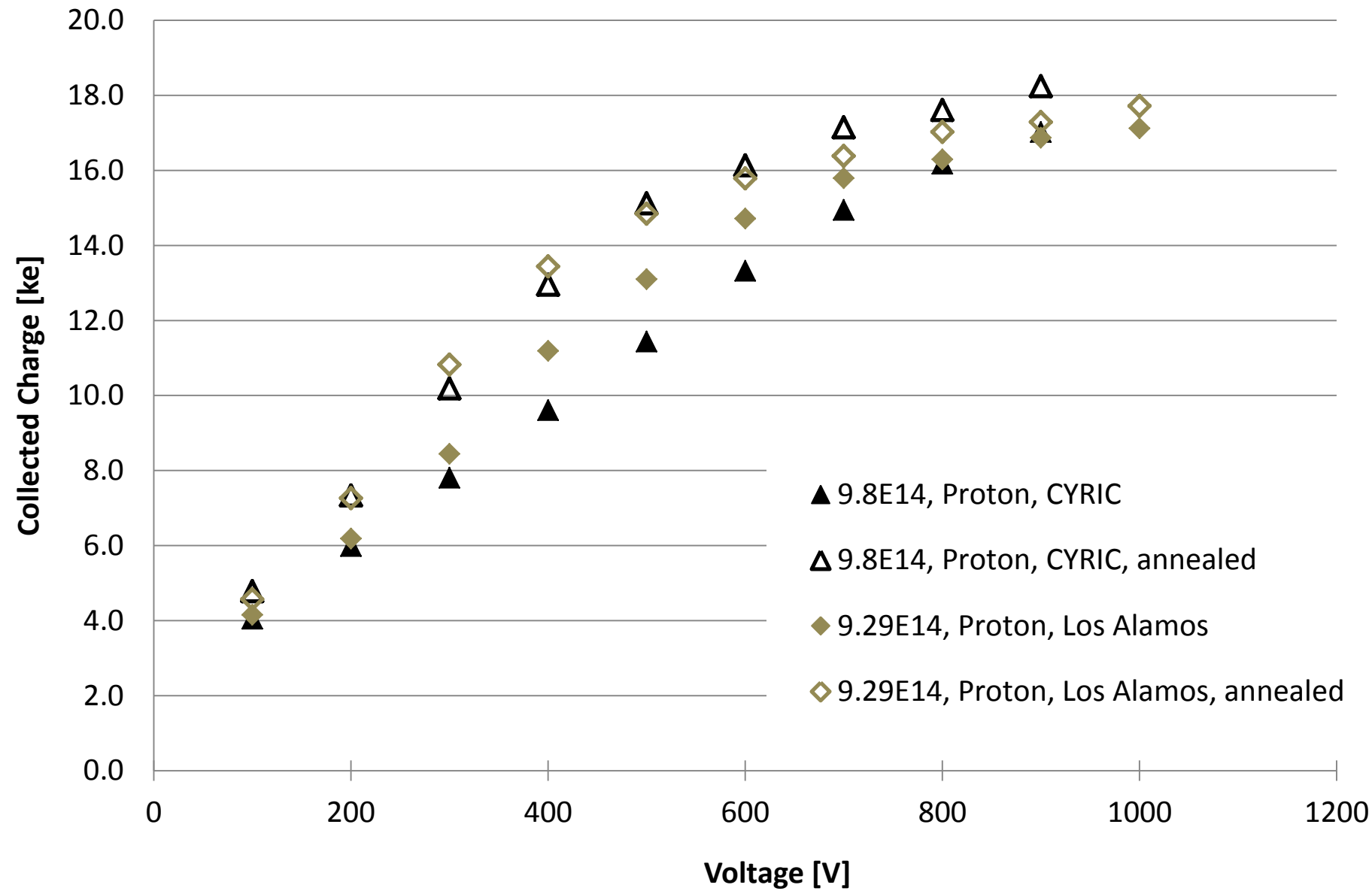








1E15 comparison





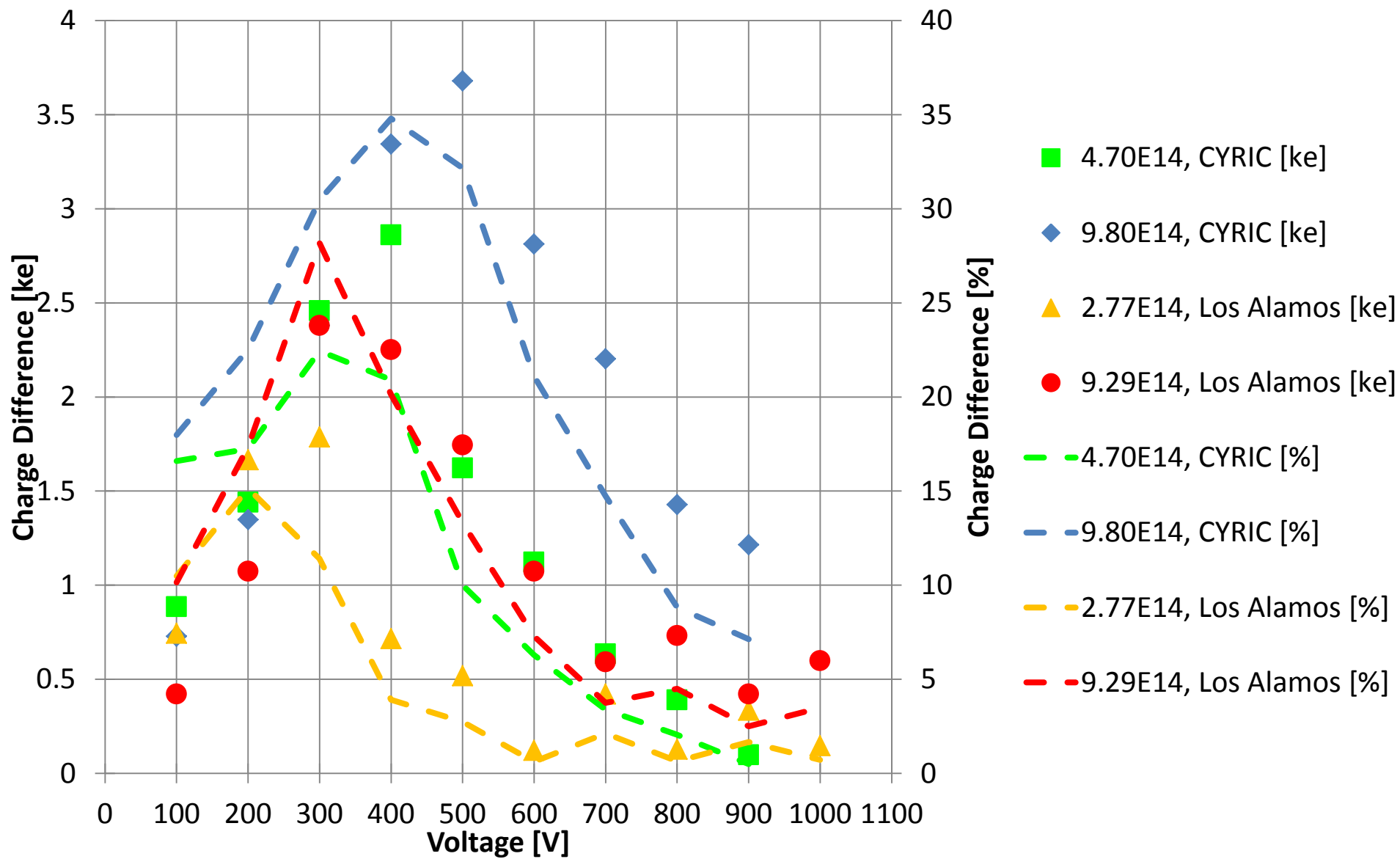
- The sensors irradiated at CYRIC and Los Alamos show the expected characteristics after annealing (80 min at 60°C).
- Comparison of CYRIC and Los Alamos sensors irradiated to $\sim 1 \times 10^{15} n_{eq}/cm^2$:
 - “Not annealed” Los Alamos sensor seems to be slightly annealed compared to CYRIC sensor
 - After full annealing collected charge is nearly the same for both devices



Backup



Charge difference before and after annealing





Scaled Charge

Scaled to $1 \times 10^{15} \text{ n}_{\text{eq}}/\text{cm}^2$

Difference < 1ke

