

# ATLAS12M testing

Y. Unno, K. Hara, et al.

# Samples Prepared/Irradiated

	type	pcs/wafer	Surface Study					Charge Collection Study					No. Wafers
			5.3e12	1.0e13	0.91e14	0.98e15	2.5e15	4.7e14	0.98e15	1.8e15	2.5e15	0.88e16	
1	BZ1	2	2	2	2	2	2	---	---	---	---	---	5
2	BZ2C	2	2	2	2	2	2	---	---	---	---	---	5
3	BZ3A	2	2	2	2	2	2	---	---	---	---	---	5
4	BZ3B	2	2	2	2	2	2	---	---	---	---	---	5
5	BZ3C	2	2	2	2	2	2	2	Surface	2	Surface	2	8
6	BZ3D	2	2	2	2	2	2	---	---	---	---	---	5
7	BZ3E	1	2	2	2	2	2	---	---	---	---	---	10
8	BZ3F	1	2	2	2	2	2	---	---	---	---	---	10
9	BZ4B2	2	2	2	2	2	2	---	---	---	---	---	5
10	BZ6C	2	2	2	2	2	2	---	---	---	---	---	5
11	BZ6E	2	2	2	2	2	2	---	---	---	---	---	5
12	EC-Small Pitch-C	2	2	2	2	2	2	---	---	---	---	---	5
13	EC-Small Pitch-E	2	2	2	2	2	2	---	---	---	---	---	5

- Irradiation at CYRIC (70 MeV protons)
  - 2013.7.25-7.26
  - Miniatures from ATLAS12M
    - BZ1, BZ2C, BZ3A,B,C,D,E,F, BZ4B2, BZ6C,E
    - EC-Small pitch-C,E
  - Target f.: 5e12, 1e13, 1e14, (5e14), (1e15), (2e15), (5e15), 1e16
  - Dosimetry f.: 5.3e12, 1.0e13, 0.91e14, 4.7e14, 0.98e15, 1.8e15, 2.5e15, 0.88e16
  - Surface and Charge Collection (in ()) studies
- Measurements are underway
  - M. Hagihara, K. Hara
  - Others

# Samples Irradiated – ATLAS12

- ATLAS12A BZ3C (from Liverpool)
  - 7/25-7/26 irradiation at CYRIC
    - 4.7e14 LIV-W620-BZ3C-P2, LIV-W626-BZ3C-P2
    - 0.98e15 LIV-W628-BZ3C-P2, LIV-W639-BZ3C-P2
    - 1.8e15 LIV-W640-BZ3C-P2, LIV-W642-BZ3C-P2
    - 2.5e15 LIV-W644-BZ3C-P2, LIV-W645-BZ3C-P2
  - Shipped on 2013/10/8 to Liverpool
- ATLAS12M main sensor
  - 10/21-10/22 irradiation at CYRIC
  - Full area, uniformly, 1.11e15 neq/cm<sup>2</sup>
  - Measurements to be done

# Measurements – ATLAS12M

- Body I-V, C-V
  - Completed, analyzing data, ...
- Inter-strip resistance, capacitance
  - Underway
- Charge collection
  - With our hybrid amplifier-readout system
    - Underway
  - Plan to use ALibava... (but not yet)