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Title: Abstract Summarizing Bowtie Data (Round 3)

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Abstract Summarizing Bowtie Data (Round 3)

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This dataset is the third in a set of bowtie data to be released. The first two were covered by LA-UR-25-28525, which can be found on LANL's Ocean's 11 Repository:

<https://oceans11.lanl.gov/bowtie>

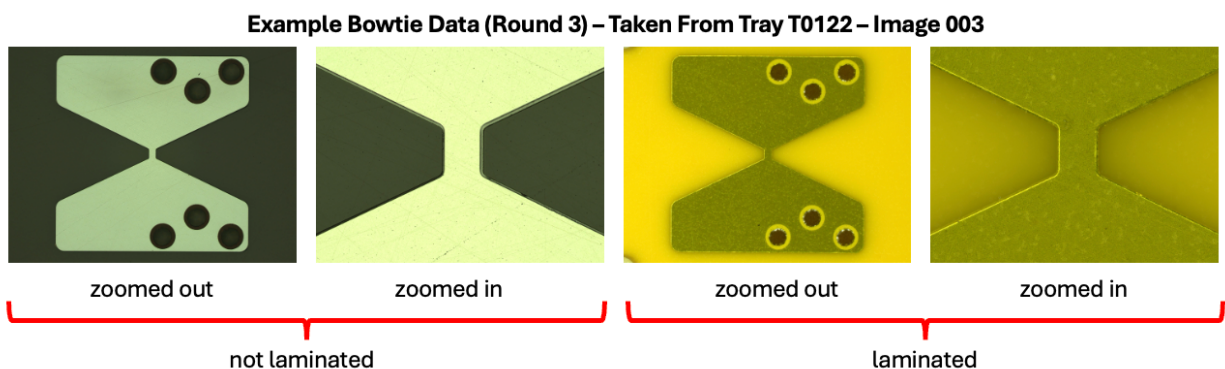
This Round 3 dataset is simply an additional set of images. The content, both conceptually and structurally, of this dataset is largely analogous to those covered by LA-UR-25-28525. This set adds the following bowtie trays:

Name			
	▼ T0122	T0122	464
> T0122	> laminated_1	T0123	464
> T0123	> laminated_2	T0124	464
> T0124	📄 T0122_Inspection.xlsx	T0125	232
> T0125	📄 T0122_Laminated Inspection.xlsx	T0126	232
> T0126	> zoomed_in		
	> zoomed_out		

(image count per tray)

Trays T0{122-124} have the above subfolder structure. Trays T0125 and T0126 do not contain the laminated versions of the parts.

Example of the parts are as follows:



Where the TNNN_Inspection.xlsx file contains the inspector categorization (**Accept** or **Reject**) notes for the zoomed_in and zoomed_out version of each bowtie instance contained in the given tray:

	A	B	C	D	E	F	G
1			Tray	0122	Inspector	1	129210
2	img	Pos	zoomed_in_1/Note 6A	comments	zoomed_out_2/Note 6B	comments	9900000 Visual
3	3	A0	A		A		A
4	4	B0	A		R	Foreign Material	A
5	5	C0	A		A		A
6	6	D0	A		A		A
7	7	E0	A		A		A
8	8	F0	A		A		A
9	9	G0	R	Foreign Material	R	Foreign Material	A
10	10	H0	A		A		A
11	11	I0	A		A		A
12	12	J0	A		A		A
13	13	K0	R	Foreign Material	A		A
14	14	L0	A		A		A

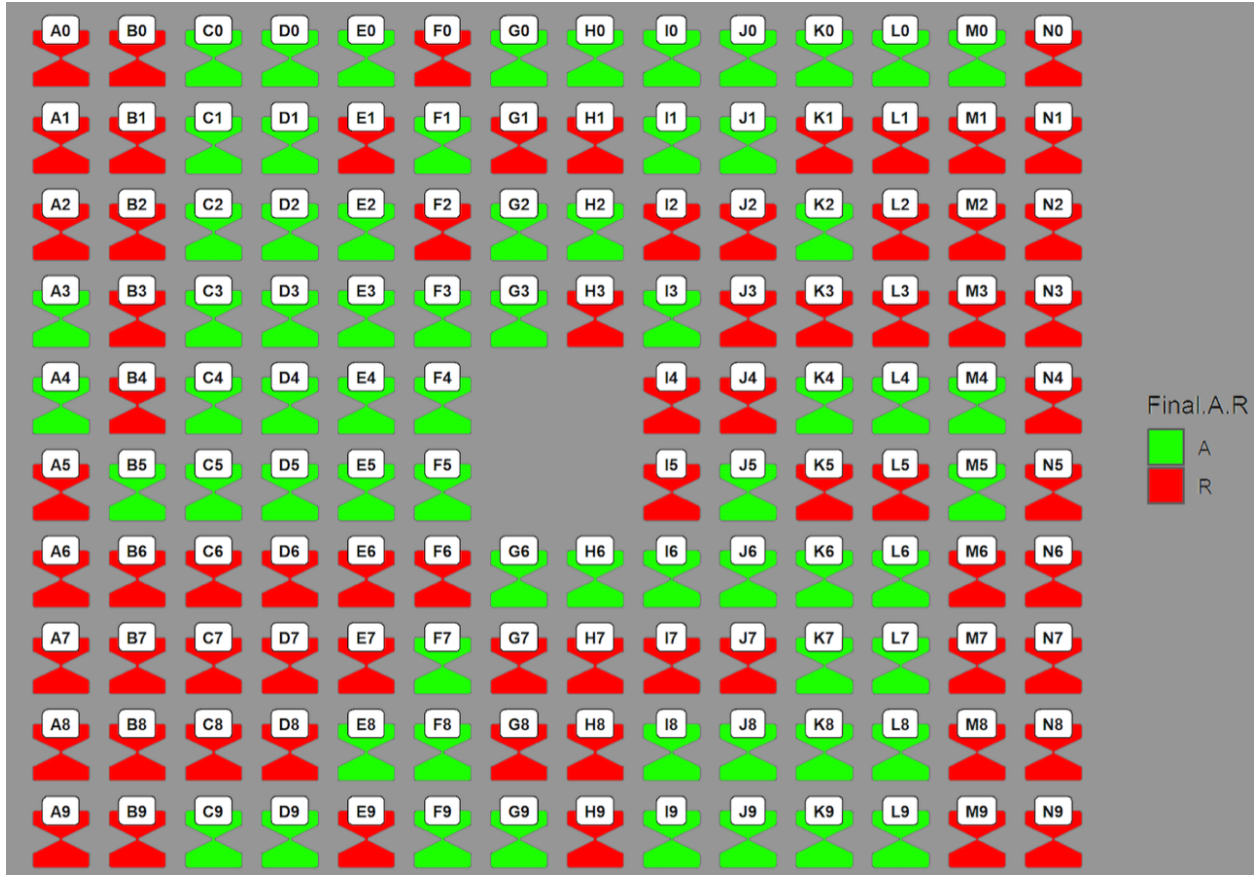
In the columns, we can see the type of defect present for the given zoom factor.

Likewise, the TNNN_Laminated_Inspection.xlsx files contain similar information for the laminated versions of each bowtie part:

	A	B	C	D	E	F	G	H
1			Tray	0123	Inspector	1	Tray Barcode	00129667
2	img	Pos	Flyer_1/Note 6A	comments	Flyer_2/Note 6B	comments		
3	3	A0	R	Foreign Material	A			
4	4	B0	R	Foreign Material	A			
5	5	C0	A		R	Void		
6	6	D0	R	Foreign Material	A			
7	7	E0	R	Bubble	R	Bubble		
8	8	F0	A		A			
9	9	G0	R	Foreign Material	R	Void		
10	10	H0	A		A			
11	11	I0	A		A			
12	12	J0	A		A			
13	13	K0	R	Foreign Material	R	Gouge		
14	14	L0	A		A			
15	15	A1	R	Scratches	R	Scratches		

As you can see – the only “PII” information here would be the inspector ID which was a LANL Z number, but those have been removed and replaced with anonymous ID numbers: 1, 2, 3, 4, ... , num_unique_inspectors

Column B (position) indicates the location of each part inside of the given tray. Here is the tray layout:



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