

TABLE I
Parameters' values used for training dataset creation

Parameter	Value
$d_p, \mu\text{m}$	150, 180, 210, 240
N_B, cm^{-3}	10^{15} , 1.778×10^{15} , 3.162×10^{15} , 5.623×10^{15} , 10^{16} , 1.778×10^{16} , 3.162×10^{16} , 5.623×10^{16} , 10^{17}
$N_{\text{Fe}}, \text{cm}^{-3}$	10^{10} , 1.468×10^{10} , 2.154×10^{10} , 3.162×10^{10} , 4.642×10^{10} , 6.813×10^{10} , 10^{11} , 1.468×10^{11} , 2.154×10^{11} , 3.162×10^{11} , 4.642×10^{11} , 6.813×10^{11} , 10^{12} , 1.468×10^{12} , 2.154×10^{12} , 3.162×10^{12} , 4.642×10^{12} , 6.813×10^{12} , 10^{13}
T, K	290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340

TABLE II
Parameters' values used for test dataset creation

N_B, cm^{-3}	$N_{\text{Fe}}, \text{cm}^{-3}$	$d_p, \mu\text{m}$	$d_p, \mu\text{m}$	# of IVCs
"B-varied" dataset				
1.4×10^{15}	10^{10} , 1.468×10^{10} , 2.154×10^{10} , 3.162×10^{10} , 4.642×10^{10} , 6.813×10^{10} , 10^{11} , 1.468×10^{11} , 2.154×10^{11} , 3.162×10^{11} , 4.642×10^{11} , 6.813×10^{11} , 10^{12} , 1.468×10^{12} , 2.154×10^{12} , 3.162×10^{12} , 4.642×10^{12} , 6.813×10^{12} , 10^{13}	150, 180	290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340	1672

4.5×10^{15} , 8×10^{16}	10^{10} , 2.154×10^{10} , 3.162×10^{10} , 1.468×10^{11} , 2.154×10^{11} , 4.642×10^{11} , 10^{12} , 2.154×10^{12} , 3.162×10^{12} , 4.642×10^{12} , 6.813×10^{12} , 10^{13} cm^{-3}	210	290, 305, 320, 340	384
<hr/> “Fe-varied” dataset <hr/>				
1.778×10^{15} , 5.623×10^{15} , 10^{16} , 3.162×10^{16} , 10^{17}	1.3×10^{10} , 2.471×10^{10} , 4.696×10^{10} , 8.927×10^{10} , 1.697×10^{11} , 3.225×10^{11} , 6.13×10^{11} , 1.165×10^{12} , 2.214×10^{12} , 4.209×10^{12} , 8×10^{12}	180	290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340	2420
3.162×10^{15} , 10^{16} , 10^{17}	1.2×10^{11} , 2.234×10^{11} , 4.16×10^{11} , 7.746×10^{11} , 1.442×10^{12} , 2.685×10^{12} , 5×10^{12}	210, 240	290, 300, 310, 320, 330, 340	1004
<hr/> “d-varied” dataset <hr/>				
10^{15} , 5.623×10^{15} , 1.778×10^{16} , 5.623×10^{16}	10^{10} , 1.468×10^{10} , 2.154×10^{10} , 3.162×10^{10} , 4.642×10^{10} , 6.813×10^{10} , 10^{11} , 1.468×10^{11} , 2.154×10^{11} , 3.162×10^{11} , 4.642×10^{11} , 6.813×10^{11} , 10^{12} , 1.468×10^{12} , 2.154×10^{12} , 3.162×10^{12} , 4.642×10^{12} , 6.813×10^{12} , 10^{13}	190	290, 300, 310, 320, 330, 340	1824

10^{15} , 1.778×10^{15} , 3.162×10^{15} , 5.623×10^{15} , 10^{16} , 1.778×10^{16} , 3.162×10^{16} , 5.623×10^{16} , 10^{17}	$10^{10}, 3.162 \times 10^{10}, 10^{11}$, $3.162 \times 10^{11}, 10^{12}$, $3.162 \times 10^{12}, 10^{13}$	205	295, 305, 315, 325, 335	1260
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1.778×10^{15} , 10^{16}	$10^{10}, 1.468 \times 10^{10}$, $2.154 \times 10^{10}, 3.162 \times 10^{10}$, $4.642 \times 10^{10}, 6.813 \times 10^{10}$, $10^{11}, 1.468 \times 10^{11}$, $2.154 \times 10^{11}, 3.162 \times 10^{11}$, $4.642 \times 10^{11}, 6.813 \times 10^{11}$, $10^{12}, 1.468 \times 10^{12}$, $2.154 \times 10^{12}, 3.162 \times 10^{12}$, $4.642 \times 10^{12}, 6.813 \times 10^{12}$, 10^{13}	230	290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340	1672
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“T-varied” dataset

10^{15} , 1.778×10^{15} , 3.162×10^{15} , 5.623×10^{15} , 10^{16} , 1.778×10^{16} , 3.162×10^{16} , 5.623×10^{16} , 10^{17}	$1.468 \times 10^{10}, 4.642 \times 10^{10}$, $6.813 \times 10^{10}, 1.468 \times 10^{11}$, $4.642 \times 10^{11}, 6.813 \times 10^{11}$, $2.154 \times 10^{12}, 4.642 \times 10^{12}$	210	314	288
10^{15} , 5.623×10^{15} , 1.778×10^{16} , 3.162×10^{16}	$10^{10}, 1.468 \times 10^{10}$, $2.154 \times 10^{10}, 3.162 \times 10^{10}$, $4.642 \times 10^{10}, 6.813 \times 10^{10}$, $10^{11}, 1.468 \times 10^{11}$,	150, 180, 210, 240	303	1216

1.778×10 ¹⁵ , 1.778×10 ¹⁶ , 10 ¹⁷	2.154×10 ¹¹ , 3.162×10 ¹¹ , 4.642×10 ¹¹ , 6.813×10 ¹¹ , 10 ¹² , 1.468×10 ¹² ,	150, 180	393	456
10 ¹⁵ , 1.778×10 ¹⁵ , 3.162×10 ¹⁵ , 5.623×10 ¹⁵ , 10 ¹⁶ , 1.778×10 ¹⁶ , 3.162×10 ¹⁶ , 5.623×10 ¹⁶ , 10 ¹⁷	2.154×10 ¹² , 3.162×10 ¹² , 4.642×10 ¹² , 6.813×10 ¹² , 10 ¹³	180, 240	336	1328
10 ¹⁵ , 1.778×10 ¹⁵ , 3.162×10 ¹⁵ , 5.623×10 ¹⁵ , 10 ¹⁶ , 1.778×10 ¹⁶ , 3.162×10 ¹⁶ , 5.623×10 ¹⁶ , 10 ¹⁷	1.468×10 ¹⁰ , 4.642×10 ¹⁰ , 6.813×10 ¹⁰ , 1.468×10 ¹¹ , 4.642×10 ¹¹ , 6.813×10 ¹¹ , 2.154×10 ¹² , 4.642×10 ¹²	210	314	288
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“All-varied” dataset				
1.3×10 ¹⁵ , 2×10 ¹⁶	5×10 ¹² , 6.082×10 ¹² , 7.399×10 ¹² , 9×10 ¹²	200	293, 313, 333	96

7×10^{15} , 4.5×10^{16}	$5 \times 10^{10}, 5.861 \times 10^{10},$ $6.869 \times 10^{10}, 8.051 \times 10^{10},$ $9.437 \times 10^{10}, 1.106 \times 10^{11},$ $1.296 \times 10^{11}, 1.52 \times 10^{11},$ $1.781 \times 10^{11}, 2.088 \times 10^{11},$ $2.447 \times 10^{11}, 2.868 \times 10^{11},$ $3.362 \times 10^{11}, 3.94 \times 10^{11},$ $4.618 \times 10^{11}, 5.413 \times 10^{11},$ $6.345 \times 10^{11}, 7.437 \times 10^{11},$ $8.717 \times 10^{11}, 1.022 \times 10^{12},$ $1.198 \times 10^{12}, 1.404 \times 10^{12},$ $1.645 \times 10^{12}, 1.928 \times 10^{12},$ $2.26 \times 10^{12}, 2.649 \times 10^{12},$ $3.105 \times 10^{12}, 3.639 \times 10^{12},$ $4.266 \times 10^{12}, 5 \times 10^{12}$	170, 200	297, 309, 321, 333	1920
2.5×10^{15} , 8×10^{16}	$1.1 \times 10^{10}, 1.302 \times 10^{10},$ $1.54 \times 10^{10}, 1.822 \times 10^{10},$ $2.156 \times 10^{10}, 2.551 \times 10^{10},$ $3.018 \times 10^{10}, 3.571 \times 10^{10},$ $4.226 \times 10^{10}, 5 \times 10^{10},$ $1.1 \times 10^{11}, 1.302 \times 10^{11},$ $1.54 \times 10^{11}, 1.822 \times 10^{11},$ $2.156 \times 10^{11}, 2.551 \times 10^{11},$ $3.018 \times 10^{11}, 3.571 \times 10^{11},$ $4.226 \times 10^{11}, 5 \times 10^{11},$ $1.1 \times 10^{12}, 1.302 \times 10^{12},$ $1.54 \times 10^{12}, 1.822 \times 10^{12},$ $2.156 \times 10^{12}, 2.551 \times 10^{12},$ $3.018 \times 10^{12}, 3.571 \times 10^{12},$ $4.226 \times 10^{12}, 5 \times 10^{12},$	220	292, 302, 312	720
