

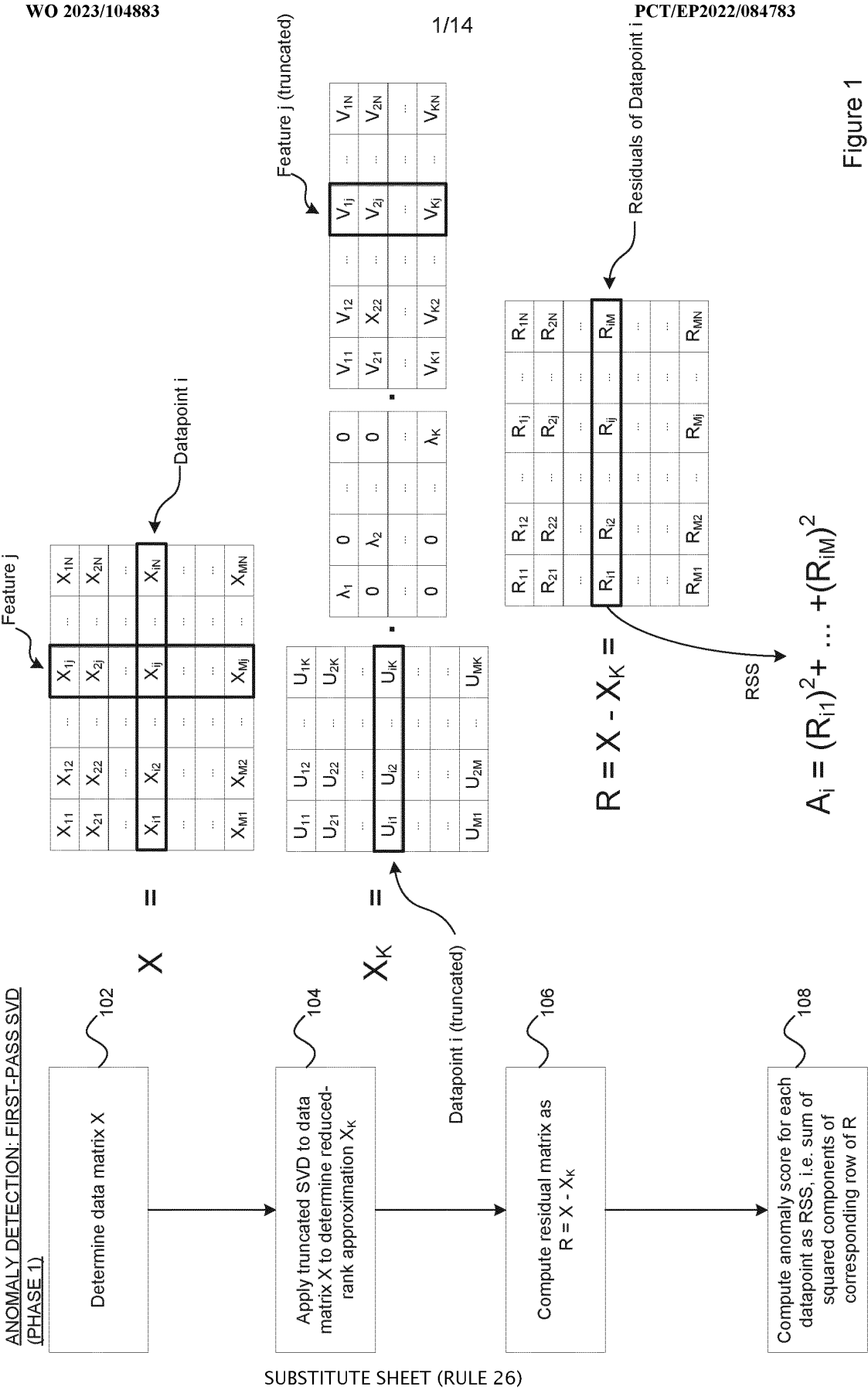


Figure 1

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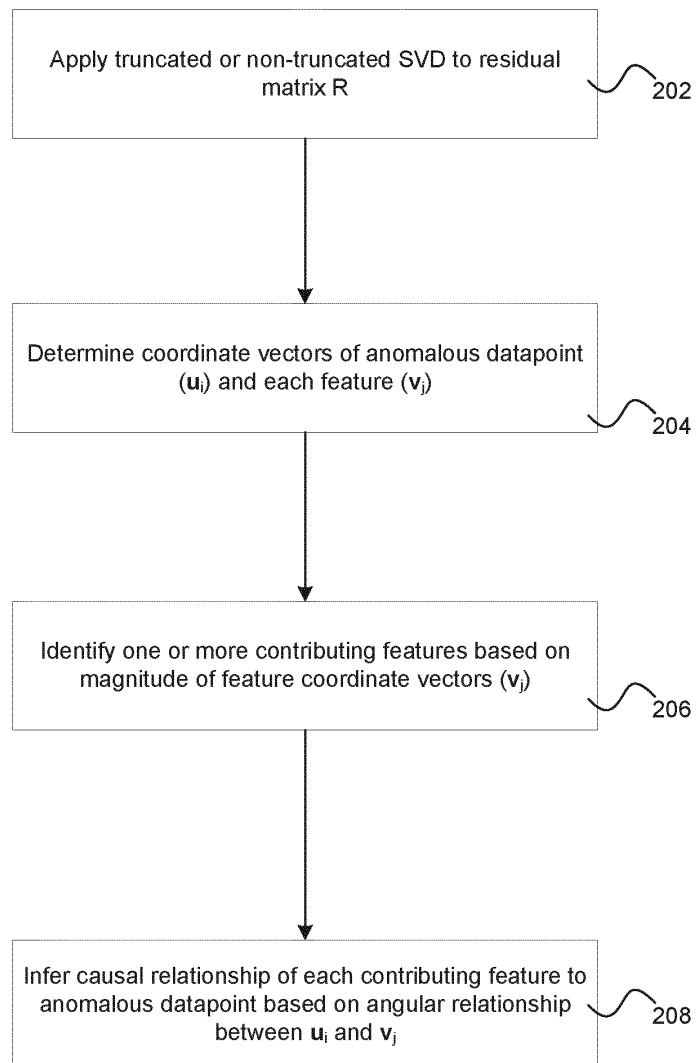
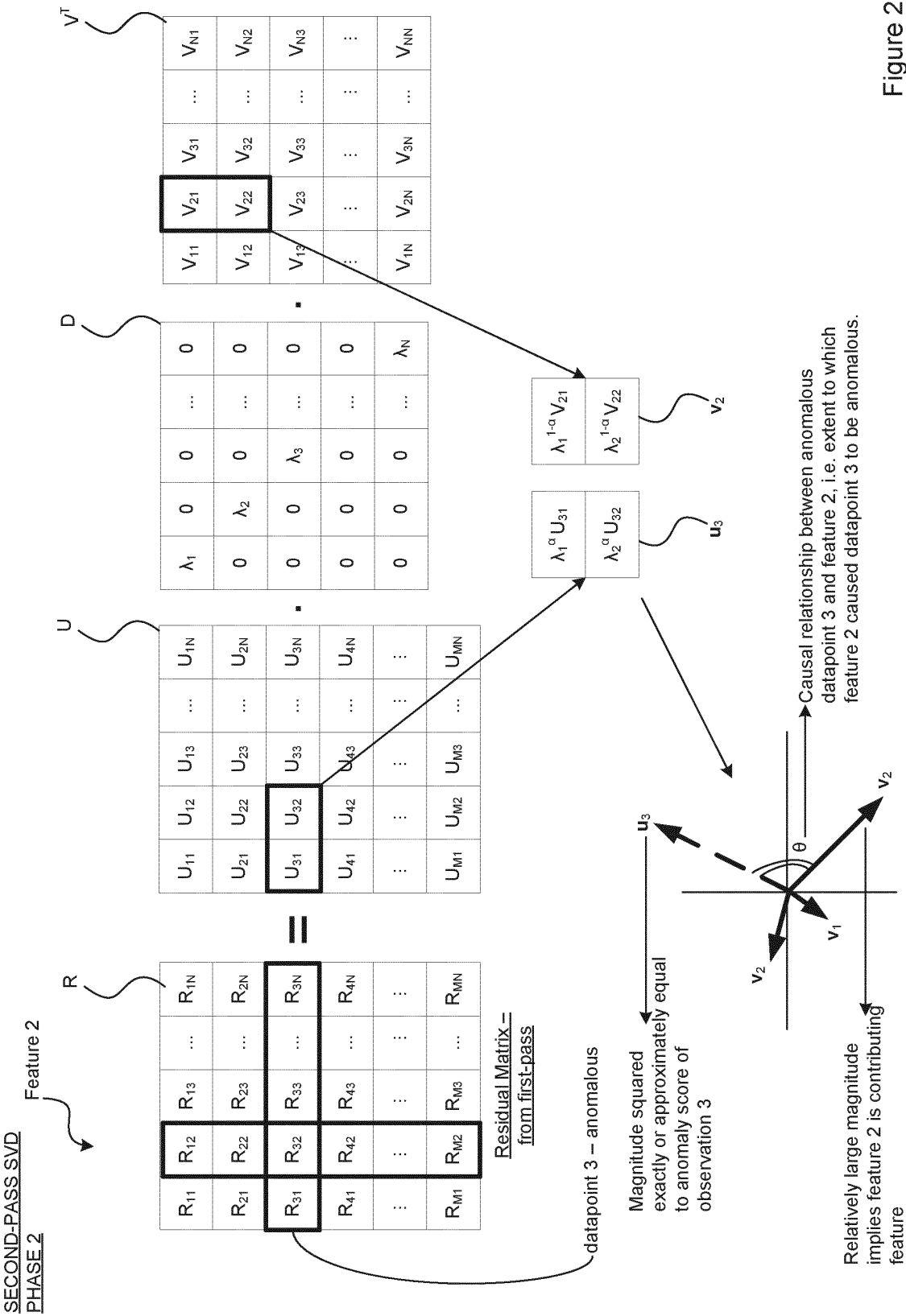
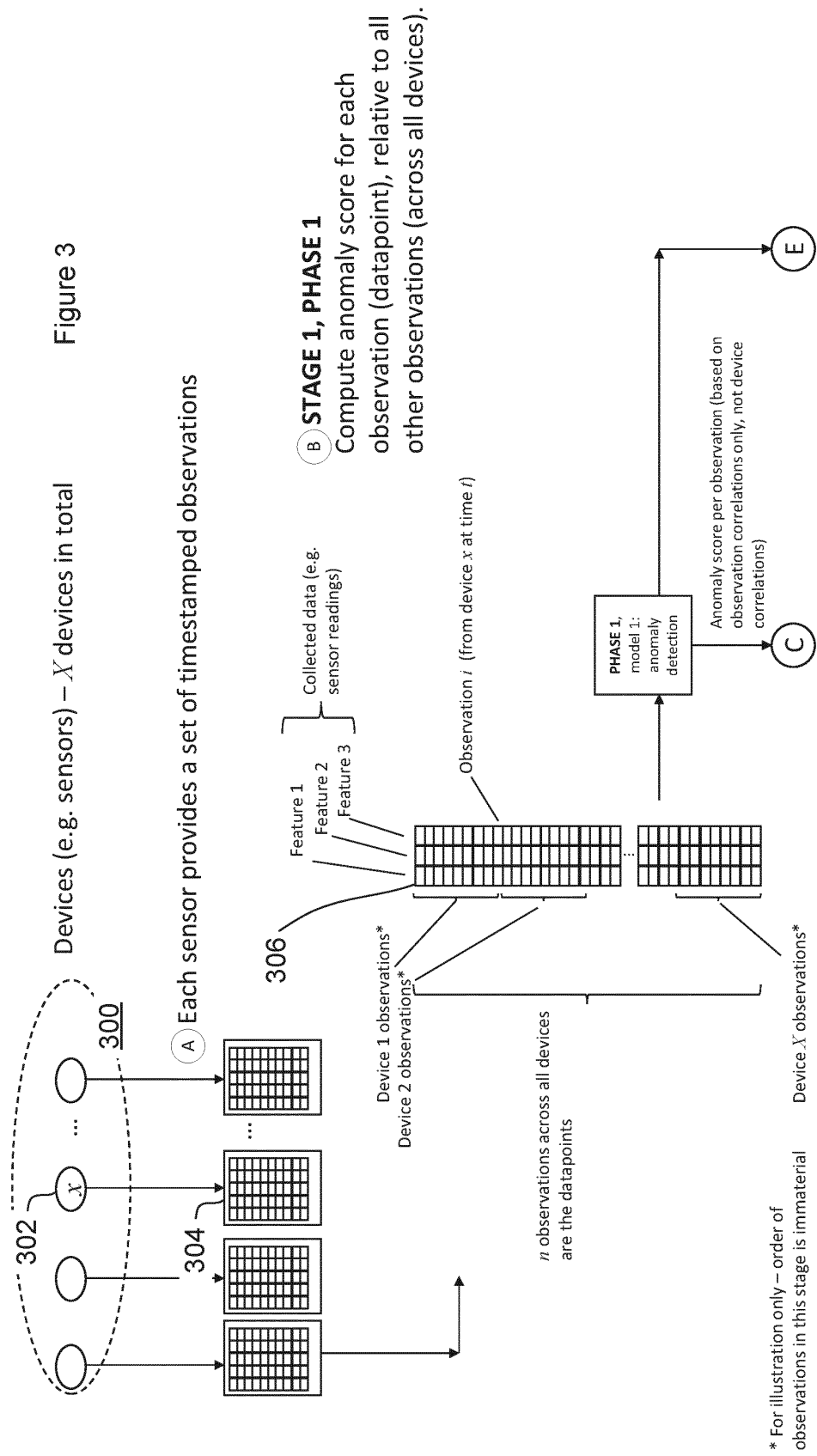
ANOMALY REASONING: SECOND-PASS SVD

Figure 2A





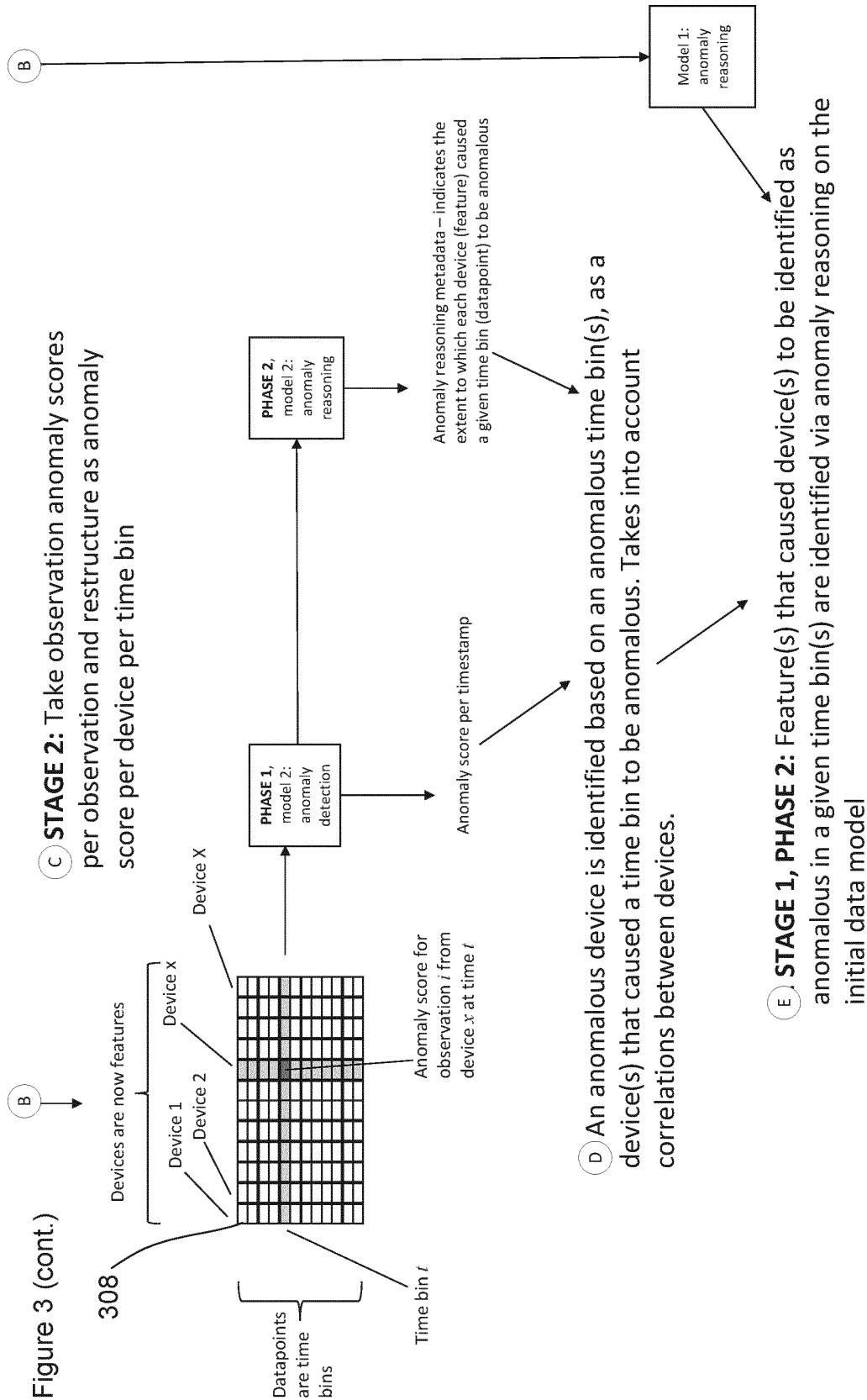
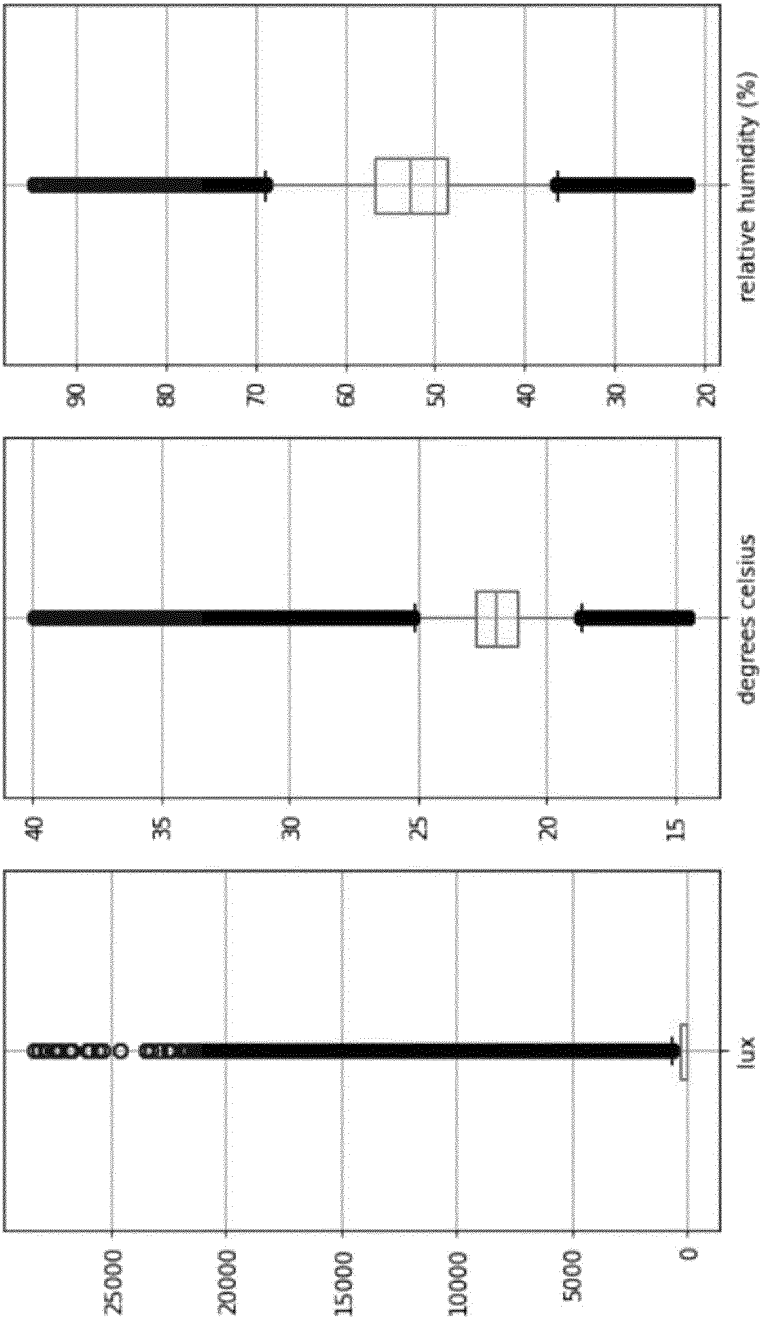


Fig. 4 Raw boxplots



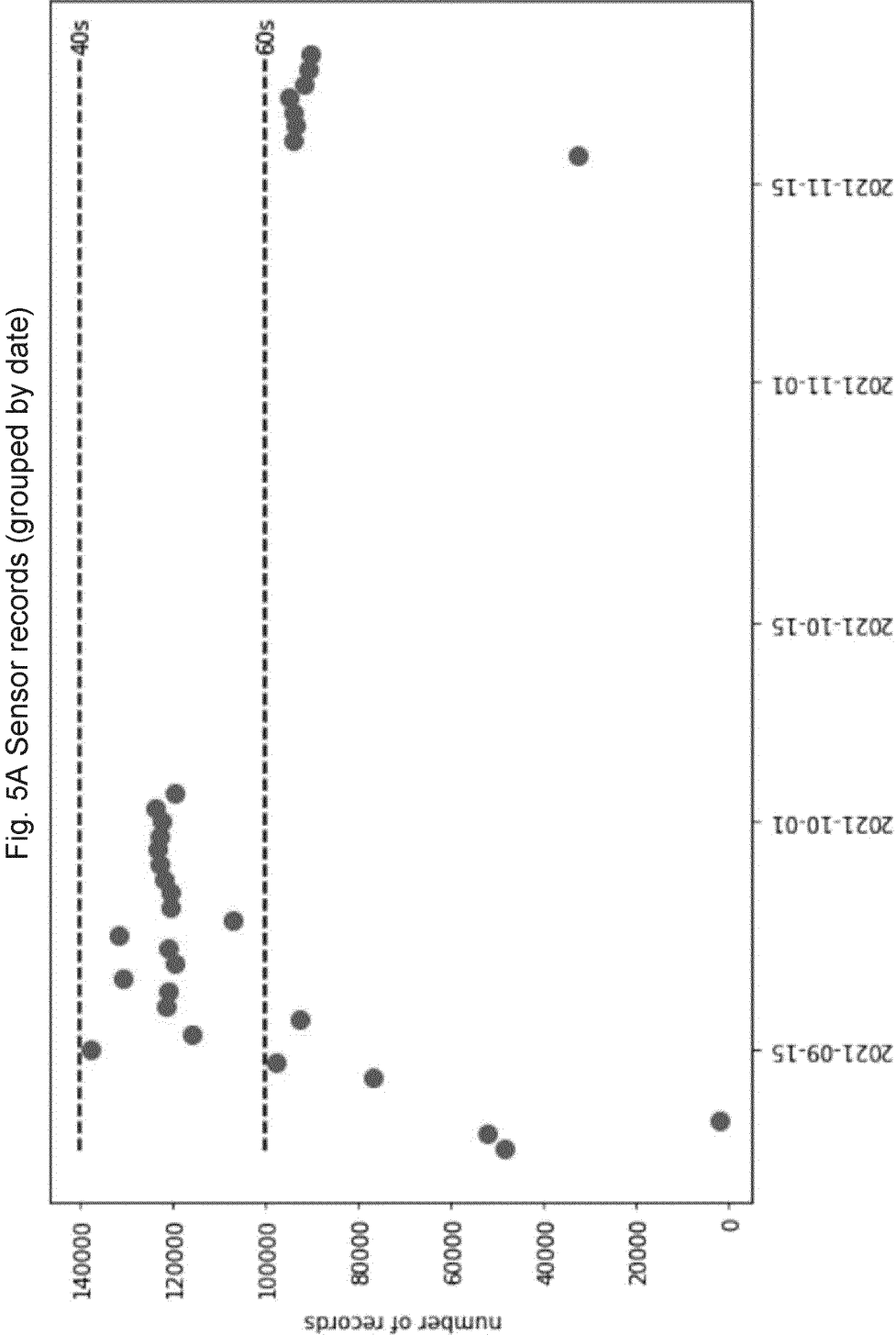


Fig. 5B Sensor records (grouped by hour)

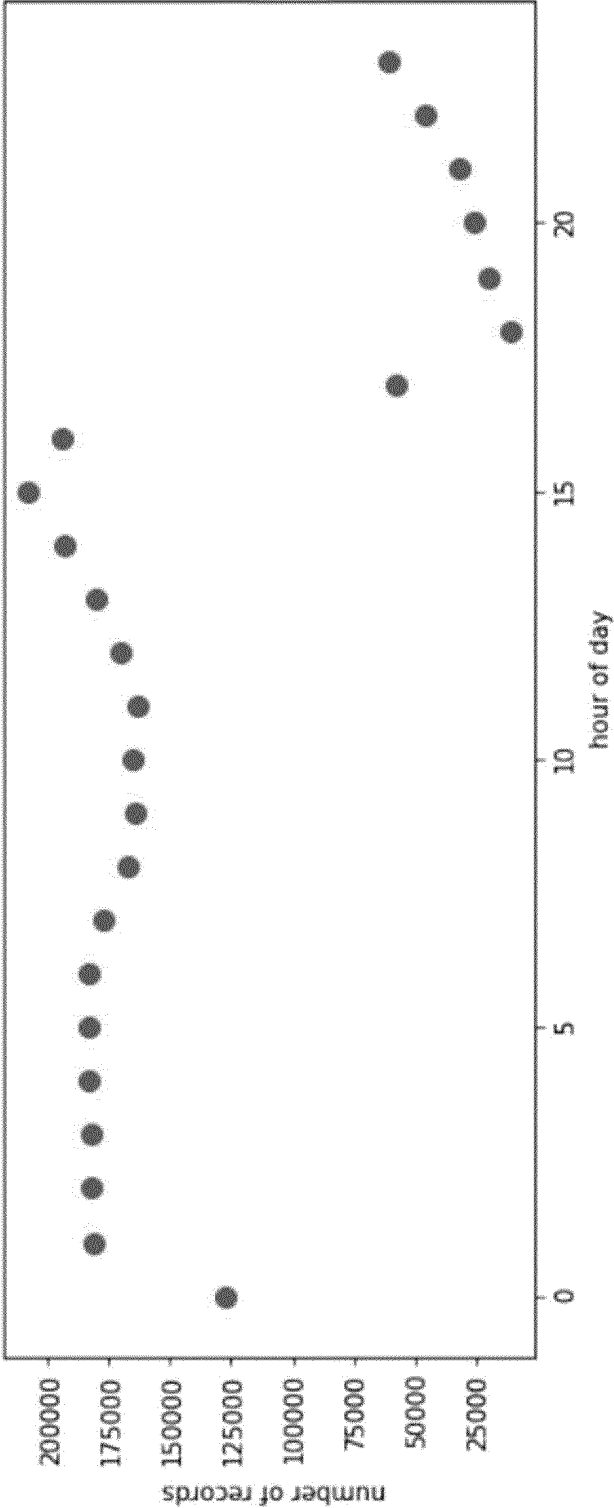


Fig. 5C Sensor records (grouped by minute)

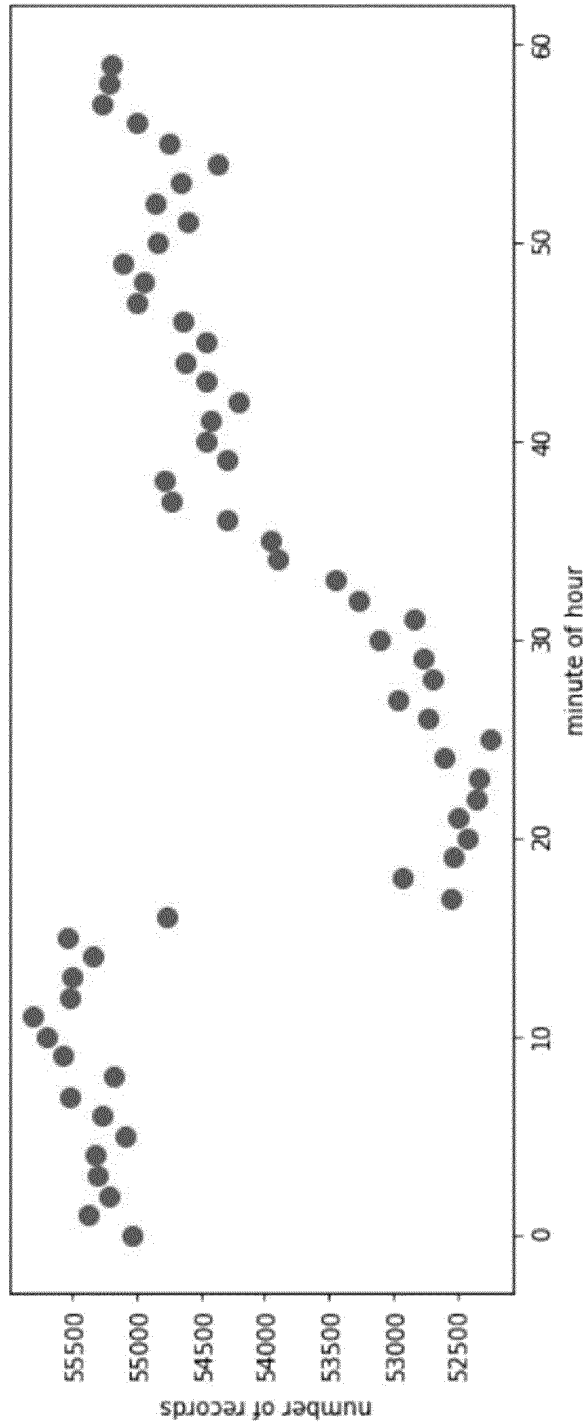


Fig. 5D Selection of training and testing periods

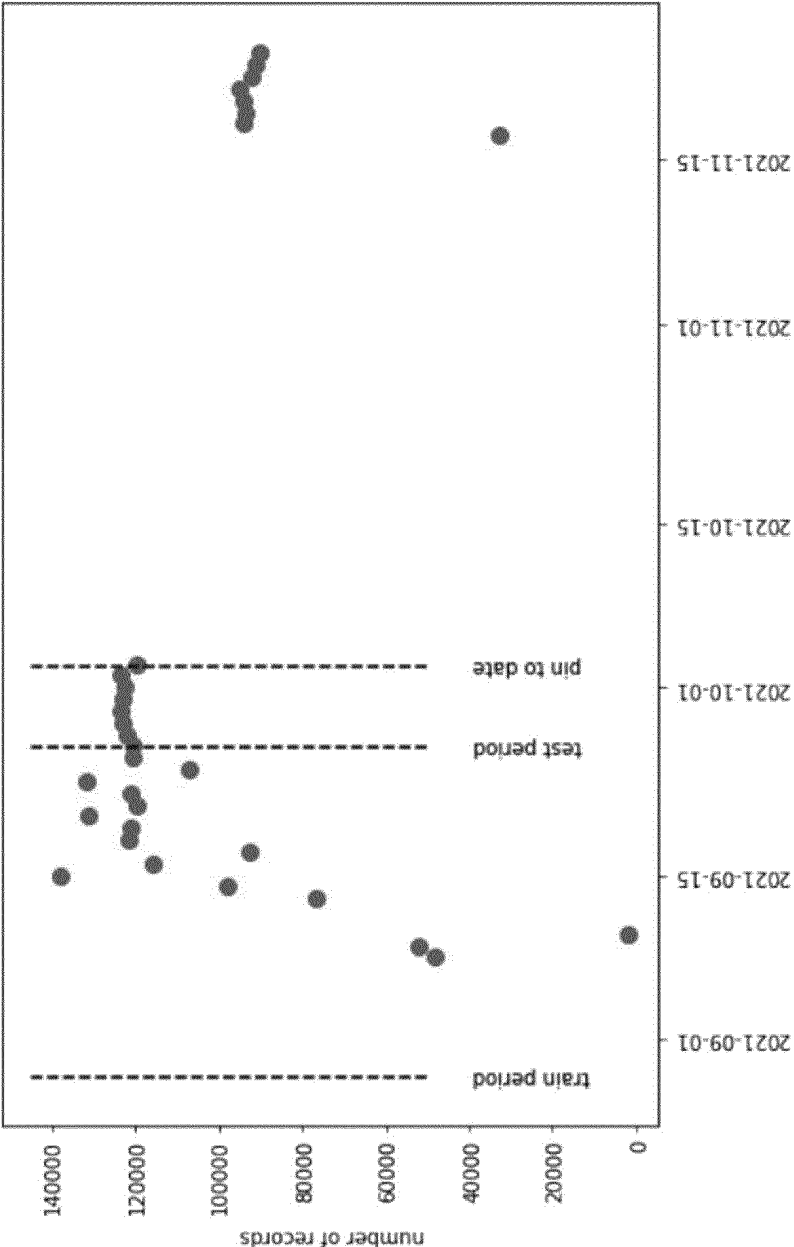


Fig 6. Raw boxplots - training period

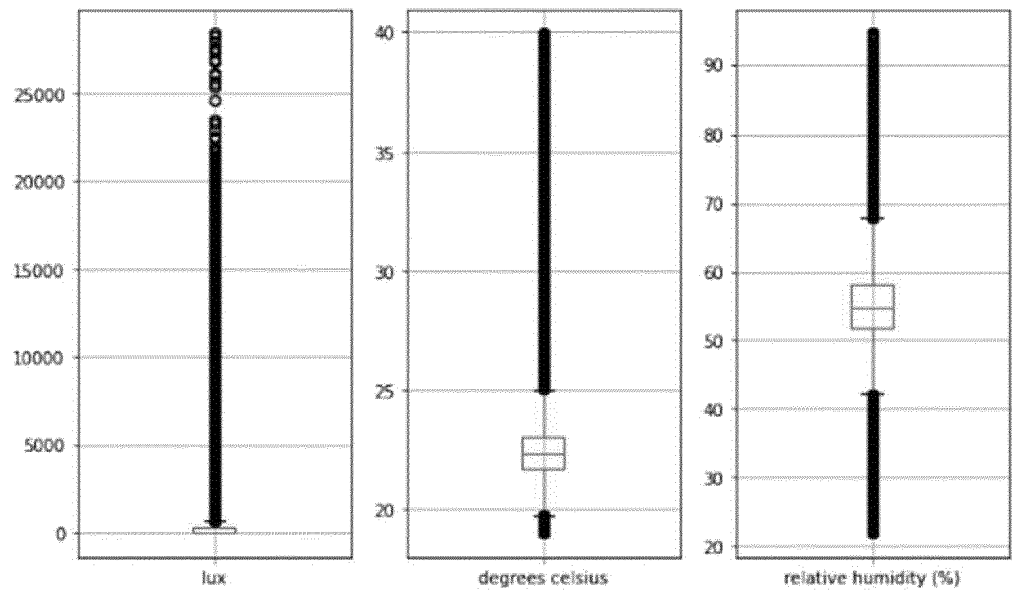
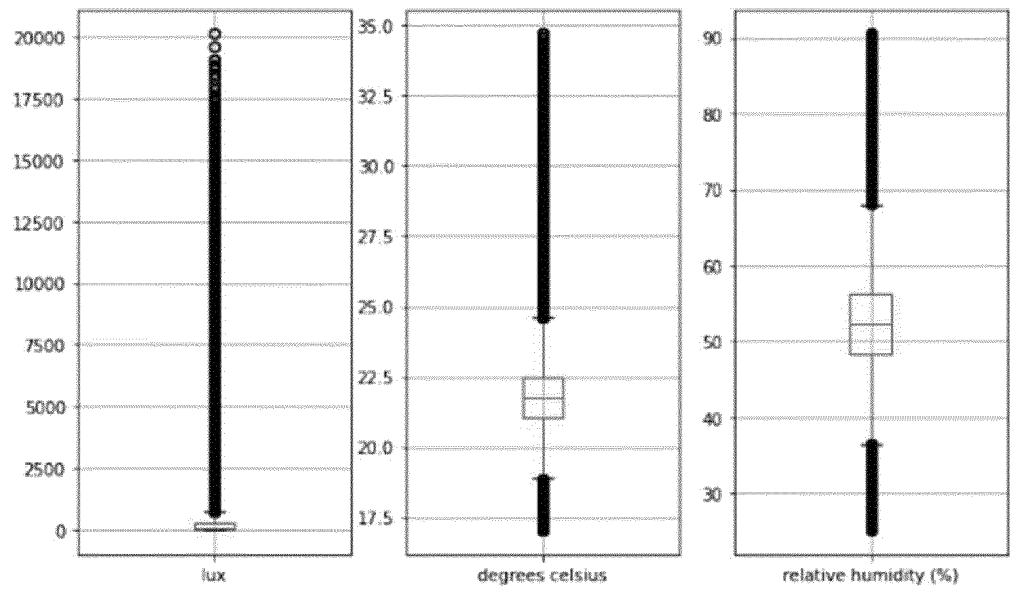


Fig 7. Raw boxplots - testing period



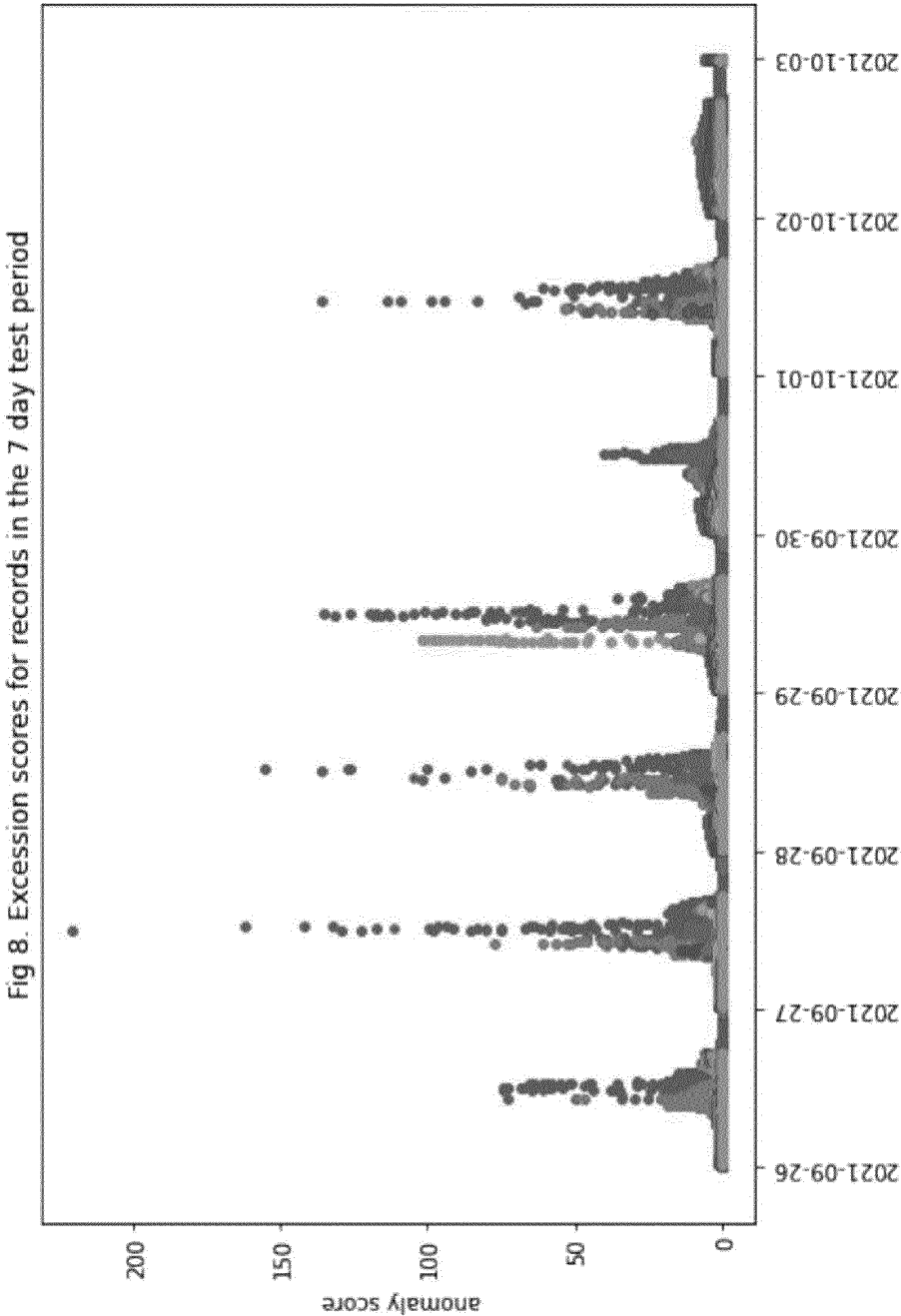
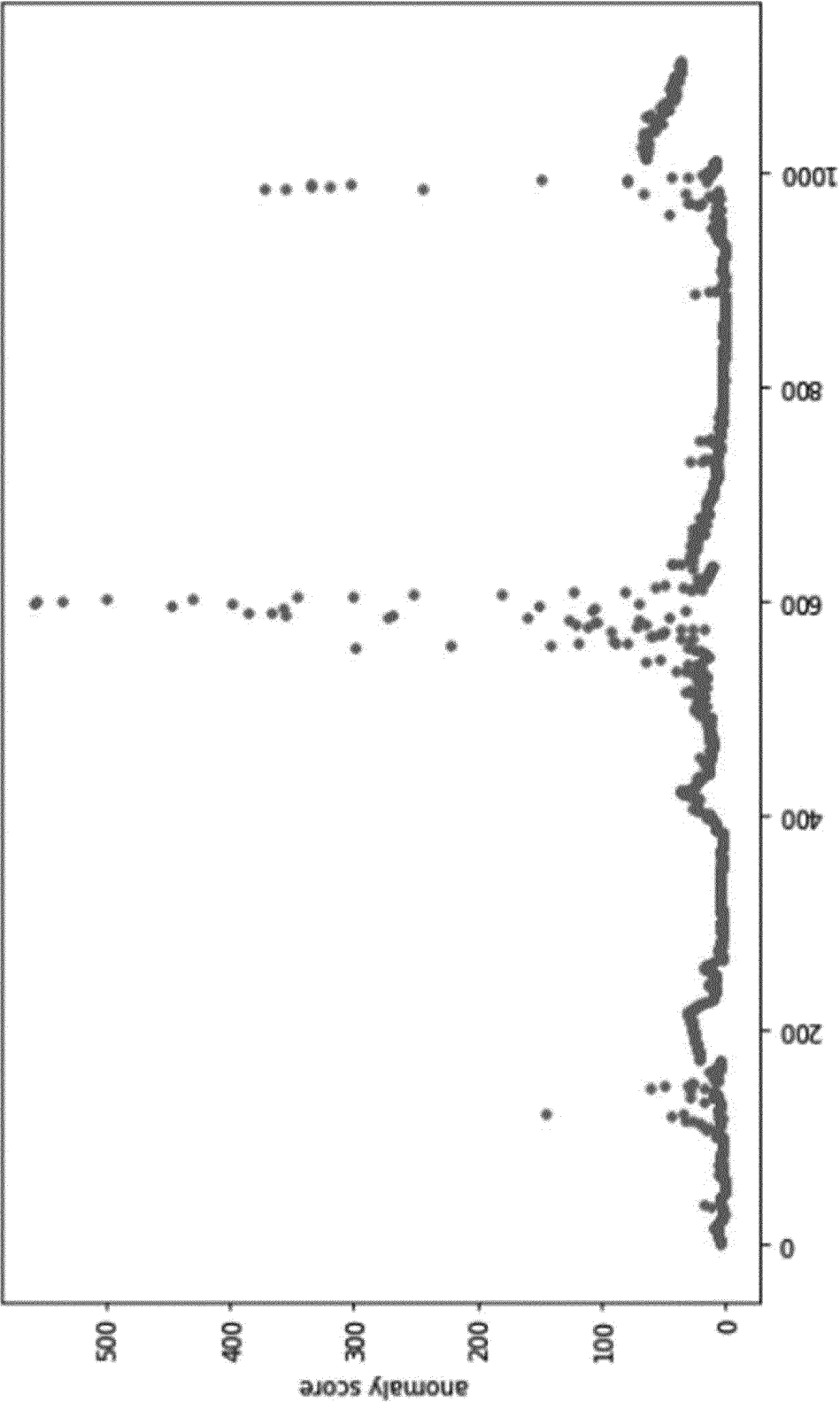
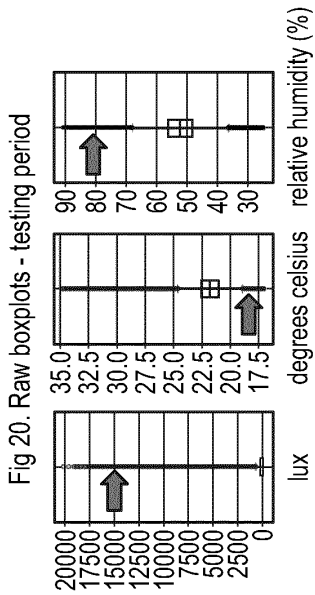


Fig 9. Ensemble scores for records in the 7 day test period





Attack Scenario - Single Data Point Injection

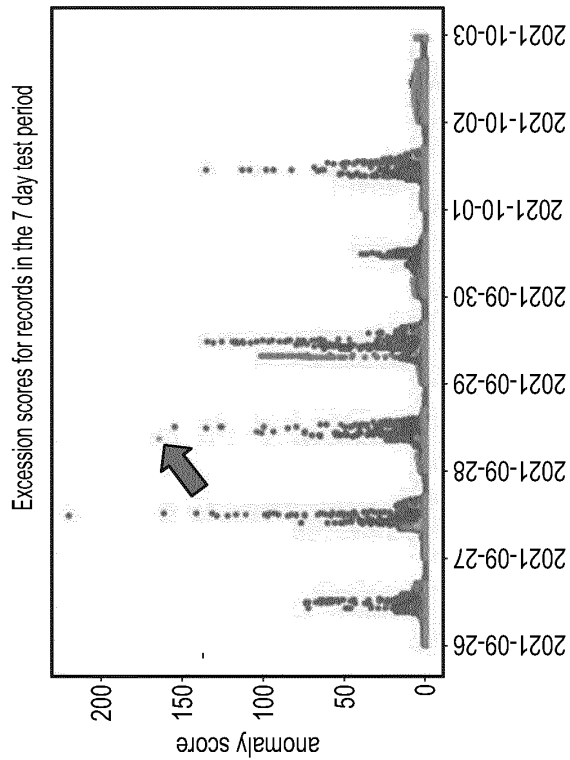


Fig. 10A

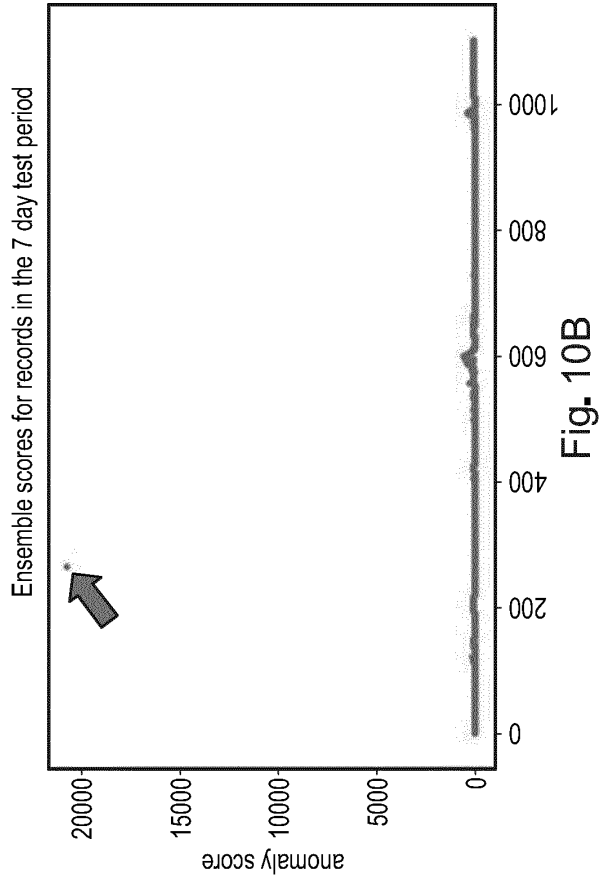


Fig. 10B