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Reply

Reply to comment on 'Enhancing the security of communication via directly modulated antenna arrays'

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First of all we are pleased that our original paper has generated interest within the community and that it has been studied in detail by Dr Tao Hong. We agree with the comments made with regard to the relative phase difference between the constellation points generated by our original two-element array system.

The symbol error rate results presented in our original paper of 'Enhancing the security of communication via directly modulated antenna arrays' are calculated based on the assumption that: the eavesdroppers at unwanted angles decode the baseband symbols according to a reference pattern rather than the patterns they received. This reference pattern is the standard 8-PSK modulated for the desired receiver in the broadside direction. Under these assumptions, the results presented in the original paper are consistent.

However, Dr Tao Hong presented an alternative (and more realistic) scenario in which an eavesdropper can deduce the reference constellation pattern based on the received data sets. Based on this detection scenario, we agree that our original system does not provide secure off-boresight transmission.