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READ ME File For 'Dataset for: Efficient Deployment of UAV-powered Sensors for Optimal Coverage and Connectivity'

Dataset DOI: 10.5258/SOTON/D1221

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This is the readme file for the dataset supporting the article entitled "Efficient Deployment of UAV-powered Sensors for Optimal Coverage and Connectivity", which has been accepted for the publication in IEEE Wireless Communications and Networking Conference (WCNC) 2020.

The dataset is for the following figures:

**Fig. 3:** The rectenna efficiency as a function of input power :

**(a)** for the rectenna proposed in [23] (@ MHz);

**(b)** for the rectenna proposed in [24] (@ GHz).

**Fig. 4:** The number of w-p*D*s , coverage rate and coverage lifetime for UAV altitude and apex angle (W EIRP (@ MHz):

**(a)** vs. *h* (for of , , , and dBi);

**(b)** vs. *h* (for of , , , and dBi);

**(c)** and vs. and vs. (for of 140m2).

**Fig. 5:** The number of w-p*D*s and coverage rate for the increasing size of event area :

**(a)** vs. (for of , , and dBi, W EIRP @ MHz);

**(b)** vs. (for of , , and dBi, W EIRP @ MHz).

**Fig. 6:** The effect of increasing EIRP on the number of w-p*D*s and coverage rate for varying UAV altitude :

**(a)** vs. (for EIRP of , , , and W @ GHz);

**(b)** vs. (for EIRP of , , , and W @ GHz).

**Fig. 7:** The required number of w-p*D*s to achieve different target coverage rates for the increasing size of event area (, W EIRP @ MHz). p.s. the dashed red line shows that can be fit in the given (with respect to system parameters), where achievable for that particular is shown in orange.

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**Related projects:** EP/P010164/1

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