

An efficient data compression technique based on BPDN for scattered fields from complex targets

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Appendix A

Table A1 Primary parameters of simulated RCS data

Frequency band range	8.5GHz–10.5GHz
Frequency step size	20MHz
Angle range in az. and el.	-5° – 5°
Sample spacing in az. and el.	0.2°
Signal-to-noise ratio	20dB

Table A2 Data compression ratio and RCS reconstruction error

Algorithm	Data compression ratio	rMSE
IST	148	22.74%
IHT	73	20.42%
Proposed	282	15.13%

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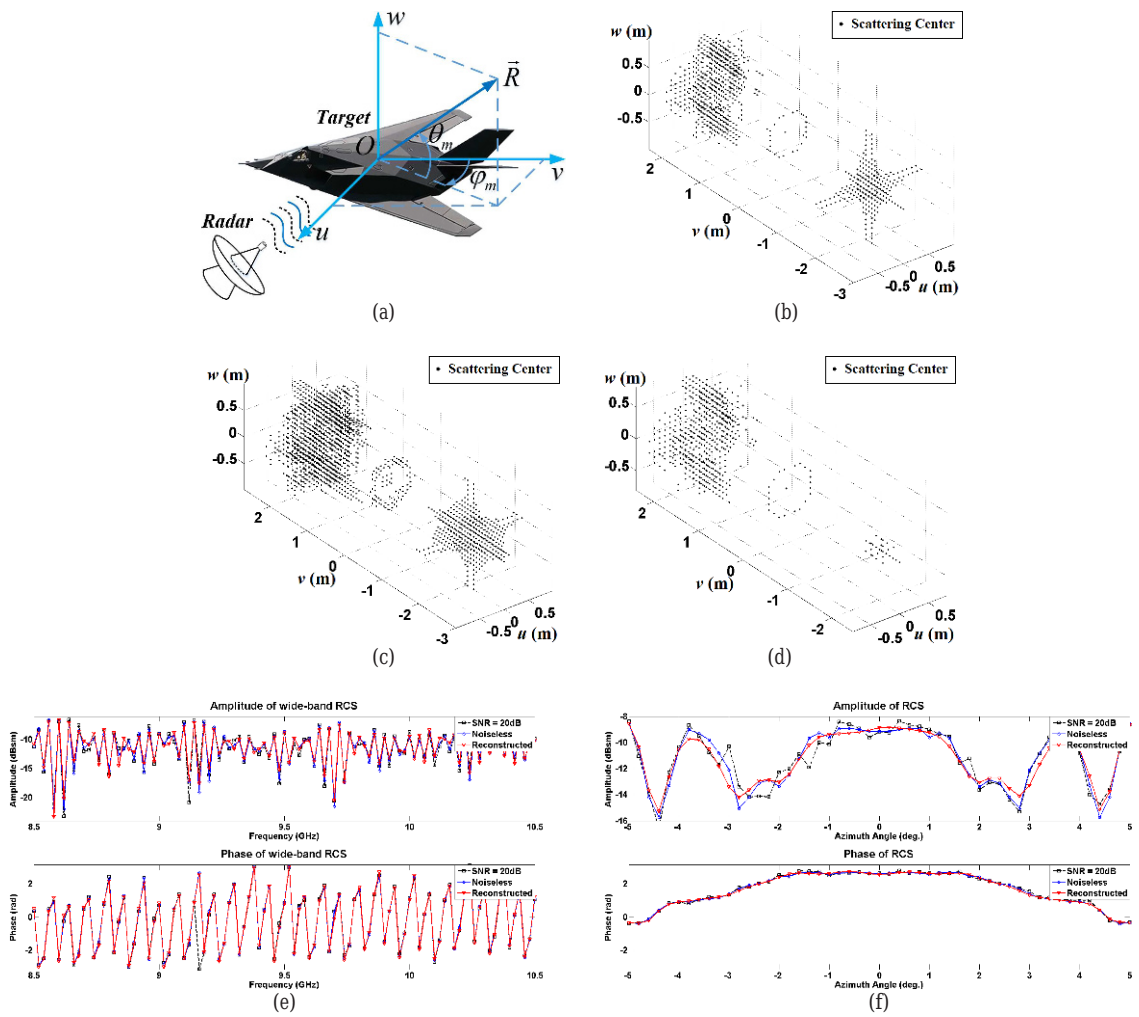


Figure A1 RCS data acquisition geometry and experimental results. (a) Observation geometry for collecting RCS samples. (b) Distribution of scattering centers estimated by IST. (c) Distribution of scattering centers estimated by IHT. (d) Distribution of scattering centers estimated by our method. (e) Result of wide-band RCS reconstruction in range. (f) Result of RCS reconstruction in azimuth.