

Abbreviations

1-D	one-dimensional	DOJ	Department of Justice
2-D	two-dimensional	DOT	Department of Transportation
3-D	three-dimensional	DPCA	displaced phase center antenna
AAW	anti-air warfare	DSA	dynamic spectrum access
ACF	autocorrelation function	DSO	Defense Spectrum Organization
ADC (A-D)	analog-to-digital converter (conversion)	DSP	digital signal processing
ADIT	automatic detection and integrated tracking	DSX	direct synthesizer
A-DPCA	adaptive displaced phase center antenna	DTE	digital target extractor
ADT	automatic detection and track	DTV	digital television
AESA	active electronically scanned array	DySPAN	International Symposium on Dynamic Spectrum Access Networks
AEW	airborne early warning	EA	electronic attack
AF	array factor	ECM	electronic countermeasures
AFB	Air Force Base	EE	electrical engineering
AGC	automatic gain control	EIO	extended interaction (klystron) oscillator
AGL	above ground level	EIRP	effective isotropic radiated power
AIS	automatic identification system (for ships)	EKF	extended Kalman filter
AMTI	airborne moving target indication	EM	electromagnetic interference
ANSI	American National Standards Institute	EMC	electromagnetic compatibility
AOA	angle of arrival	EP	electronic protection
ARMA	autoregressive moving average	ESA	electronically scanned array
ASR	airport surveillance radar	ESNL	estimated system noise level
ATC	air traffic control	EW	electronic warfare
AWG	arbitrary waveform generator	f/D	focal length to diameter ratio
B.Eng.	Bachelor of Engineering (UK)	FAA	Federal Aviation Administration (DOT)
BPF	bandpass filter	FAR	false alarm rate
BMD	ballistic missile defense	FASR	fixed array surveillance radar
BMEWS	ballistic missile early warning system	FCC	Federal Communications Commission
B.S.	Bachelor of Science	FCR	fire control radar
CA	cell averaging	FDS	fractional Doppler shift
CA-CFAR	cell averaging constant false alarm rate	FM	frequency modulation
CDL	common data link	FMCW	frequency-modulated continuous wave
CDMA	code-division multiple access	FOPEN	foliage penetration
CFA	crossed field amplifier	FOV	field of view
CFAR	constant false alarm rate	FPGA	field programmable gate array
CNR	clutter-to-noise ratio	FTC	fast time constant radar receiver processing, Federal Trade Commission
COHO	coherent oscillator	FWHM	full width at half maximum
CPI	coherent processing interval	GCMLD	generalized censored mean level detector
CRFS	Cambridge Radio Frequency Services	GMTI	ground moving target indication
CRT	cathode-ray tube	GOCA-CFAR	greatest-of cell averaging constant false alarm rate
CS	computer science	GPEN	ground penetration
CTO	Chief Technology Officer	GPR	ground penetrating radar
CU	University of Colorado	GPS	global positioning system
CW	continuous wave, carrier wave (sine wave) signal modulation	GTRI	Georgia Tech Research Institute
DAC	digital-to-analog converter	HCE	heterogeneous clutter estimation
DARPA	Defense Advanced Research Projects Agency	HF	high frequency
dB	decibel	HRR	high range resolution
dbc	decibels relative to the carrier	I	In-phase channel or signal
DBF	digital beam-forming	IADT	integrated automatic detection and tracking
DBS	Doppler beam sharpening	IAGC	instantaneous automatic gain control
DDS	direct digital synthesis (synthesizer)	ICBM	intercontinental ballistic missile
DFS	dynamic frequency selection	IDA	Infocomm Development Authority (Singapore)
DHS	Department of Homeland Security	IEEE	Institute of Electrical and Electronic Engineers
DISA	Defense Information Agency	IF	intermediate frequency
DOA	direction of arrival	IFF	identification friend or foe
DOC	Department of Commerce	IFM	instantaneous frequency measurement
DOD	Department of Defense	IFSAR	interferometric synthetic aperture radar
DOE	Department of Energy		
DOF	degrees of freedom		

IIT	Illinois Institute of Technology	PFD	power flux density
IMO	International Maritime Organization	PFN	pulse-forming network
iNet	Institute for Networked Systems (RWTH Aachen University)	Ph.D.	Doctor of Philosophy
IOT	inductive output tube	PHY	physical layer
IPP	interpulse period	PLL	phase-locked loop
I/Q	in-phase/quadrature	PLO	phase-locked oscillator
IR	interference rejection	PPI	plan position indicator
IRAC	Interdepartment Radio Advisory Committee	PRF	pulse repetition frequency
ISAR	inverse synthetic aperture radar	PRI	pulse repetition interval
ISM	industrial, scientific, and medical (spectrum bands)	PSR	primary surveillance radar
ISR	integrated sidelobe ratio	Q	quadrature phase channel or signal
ITS	Institute for Telecommunication Sciences	RAC	reflective-array compressor
ITU	International Telecommunications Union	Radar	radio detection and ranging, paired receiver and transmitter
ITU-R	International Telecommunications Union, Radiocommunication Sector	RAM	radar absorbing material
JSC	Joint Spectrum Center	RBGM	real beam ground mapping
LFM	linear frequency modulation	RBW	resolution bandwidth of a spectrum analyzer
LHC	left-hand circular	RCS	radar cross section
LNA	low-noise amplifier	REX	receiver/exciter
LO	local oscillator	RF	radiofrequency, radar frequency
Log FTC	logarithmic fast time constant radar receiver processing	RHC	right hand circular
LOS	line of sight	RHI	range-height indicator
M.A.	Master of Arts	RMA	range migration algorithm
MAC	medium access control	rms	root mean square
M.B.A.	Masters of Business Administration	ROC	receiver operating curve, receiver operating characteristic
MDD	minimum detectable Doppler	RRE	radar range equation
MDS	minimum detectable signal	RWTH	Rheinisch-Westfälische Technische Hochschule
MDV	minimum detectable velocity	RX	receive, receiver
MIT	Massachusetts Institute of Technology	s	second
MIT/LL	Massachusetts Institute of Technology Lincoln Laboratory	SAR	synthetic aperture radar
MLC	main lobe clutter	SAW	surface acoustic wave
MMW	millimeter wave	SDR	software defined radio
MOPA	master oscillator power amplifier	SFDR	spurious-free dynamic range
MOTR	multiple-object tracking radar	SINR	signal-to-interference-plus-noise ratio
MPI	message passing interface	SIR	signal-to-interference ratio
MPM	microwave power module	SIR-C	shuttle imaging radar-c
MPS	minimum peak sidelobe	SLAR	side-looking airborne radar
M.S.	Master of Science	SLC	sidelobe clutter
MSTV	Association for Maximum Service Television, Inc.	SMIT	Studies on Media, Information, and Telecommunications
MTBF	mean time between failures	SNR	signal-to-noise ratio
MTD	moving target detector	SOCA-CFAR	smallest-of cell-averaging constant false alarm rate
MTI	moving target indicator	SOLAS	safety of life at sea
MTT	multi-target tracking	SPEC	Standard Performance Evaluation Corporation
mW	milliwatt	STALO	stable local oscillator
MW	megawatt	STAP	space-time adaptive processing
NARTE	National Association of Radio and Telecommunications Engineers	STC	sensitivity time control
NASA	National Aeronautics and Space Administration	TACCAR	time-averaged-clutter coherent airborne radar
NCA	nearly constant acceleration	TBM	threshold bias map
NCTR	non-cooperative target recognition	TDU	time delay unit
NCV	nearly constant velocity	TESS	tactical electronic support system
NIJ	National Institute of Justice	TI	Texas Instrument
NIST	National Institute of Standards and Technology	T/R	transmit/receive
NLFM	nonlinear frequency modulation	TRF	tuned radio frequency
NOAA	National Oceanic and Atmospheric Administration	TWS	track while scan
NRA	no return area	TWT	traveling wave tube
NSF	National Science Foundation	TX	transmit
NTIA	National Telecommunications and Information Administration (DOC)	Tx/Rx	transmitter-receiver combination
OET	Office of Engineering and Technology (FCC)	UAV	unmanned aerial vehicle
OTH	over the horizon	UC	University of California
OTR	on-tuned rejection factor	UDSF	usable Doppler space fraction
PA	power amplifier, power-aperture	UHF	ultra-high frequency
PAG	power-aperture-gain	UMOP	unintentional modulation of pulse
PCS	personal communications services	USC	University of Southern California
PDR	phase-derived range	UWB	ultrawideband
PDRO	phase-locked dielectric resonant oscillator	VHF	very high frequency
PFA	polar formatting algorithm	VSWR	voltage standing wave ratio
		WiMax	Worldwide Interoperability for Microwave Access
		WPAN	wireless personal area network