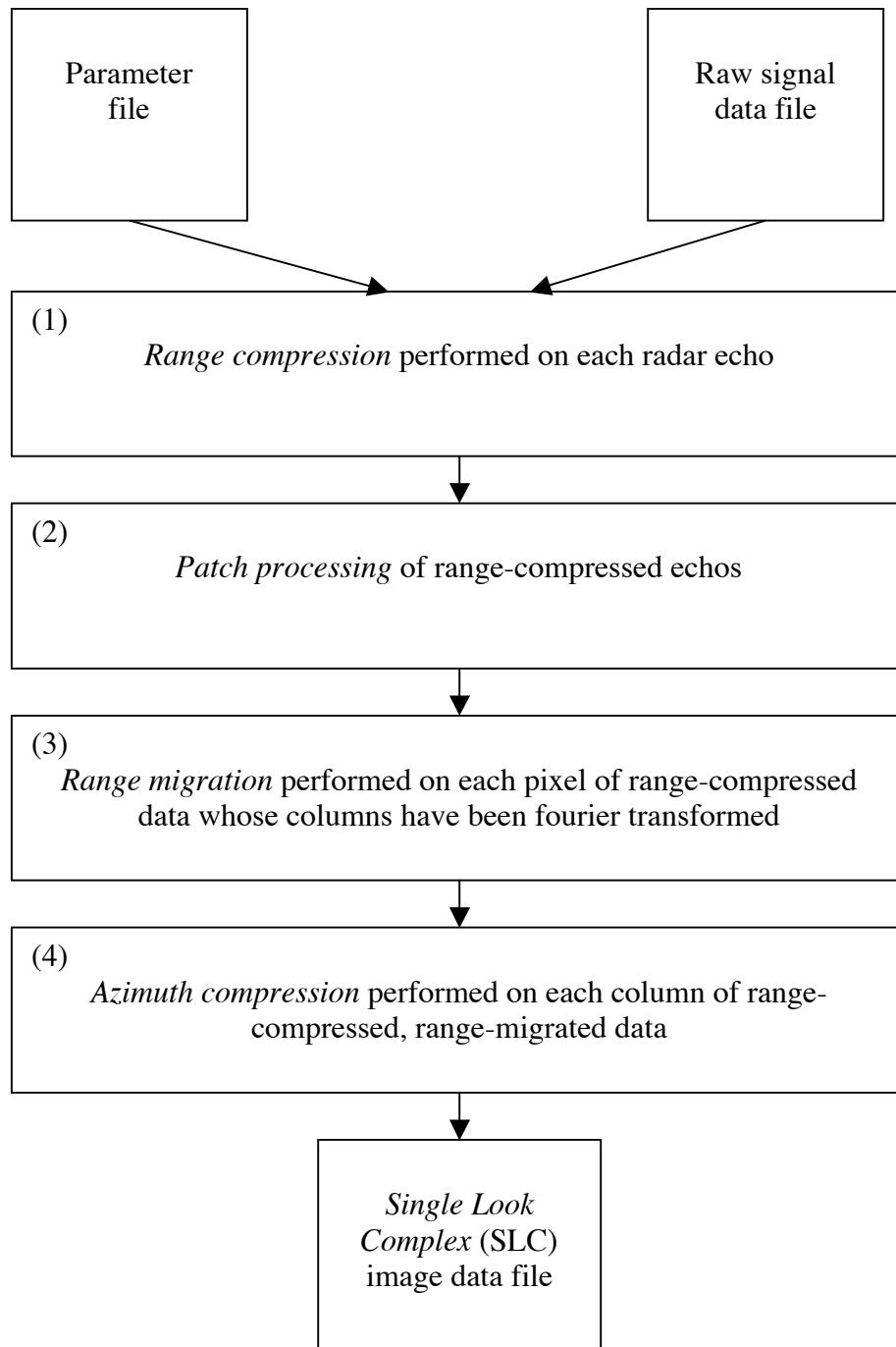
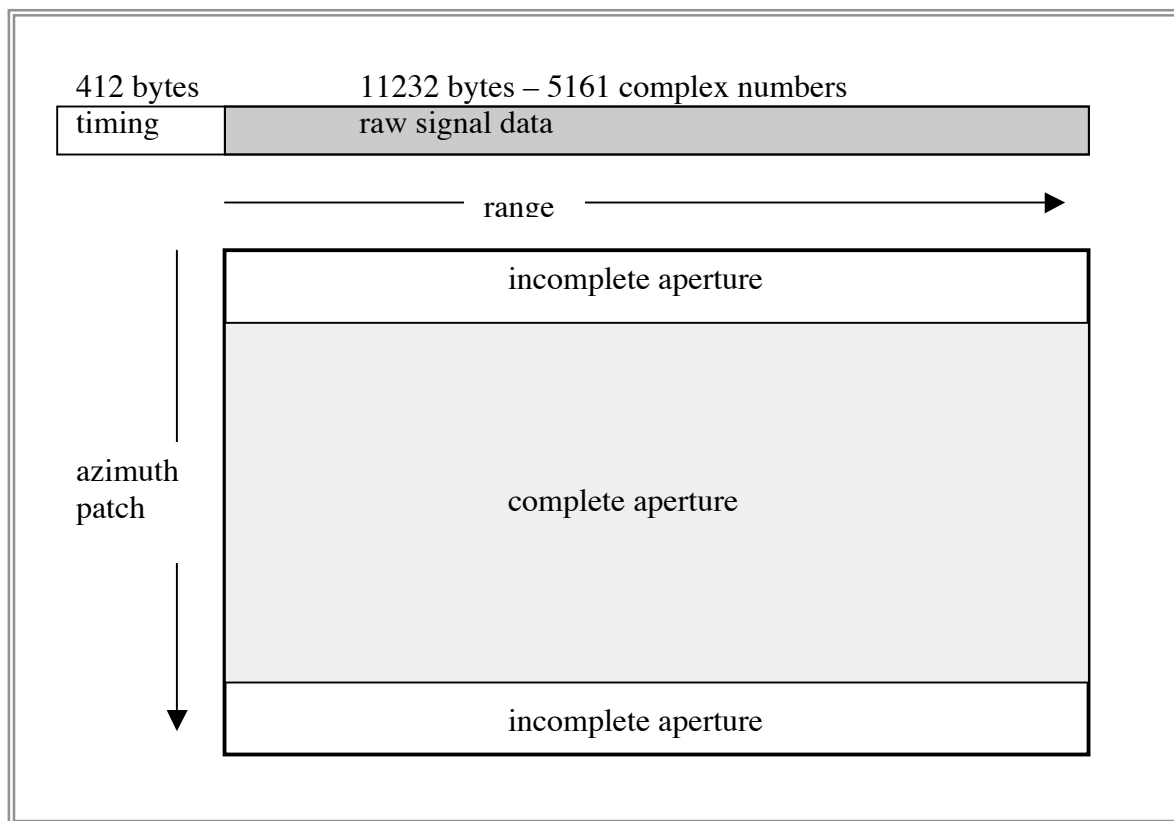


Digital SAR Processing Overview



Raw Signal Data



Parameter File (e2_10001_2925.PRM)

file information/format

input_file	e2_10001_2925.fix	name of raw data file	
SC_identity	2	(1) – ERS-1 or (2) – ERS-2	
bytes_per_line	11644	number of bytes in row of raw data	
first_sample	206	412 bytes of timing information to skip over	
fd1	248.115	Doppler centroid estimated from data	f_{Dc}
I_mean	15.504000	mean value of real numbers	
Q_mean	15.549000	mean value of imaginary numbers	
icu_start	2576039268.848	spacecraft clock for first sample	
SC_clock_start	1997078.767881851	UTC for first sample	YYYDDD.DDDDDDDDD
SC_clock_stop	1997078.768074699	UTC for last sample	YYYDDD.DDDDDDDDD

radar characteristics

PRF	1679.902394	pulse repetition frequency	PRF
rng_samp_rate	1.89625e+07	range sampling rate	f_s
chirp_slope	4.17788e+11	chirp slope	k
pulse_dur	3.712e-05	pulse duration	τ_p
radar_wavelength	0.056666	radar wavelength	λ

orbital information

near_range	829924.365777	distance to first range bin	R_{near}
earth_radius	6371746.4379	earth radius 1/2 way into image	R_e
SC_height	787955.52	spacecraft height 1/2 way into image	H
SC_vel	7125.0330	ground-track velocity	V

processing information

num_valid_az	2800	size of patch to process	
num_patches	10	number of patches to process	
first_line	1		
deskew	n	deskew (yes or no)	
st_rng_bin	1	start processing at row number	
num_rng_bins	6144	number of range bins in output file	
chirp_ext	614	extend the chirp to process outside swath	
Flip_iq	n	exchange real and imaginary numbers (yes or no)	
nlooks	1	number of azimuth echoes to average	

image alignment

rshift	15.1	range shift to align image to master	
ashift	483.2	azimuth shift to align image to master	
stretch_r	.0014569	range stretch versus range	
stretch_a	-.0019436	azimuth stretch versus range	
a_stretch_r	0.0	range stretch versus azimuth	
a_stretch_a	0.0	azimuth stretch versus azimuth	