Table 1: Detailed Performance and goals for ATA42, ATA-42A[1], ATA-350

Parameter		ATA-42 Value 2005	ATA-42A Value 2014	ATA-350 Value	Unit	Comment
Number of Dishes		42	42	350		Currently 42
Dish Diameter (Welch et al., 2009)		6.1 (20')	6.1	6.1	m	
Total Collecting Area		1227	1227	10,215	m^2	
Aperture Efficiency (Harp et al., 2011)		60%	60%	60%		
Effective Area		736	736	6129	m^2	
Tsys (typ.)	**1.4 GHz**	60	35	35	K	
	8.4 GHz	400	50	50	K	
System Equivalent Flux Density(smaller is better)						
	1.4 GHz	225	131	16	Jy	
	8.4 GHz	1500	188	23	Jy	
Array Diameter		300 m	300 m	2 km		
Field of View		$3.5^o/f_{GHz}$	$3.5^o/f_{GHz}$	$3.5^o/f_{GHz}$	Deg	0.5^o at 7GHz
Synthesized Beam		Gaussian	Gaussian	Gaussian		To 10% power level
Max.Deviation from Gaussian		20%	20%	1%		
FWHM of Synthetic Beam (snapshot)		$360/f_{GHz}$	$360/f_{GHz}$	$60/f_{GHz}$	arcsec	Natural weighting zenith
Frequency Range	**From**	0.5	0.5	0.5	GHz	
	To	9	10+	15	GHz	
Polarization (dual-linear)						
Leakage		5%	5%	5%		
Fully calibrated		1.5%	1%	1%		
Antenna Pointing						
Wind 0-15 mph		6"	6"	6"		
Wind 15-30 mph		24"	24"	24"		
Wind > 30 mph		Stow	Stow	Stow		
Wind < 100 mph		Survive	Survive	Survive		
Slew Time		120 s	120 s	120s	S	Max time
Max. Tracking Speed		$3^o/s$	$3^o/s$	$3^o/s$		Track LEOs

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Welch, J., Backer, D., Blitz, L., Bock, D., Bower, G. C., Calvin, C., … Weinreb, S. (2009). The Allen Telescope Array: The First Widefield, Panchromatic, Snapshot Radio Camera for Radio Astronomy and SETI. *Proceedings of the IEEE*, *97*(Advances in Radio Telescopes), 1438 – 1447.

[1] "A" stands for "Antonio Feed Upgrade." Over the next 18 months, all antennas will be upgraded with improved receivers with lower T_{sys} and greater frequency range.