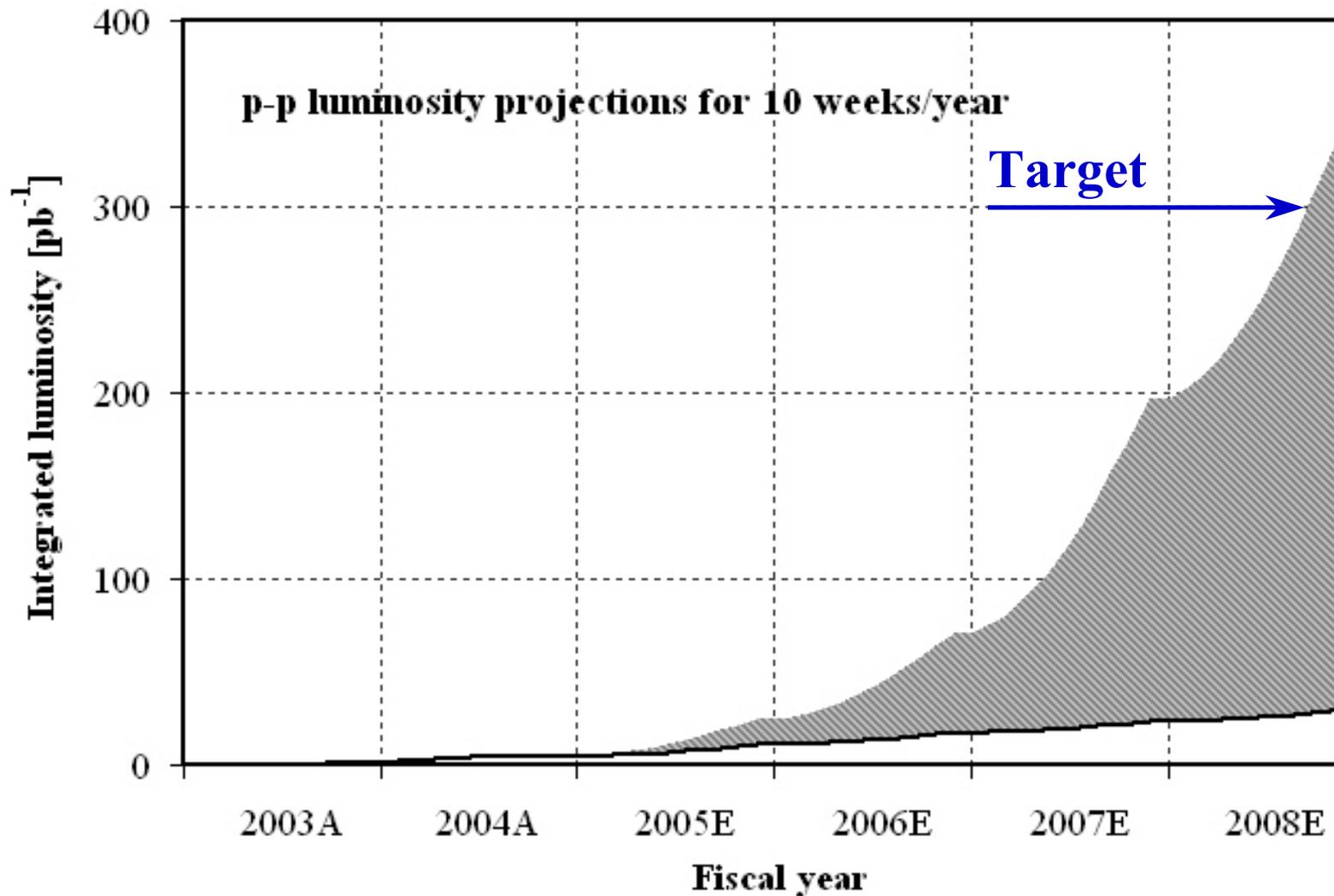


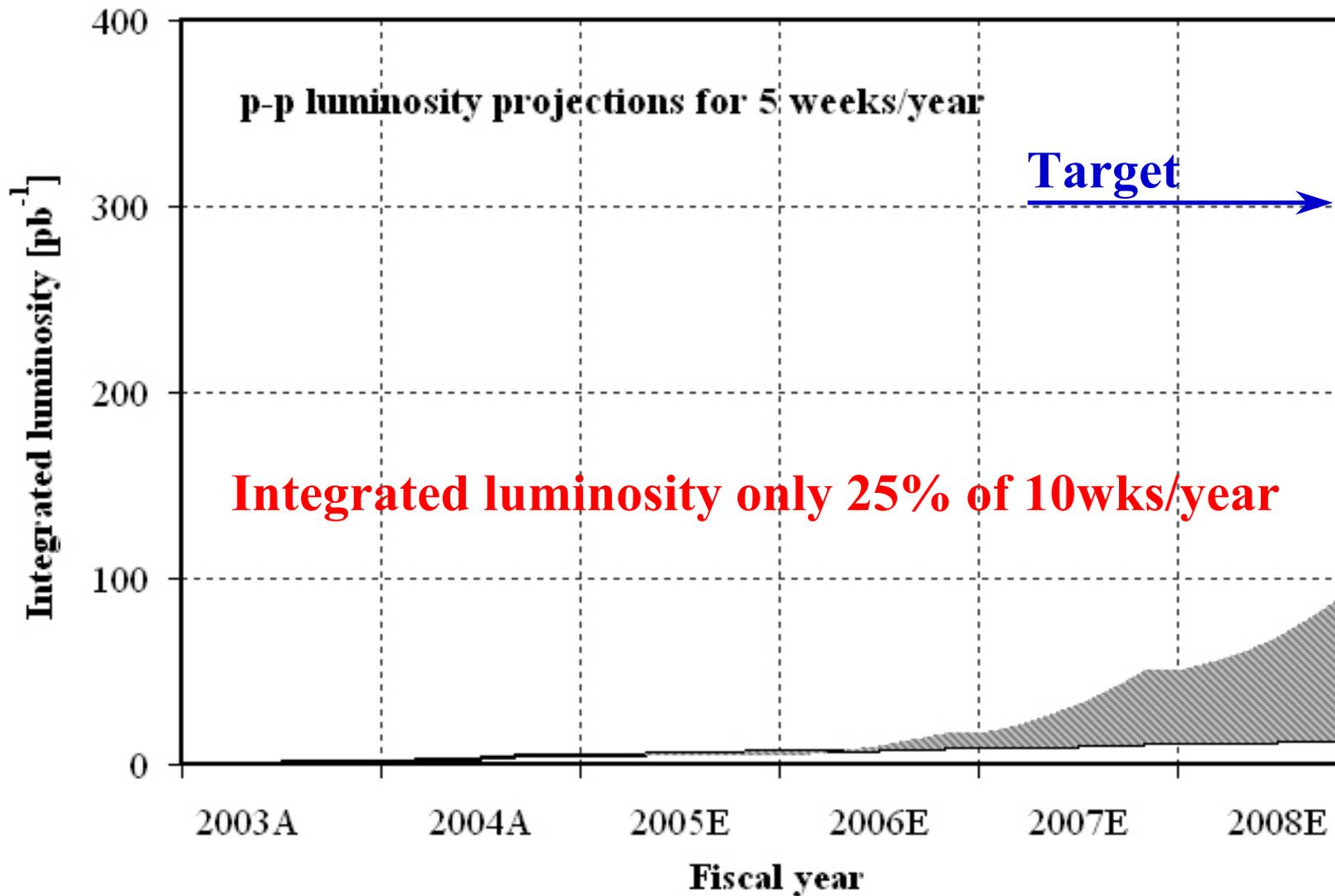
Luminosity projections 10wks/year at 100 GeV beam energy



Luminosity projections 10wks/year at 100 GeV beam energy

Fiscal year	unit	2002A	2003A	2004A	2005E	2006E	2007E	2008E
No of bunches	...	55	55	56	79	79	100	112
Ions/bunch, initial	10^{11}	0.7	0.7	0.7	1.0	1.4	2.0	2.0
Average beam current/ring	mA	48	48	52	99	138	250	280
β^*	m	3	1	1	1	1	1	1
Peak luminosity	$10^{30} \text{ cm}^{-2} \text{ s}^{-1}$	2	6	6	16	31	80	89
Average store luminosity	$10^{30} \text{ cm}^{-2} \text{ s}^{-1}$	1.5	3	4	9	21	53	60
Time in store	...	30	41	41	50	53	56	60
Maximum luminosity/week	pb^{-1}	0.2	0.6	0.9	2.8	6.6	18.0	21.6
Minimum luminosity/week	pb^{-1}				0.9	0.9	0.9	0.9
Maximum integrated luminosity	pb^{-1}	0.5	1.6	3	20	46	126	151
Minimum integrated luminosity	pb^{-1}				6	6	6	6
AGS polarization at extraction	%	35	45	50	60	75	80	80
RHIC store polarization, average	%	15	30	40	45	65	70	70
Maximum figure of merit/week	nb^{-1}	0	5	23	120	1180	4330	5190
Minimum figure of merit/week	nb^{-1}				23	23	23	23

Luminosity projections 5wks/year at 100 GeV beam energy



Energy=100GeV	2005	2006	2007	2008
AGS min	0.50	0.65	0.70	0.70
AGS max	0.60	0.75	0.80	0.80
RHIC min	0.45	0.57	0.65	0.65
RHIC max	0.53	0.70	0.75	0.75
AGS Set Up	<u>warm snake</u> AC dipole	<u>warm snake</u> <u>cold snake</u>	<u>warm snake</u> <u>cold snake</u>	<u>warm snake</u> <u>cold snake</u>
RHIC Set Up	<u>dual snake</u> <u>realignment in</u> 12' clk	<u>dual snake</u> <u>decoupling along</u> ramp <u>full realignment</u>	<u>dual snake with</u> proper setting	<u>dual snake with</u> proper setting
<u>pol</u> development	200 GeV acceleration <u>spin tune</u> measurement <u>calibrate snake</u> <u>spin flipping</u>	~0.3mm orbit distortion	~0.3mm orbit distortion	~0.3mm orbit distortion

- Assuming AGS setup starts 3 weeks before RHIC.]
- RHIC polarization ramp-up is expected to be in 2 weeks (we did it in 10 days during 04 run). A linear ramp-up of polarization during the 2 weeks is also assumed.

- For 250GeV beam energy,
multiply any part of projections with 2.5
- Expect polarization at 250GeV
almost as good as at 100GeV
(will need commissioning time)