

# Projections for Deuteron-gold energy scan in 2016

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# Past intermediate energy Au-Au runs and asymmetric runs

E (GeV)	N (10 <sup>9</sup> )	Beta* (m)	L_week	note
9.8 Au-Au	0.9	3	15 ub <sup>-1</sup>	
13.5 Au-Au	1.45	3	30 ub <sup>-1</sup>	
19.5 Au-Au	1.3	3	50 ub <sup>-1</sup>	
31.2 Au-Au	1.3	2.5	110 ub <sup>-1</sup>	
100 d-Au	120*1.0	0.85	22 nb <sup>-1</sup>	Only long. cooling
100 h-Au	45*1.3	1	33 nb <sup>-1</sup>	3D cooling

# Projections for d-Au energy scan

E (GeV)	N ( $10^9$ )	Beta* (m)	L_week	note
9.8 d-Au	0.9	3	1.5 nb <sup>-1</sup>	
13.5 d-Au	1.45	3	3.0 nb <sup>-1</sup>	
19.5 d-Au	1.5	1.5	5.0 nb <sup>-1</sup>	3D cooling
31.2 d-Au	1.5	1	11.0 nb <sup>-1</sup>	3D cooling
100 d-Au	140*1.6	0.7	110.0 nb <sup>-1</sup>	3D cooling

# Setup times

9.8 d-Au	1 day
13.5 d-Au	0.5 weeks
19.5 d-Au	0.5 weeks
31.2 d-Au	0.5 weeks
100 d-Au	0.5 weeks

# Actions against pre-fire

- Scan energy in ascending order (20, 39, 62, 200 GeV/n CoM).
- PHENIX MPC protection circuit raises protection threshold by a factor of 400.
- Sector-8 DX off by 9 mm so that the aperture for Au beam in d-Au is the same as that in Au-Au.
- Phase advances between kickers and masks are more favorable ( $\sim 73$  deg now compared with  $\sim 180$  in 2015).
- Pre-fire protection orbit bumps will be employed.