10.0
5.0
2.0
1.0
0.5
(c) 
$$\phi = -\frac{\pi}{2}, \frac{w}{R} = 0.5$$
(a)  $\phi = -\frac{\pi}{2}, \frac{w}{R} > 0.5$ 
360
380
400
420
440
 $M_{AB}$  [GeV]