

# TJ USAMO Practice 9 - Some Geometry Problems

PDiao05

December 8, 2005

No lecture for you!

## 1 The only section: Practice

1. (IMO Shortlist 2002 G1)  $B$  is a point on the circle  $S$ .  $A$  is a point (distinct from  $B$ ) on the tangent to  $S$  at  $B$ .  $C$  is a point not on  $S$  such that the line segment  $AC$  meets the circle  $S$  at two distinct points.  $S'$  is a circle which touches  $AC$  at  $C$  and  $S$  at  $D$ , where  $B$  and  $D$  are on opposite sides of the line  $AC$ . Show that the circumcenter of  $BCD$  lies on the circumcircle of  $ABC$ .

I guess there was only one problem. Have FUN !!!