GENERAL  
  
I have the differential equations and the expansions for all three variable sets.

“Shooting” methods are OK for, say, initial models for Henyey calculations (KWW p106). So the “shooting” method is not obsolete.

USING UNTRANSFORMED VARIABLES

It is possible, in principle, to perform the calculation using untransformed variables, to avoid the fitting problem which arises from using different transformed variables for the outward and inward calculations – see Schwarzschild page 113. However, I cannot find/construct the derivation of the equations 14.1.

TRANSFORMED VARIABLES – STARRED

Schwarszchild page 115 : “We will see that for most cases of interest pc\* is of the order of unity”.