



FIGURE 23. Section  $(\theta, \phi)$  constant of the Schwarzschild solution.

(i) Apparent singularity at  $r = 2m$  when coordinates  $(t, r)$  are used.

(ii) Finkelstein diagram obtained by using coordinates  $(v, r)$  (lines at  $45^\circ$  are lines of constant  $v$ ). Surface  $r = 2m$  is a null surface on which  $t = \infty$ .