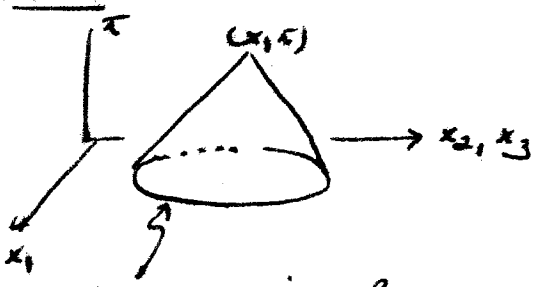
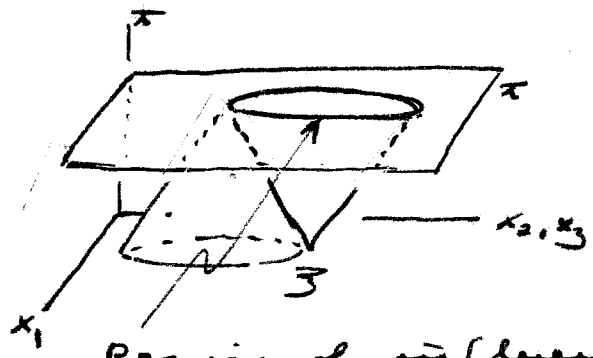
Huygheus's Minor Principle | or "strong form".

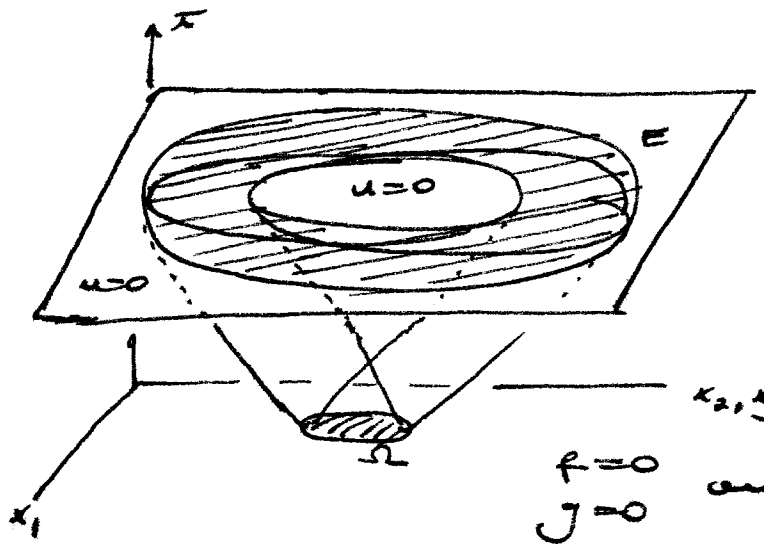
$u=3$



Domain of dependence is <u>surface</u> in x-space.



Region of influence of 3 at time τ later.

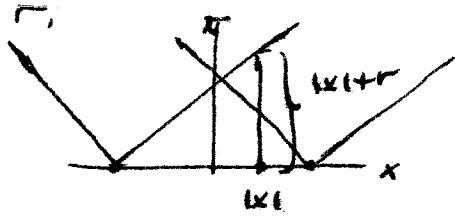


$f=0$
$g=0$ outside Ω

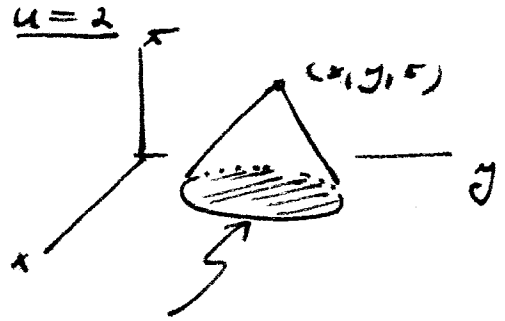
At time τ, region where $u=\varphi(x,\tau)$ $\neq 0$ is bounded by the envelope E of shells of radius $c\tau$ having centres on boundary of Ω.

For τ large, $u=0$ (see figure).

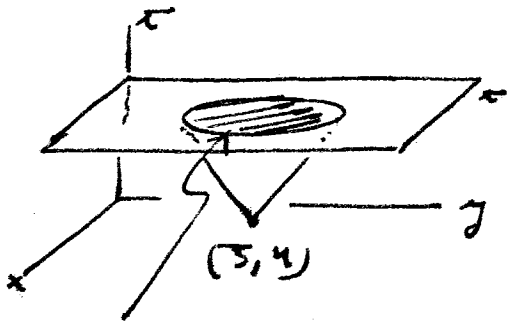
Eg. Ω solid sphere of radius r centered at origin 0, $u=0$ for $ct > |x| + r$.



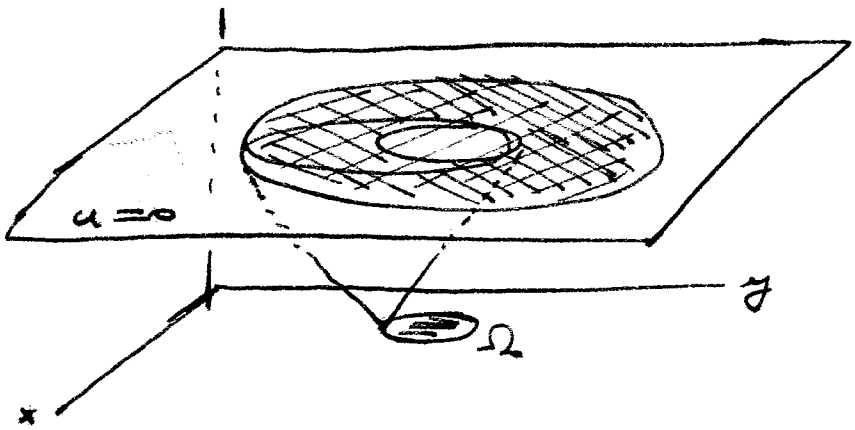
Signals are "sharp".



Domain of dependence is solid disk in xy-space.



Region of influence of point (3,4) at time t later.



For large t, u need not be 0.
i.e. Signal continues indefinitely.
& water waves.