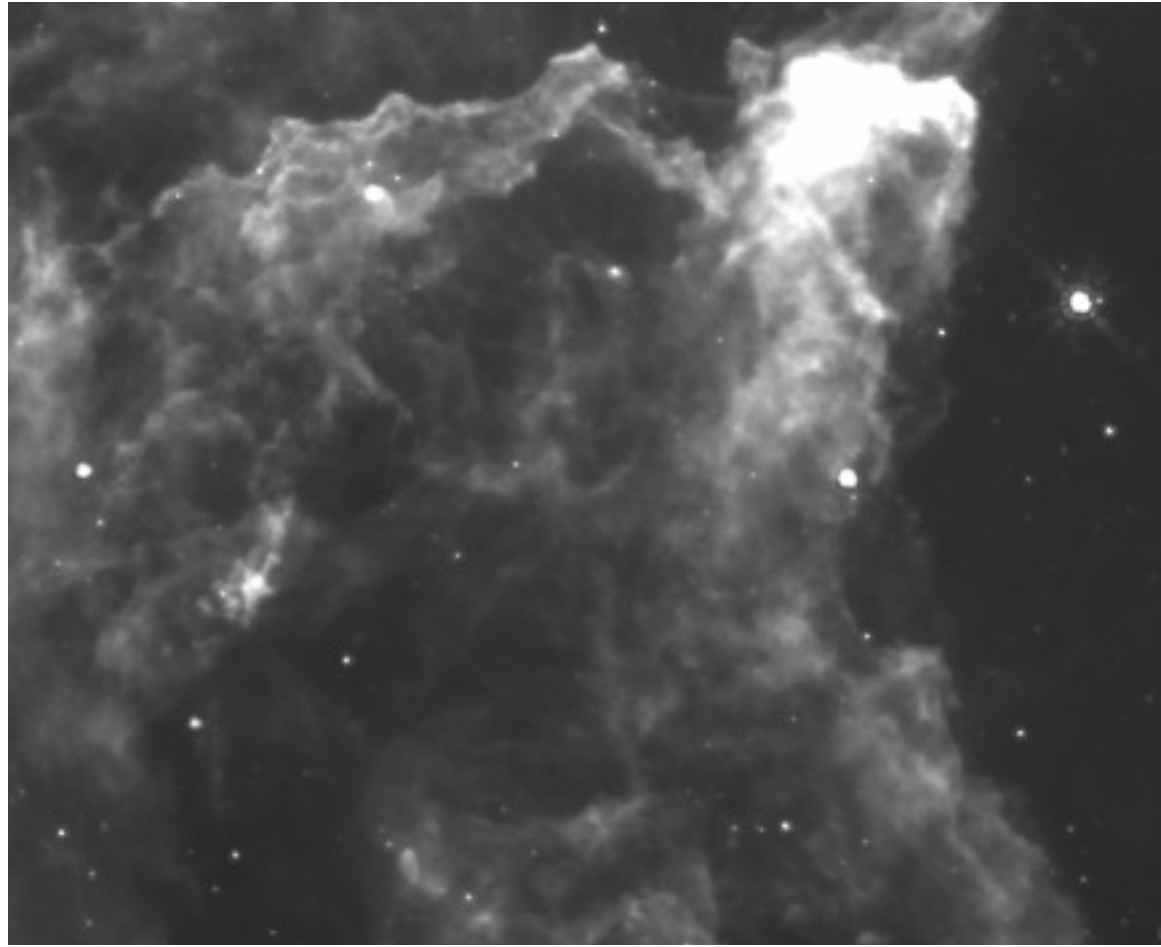
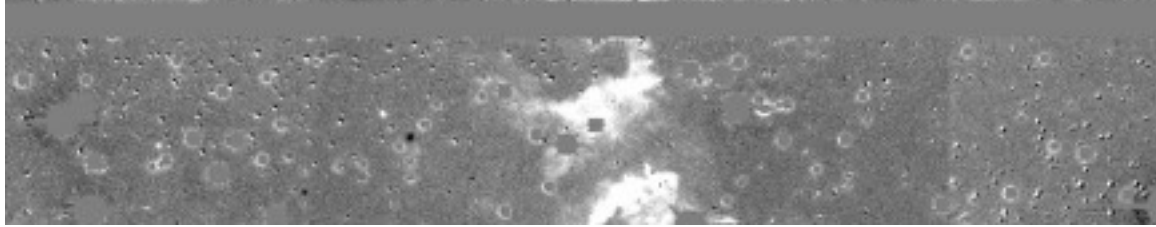
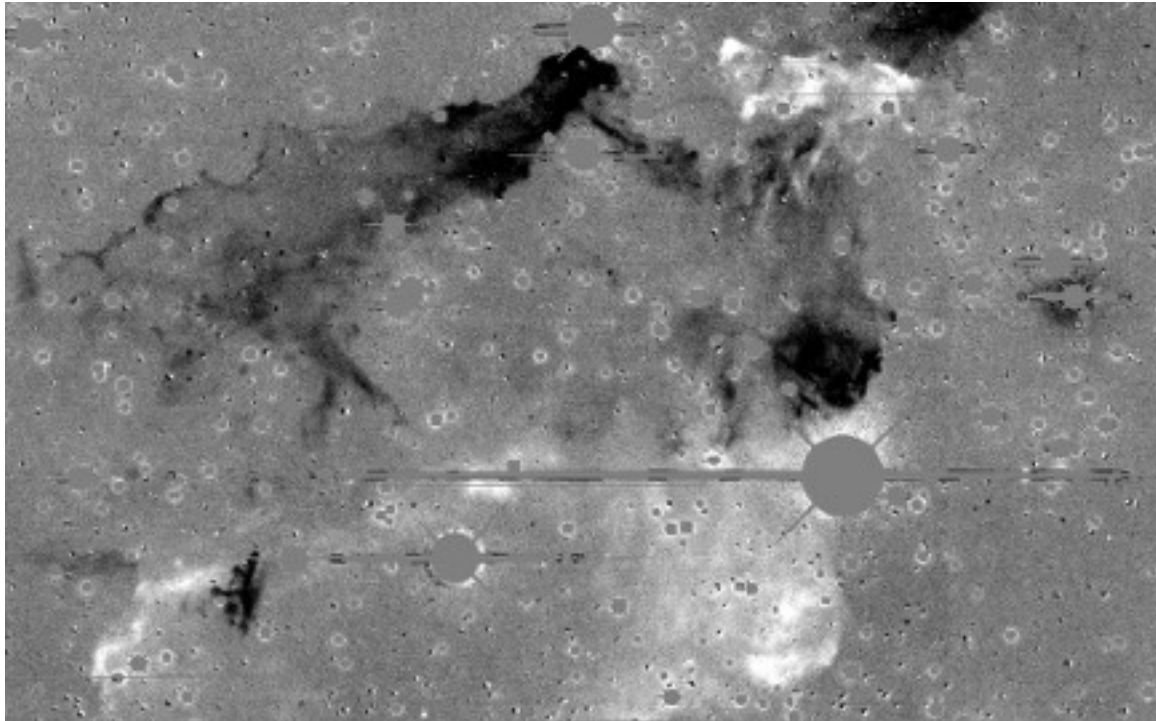




light echoes of  $\eta$ -Carinae



































































































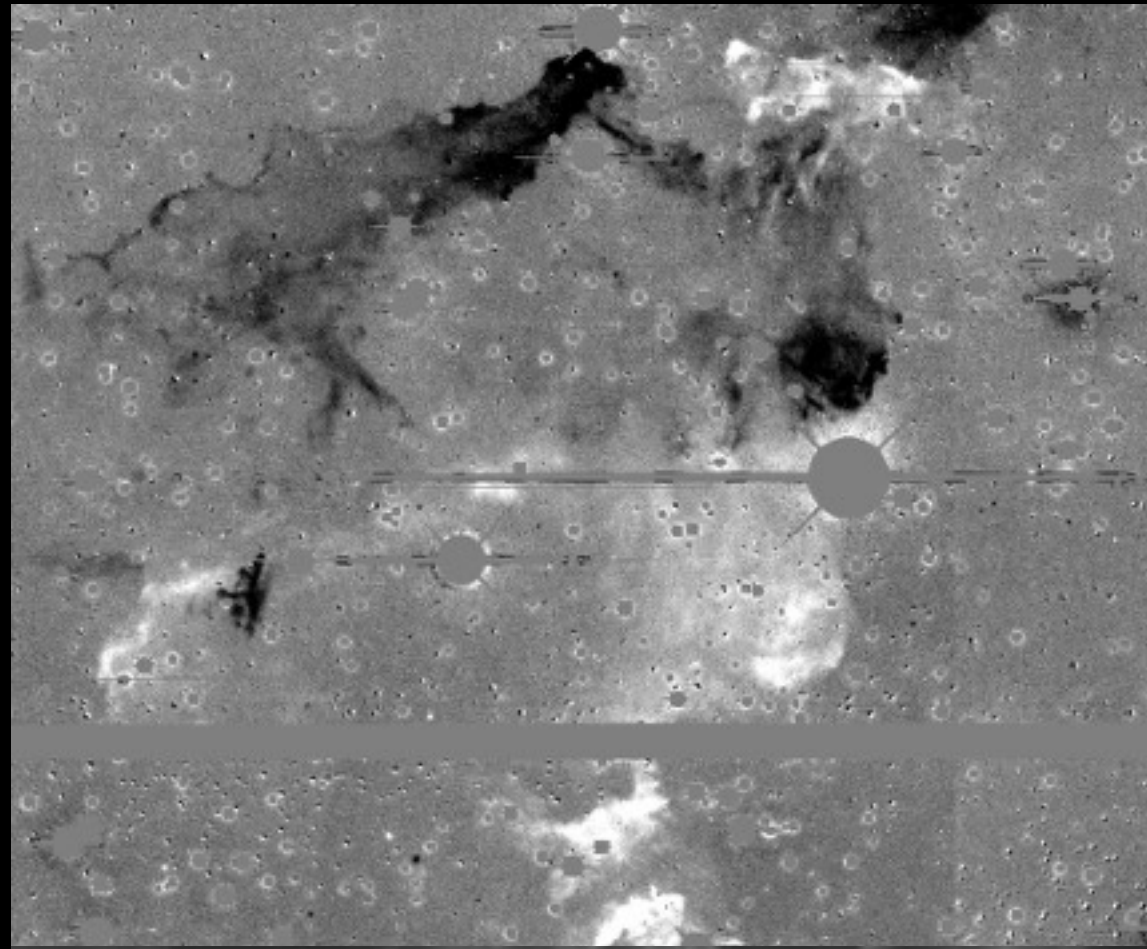


n-Carinae's light echoes



# $\eta$ -Carinae's light echoes

Light echoes of Great Eruption  
(1837-1857)



Spitzer Image: dust

8'

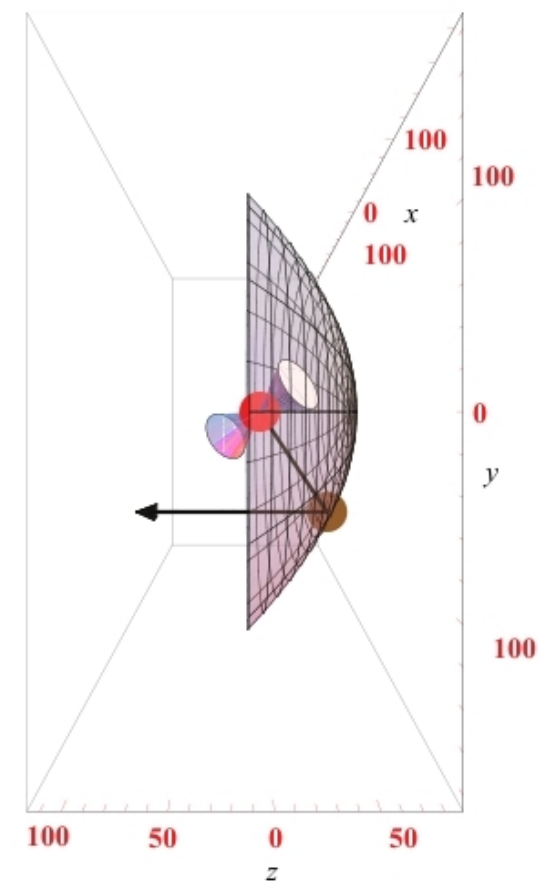
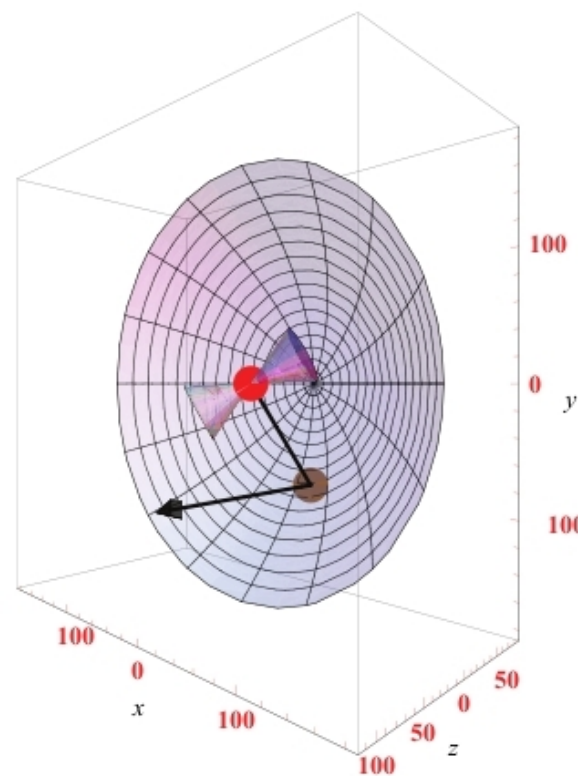
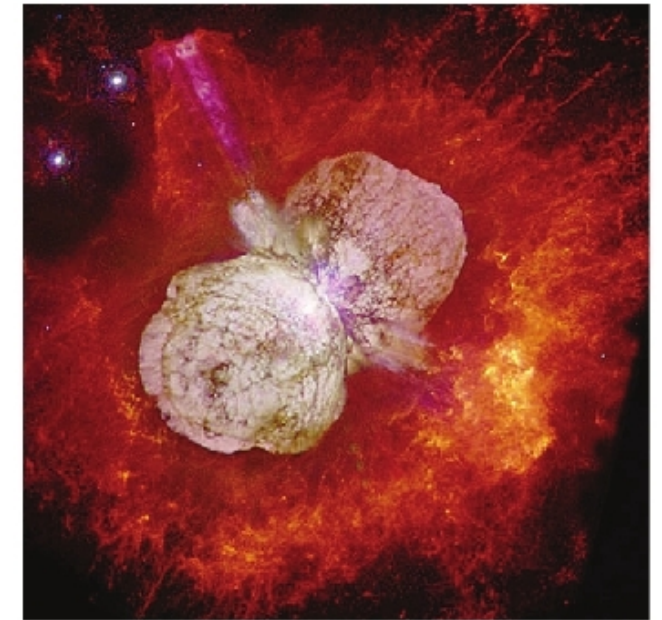
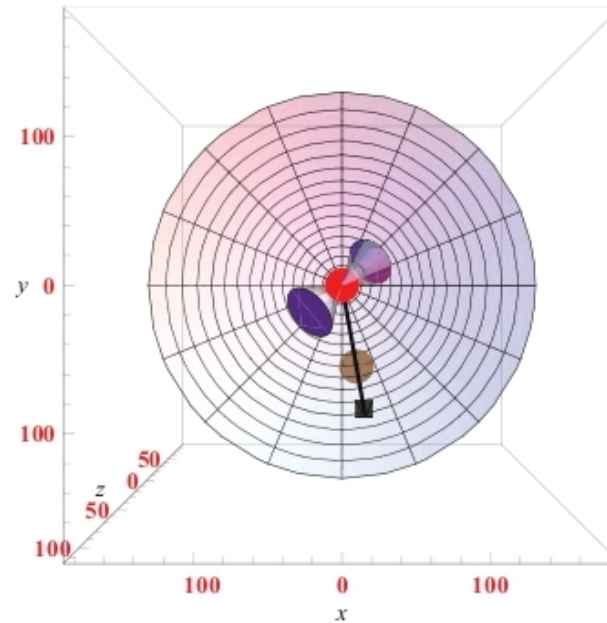
Difference Image  
black: light echo in 2003  
white: light echo in 2011

the size of the dust sheet illuminated tells the duration of the event

light echoes of  $\eta$ -Carinae

# $\eta$ -Carinae's light echoes

$\eta$  Car light echoes roughly perpendicular to equator of Homunculus nebula



light echoes of  $\eta$ -Carinae