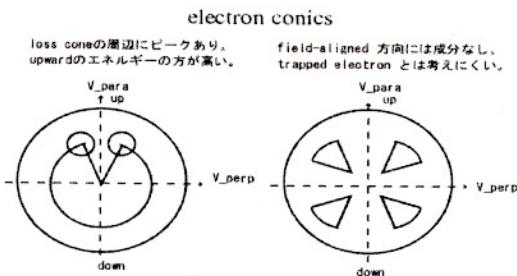


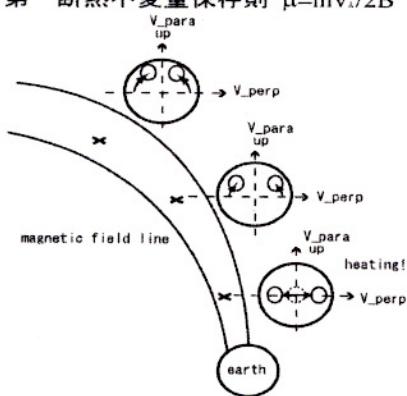
# Generation Mechanism of Electron Conics

## 速度分布関数上での形状



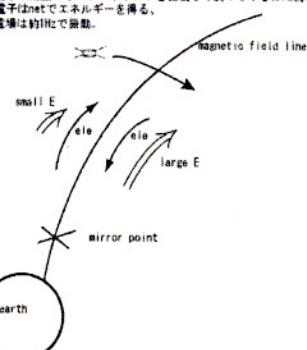
### メカニズム1

第一断熱不变量保存則  $\mu = m v^2 / 2B$



### メカニズム2

fluctuation of electric field model  
地下電子は衛星からミラーポイントを往復して戻ってくるのに約1秒かかる。  
地下電子はnetでエネルギーを得る。  
平行電場は約1Hzで振動する。



DE2 observes 0.5Hz oscillations of E\_parallel.  
(DE observations of electric field oscillations  
associated with an electron conic, JGR pp431--438, 1998)

## Viking衛星の統計結果

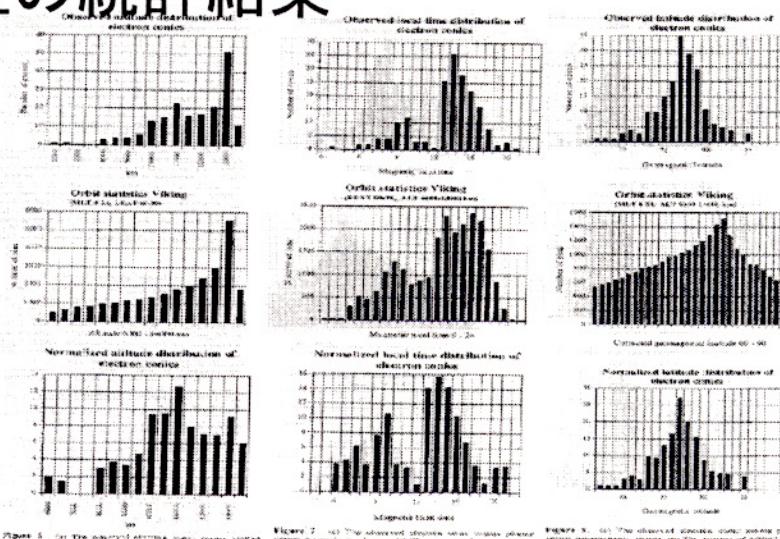


Figure 5. (a) The observed electron mean energy, particle velocity, and the number of events as a function of the particle loss rate. (b) The number of events as a function of the particle loss rate. (c) The normalized particle distribution function for the normalized particle loss rate. (d) The normalized particle loss rate distribution of electron conics.

Figure 6. (a) The observed electron mean energy, particle velocity, and the number of events as a function of the particle loss rate. (b) The number of events as a function of the particle loss rate. (c) The normalized particle distribution function for the normalized particle loss rate. (d) The normalized particle loss rate distribution of electron conics.

Figure 7. (a) The observed electron mean energy, particle velocity, and the number of events as a function of the particle loss rate. (b) The number of events as a function of the particle loss rate. (c) The normalized particle distribution function for the normalized particle loss rate. (d) The normalized particle loss rate distribution of electron conics.