

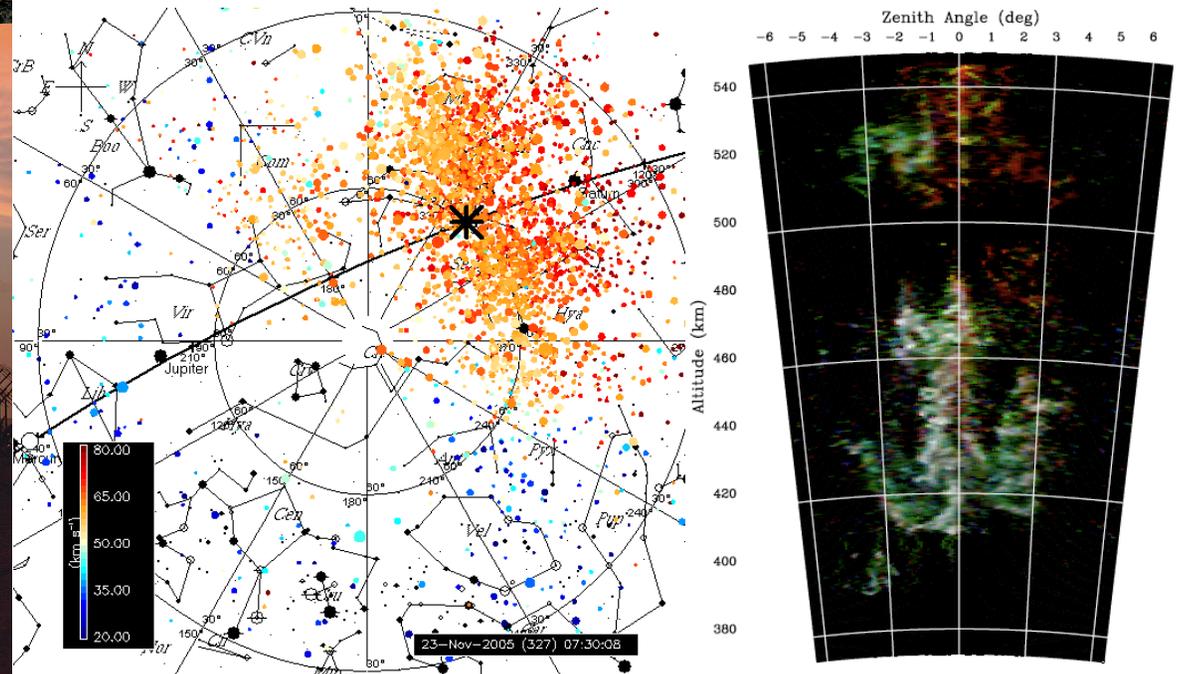
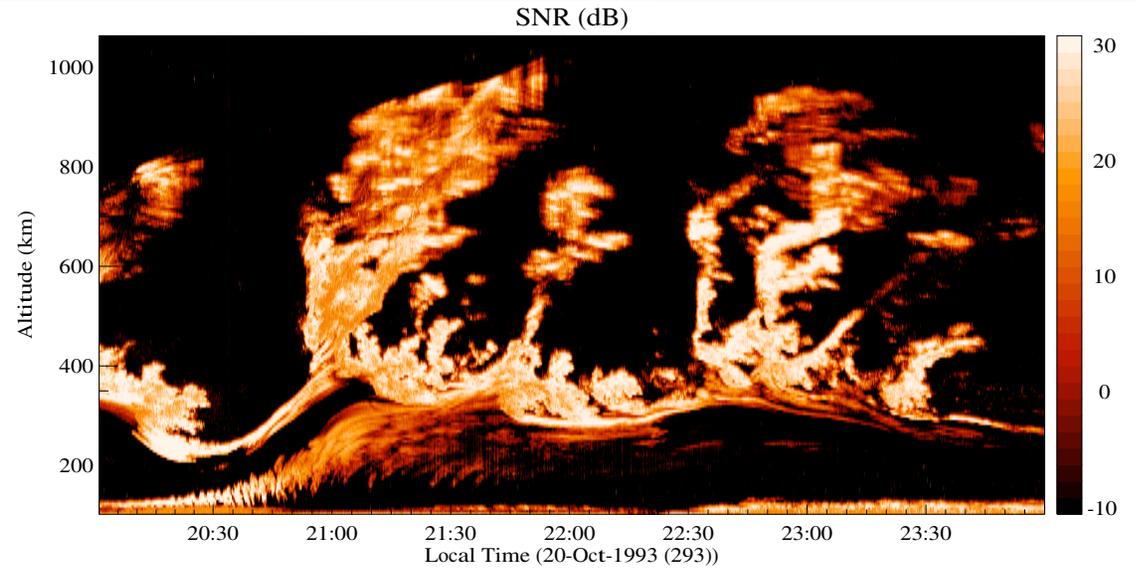
Explorando el Espacio Cercano: Investigaciones sobre Meteoros, Plasmas y Tiempo Espacial

J. L. Chau

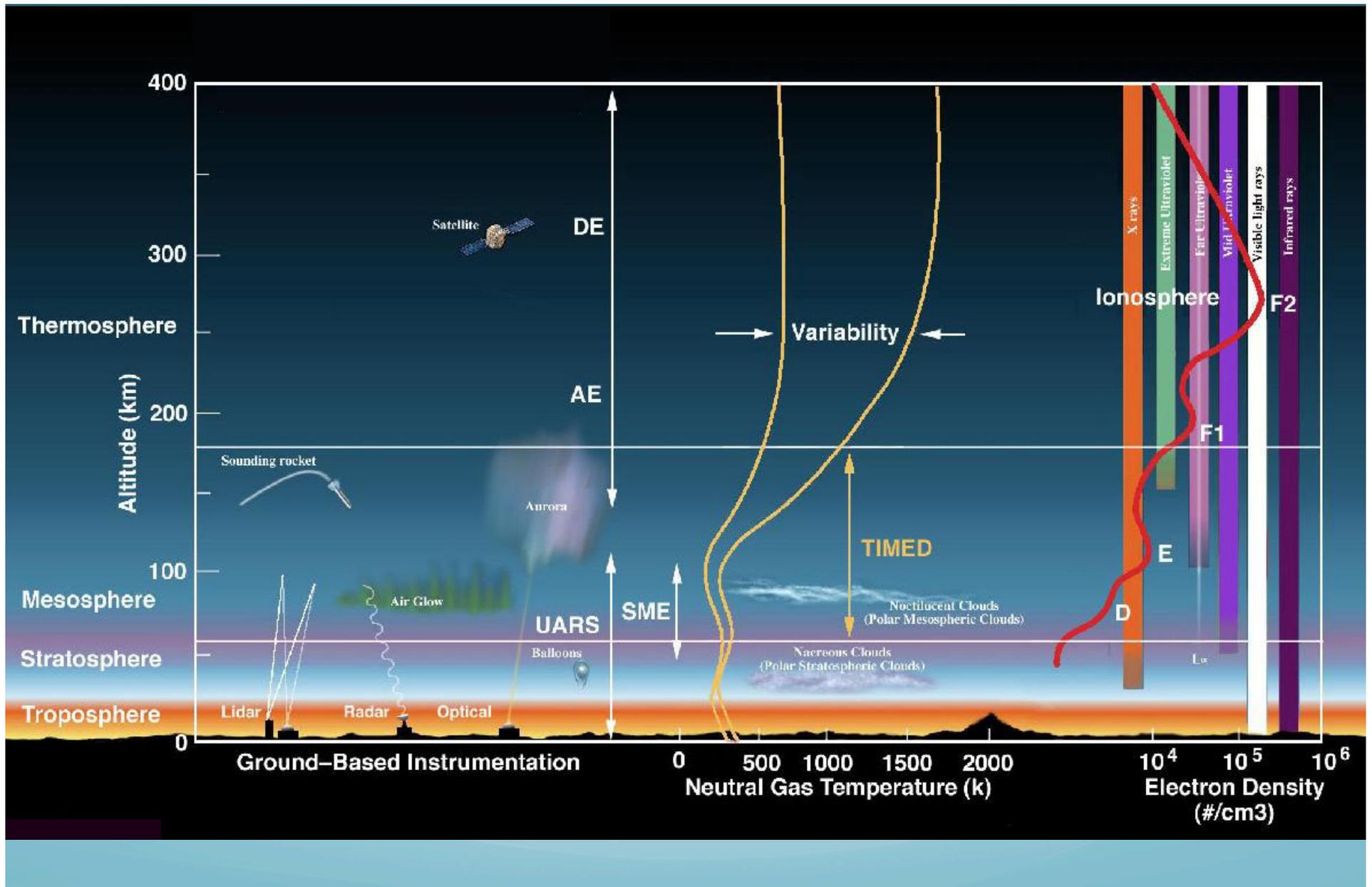
Radio Observatorio de Jicamarca,
Instituto Geofísico del Perú, Lima

Miraflores 29 de Octubre 2009

Contenido



Espacio Cercano – Ionosfera – Alta Atmósfera

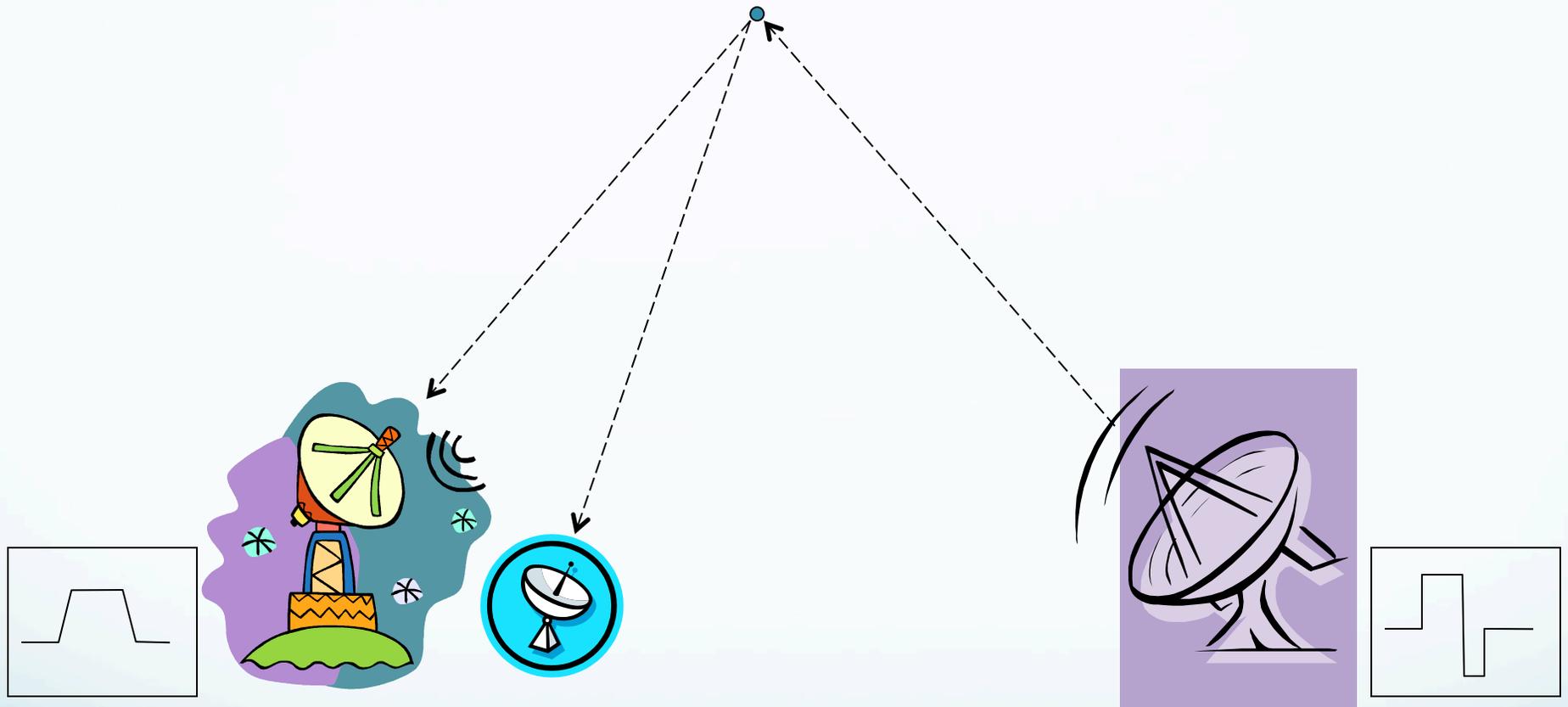


Radio Observatorio de Jicamarca – ROJ - JRO



Swartz, 03/11/77

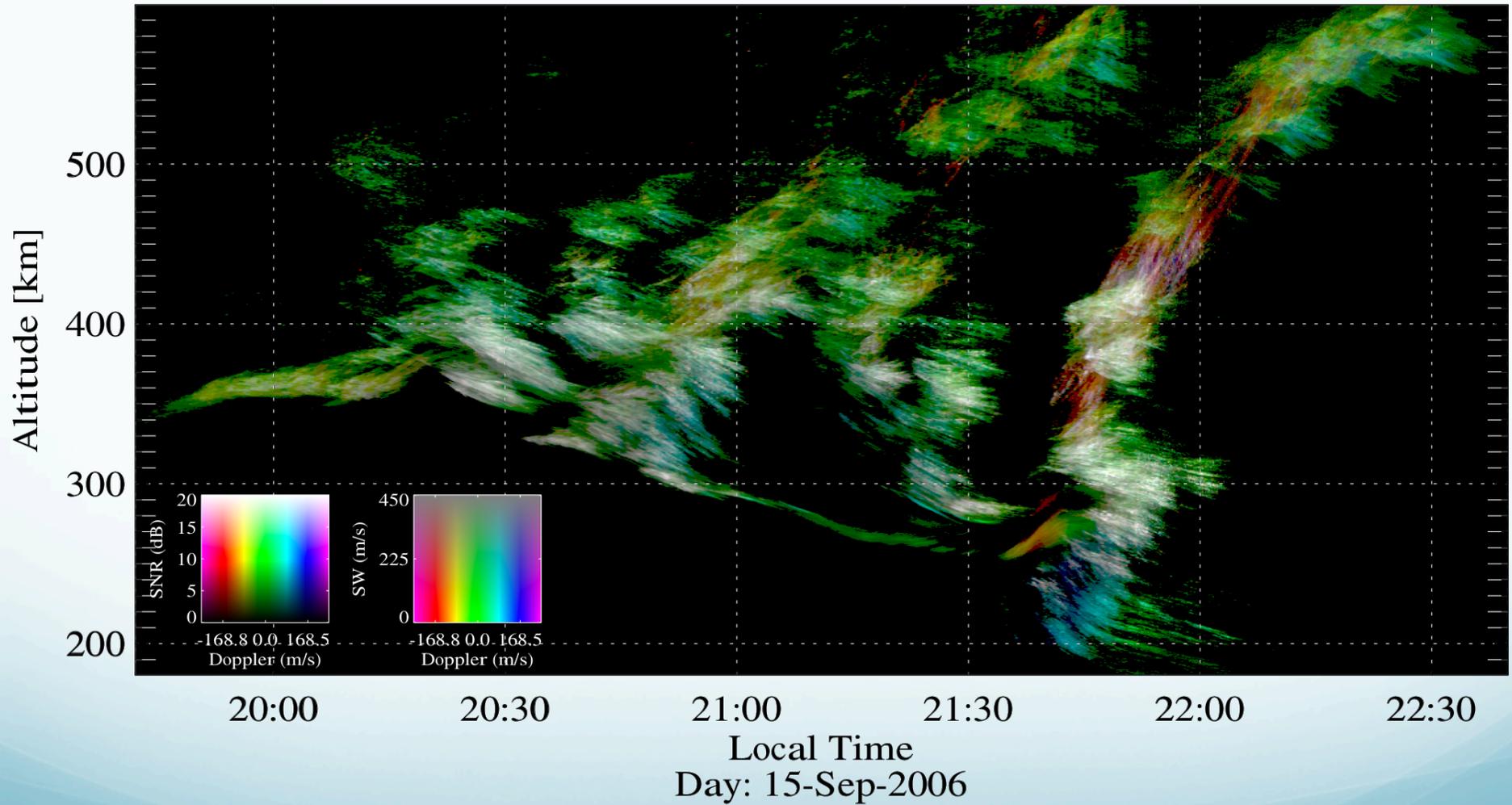
¿Cómo funciona un RADAR?



$$g = \frac{4\pi A}{\lambda^2}$$

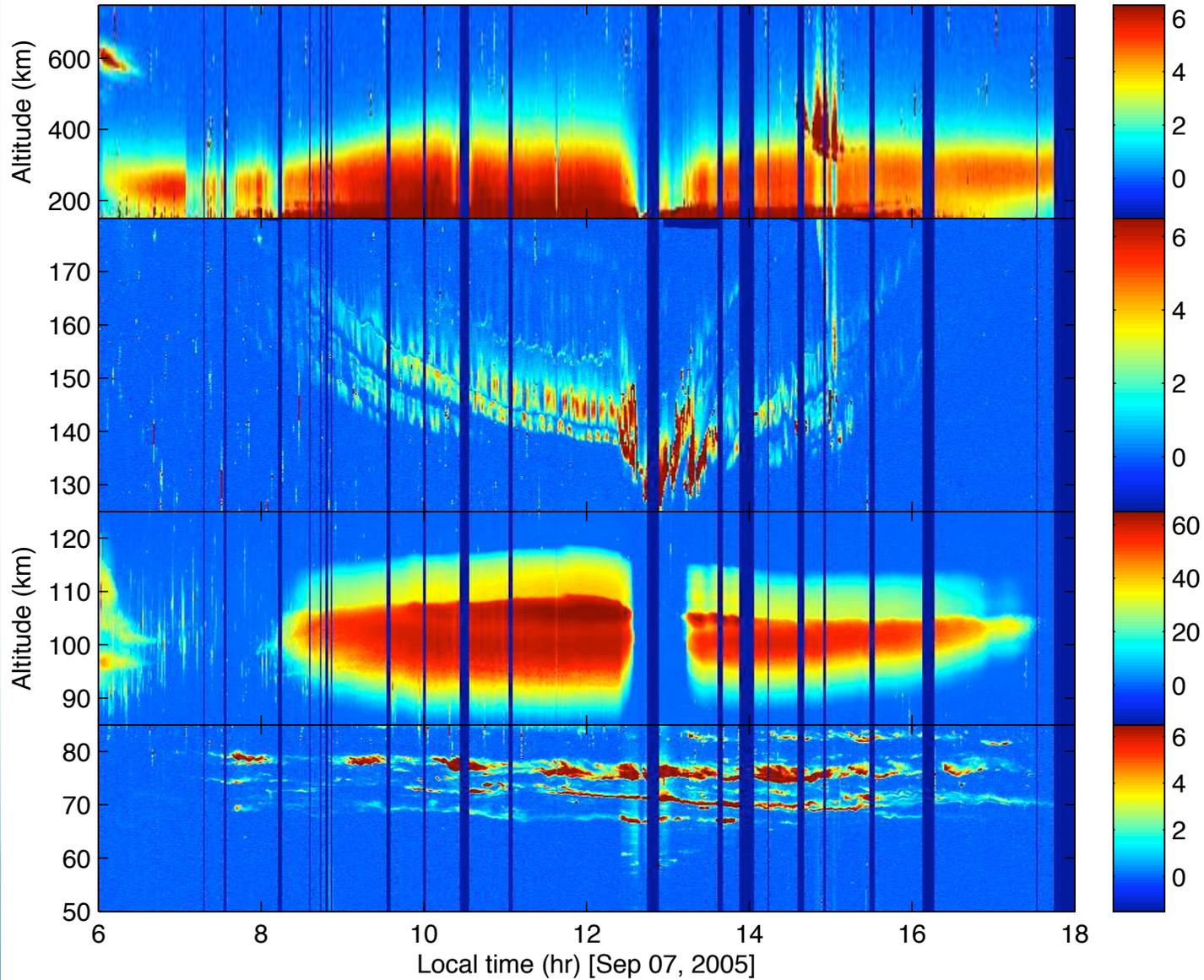
Una noche típica sobre el Perú

RTDI over JRO

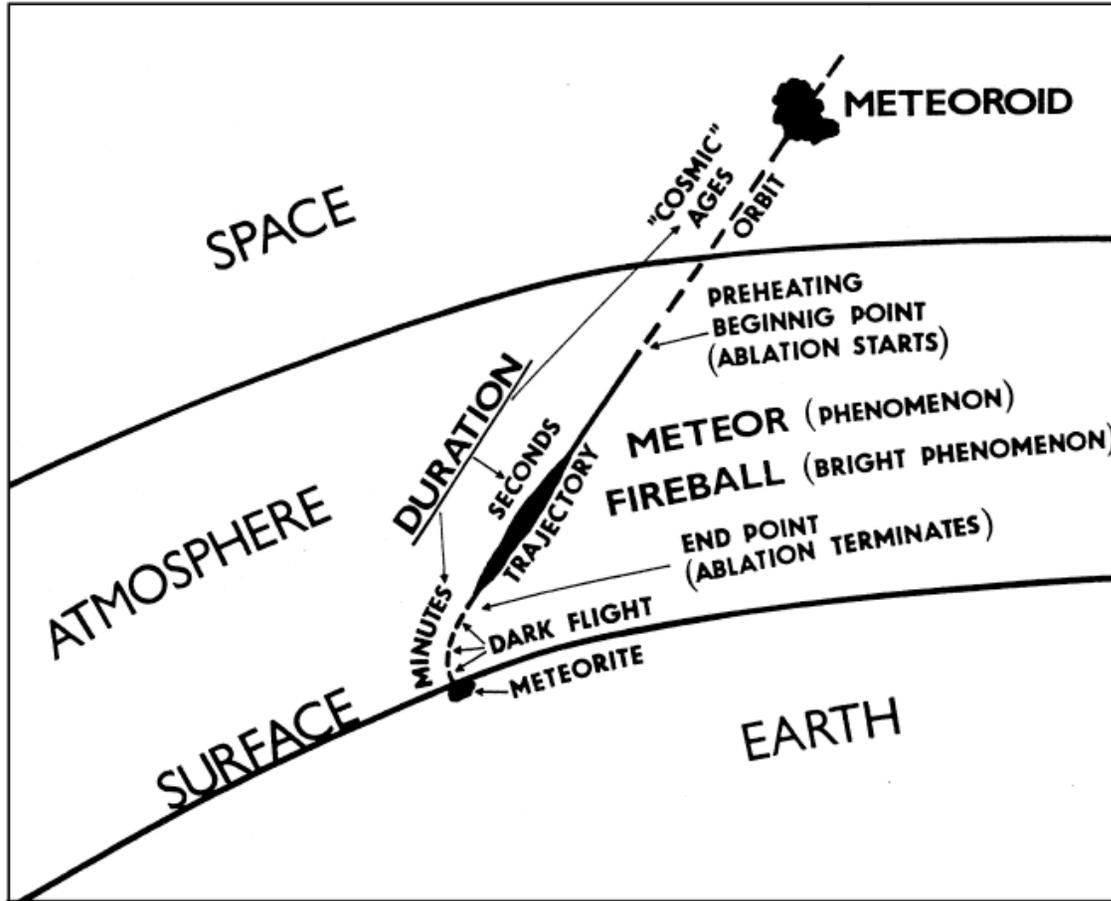


Un ejemplo de día

MST-ISR SNR+1 map West beam



Meteorito – Meteoro - Meteroide

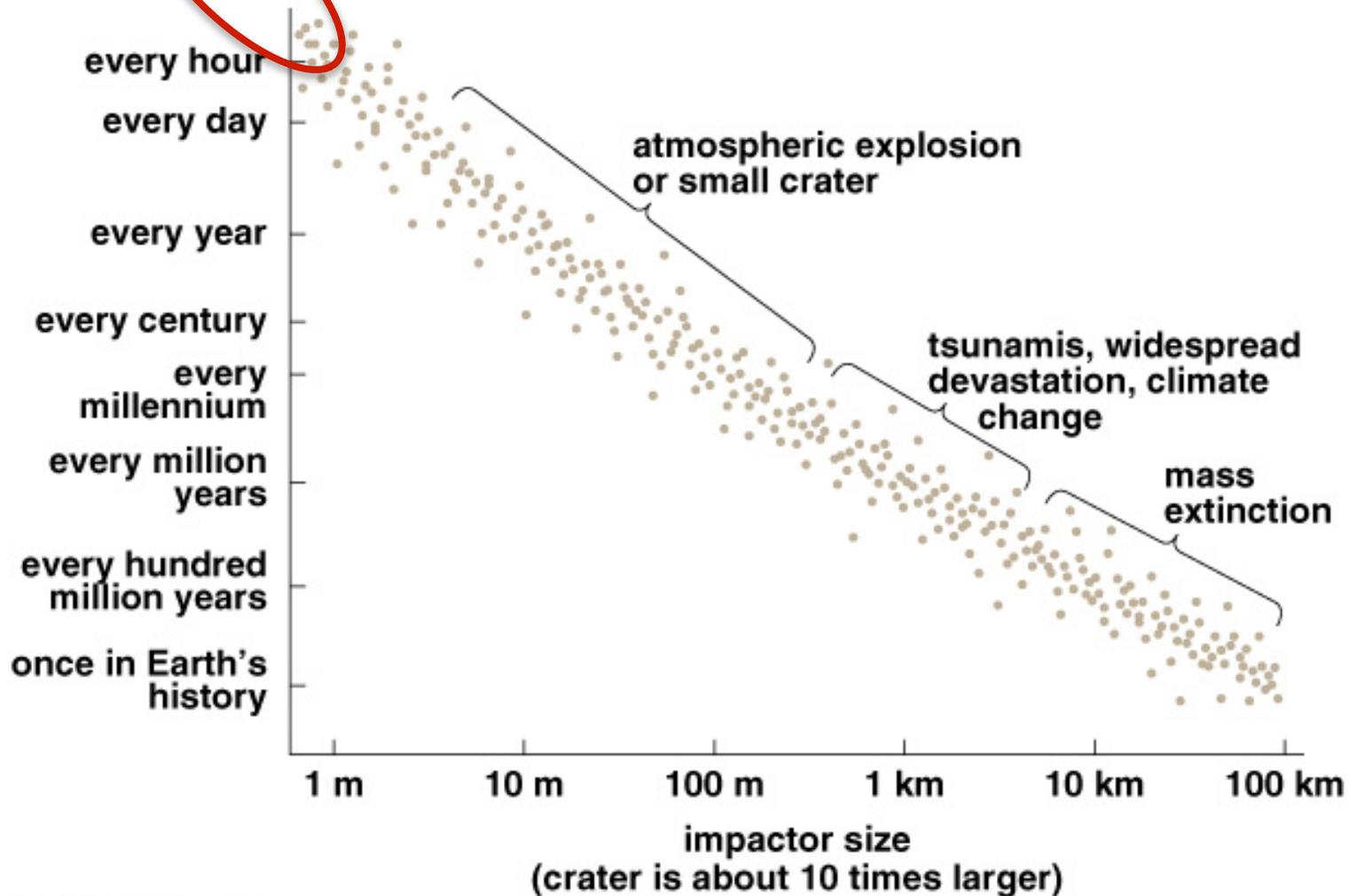


Meteoroides – Asteroides - Planetoides

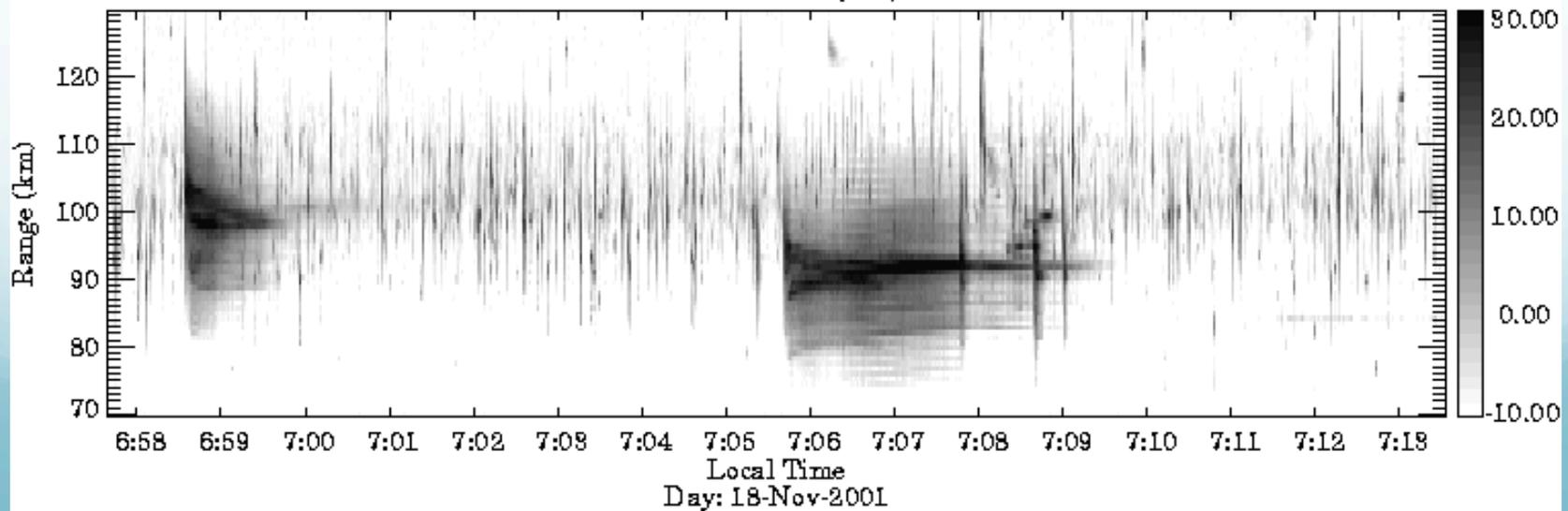
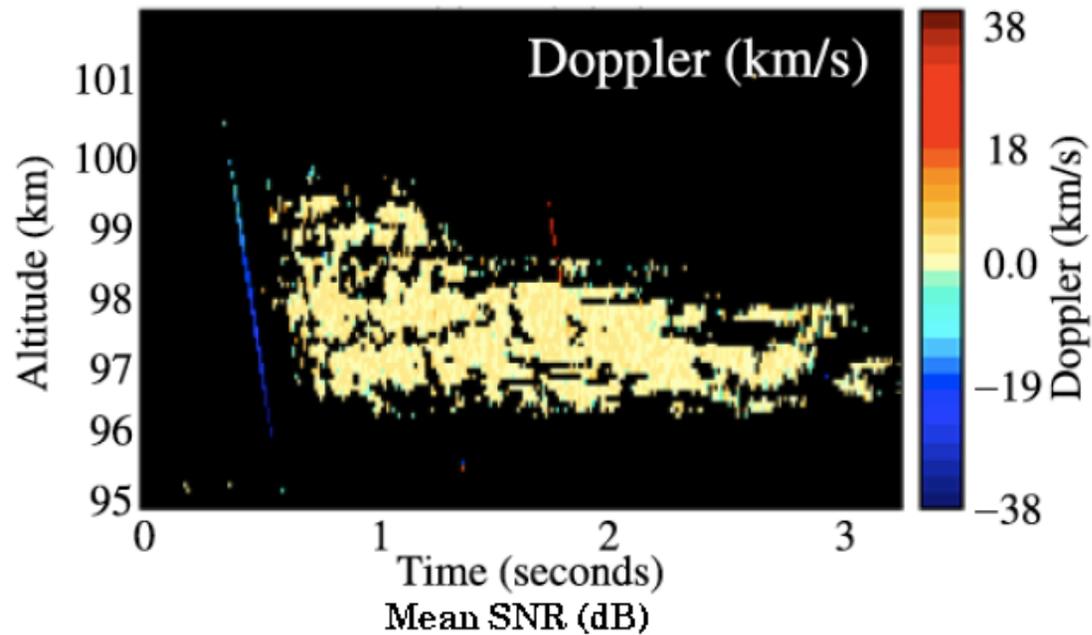
cada segundo



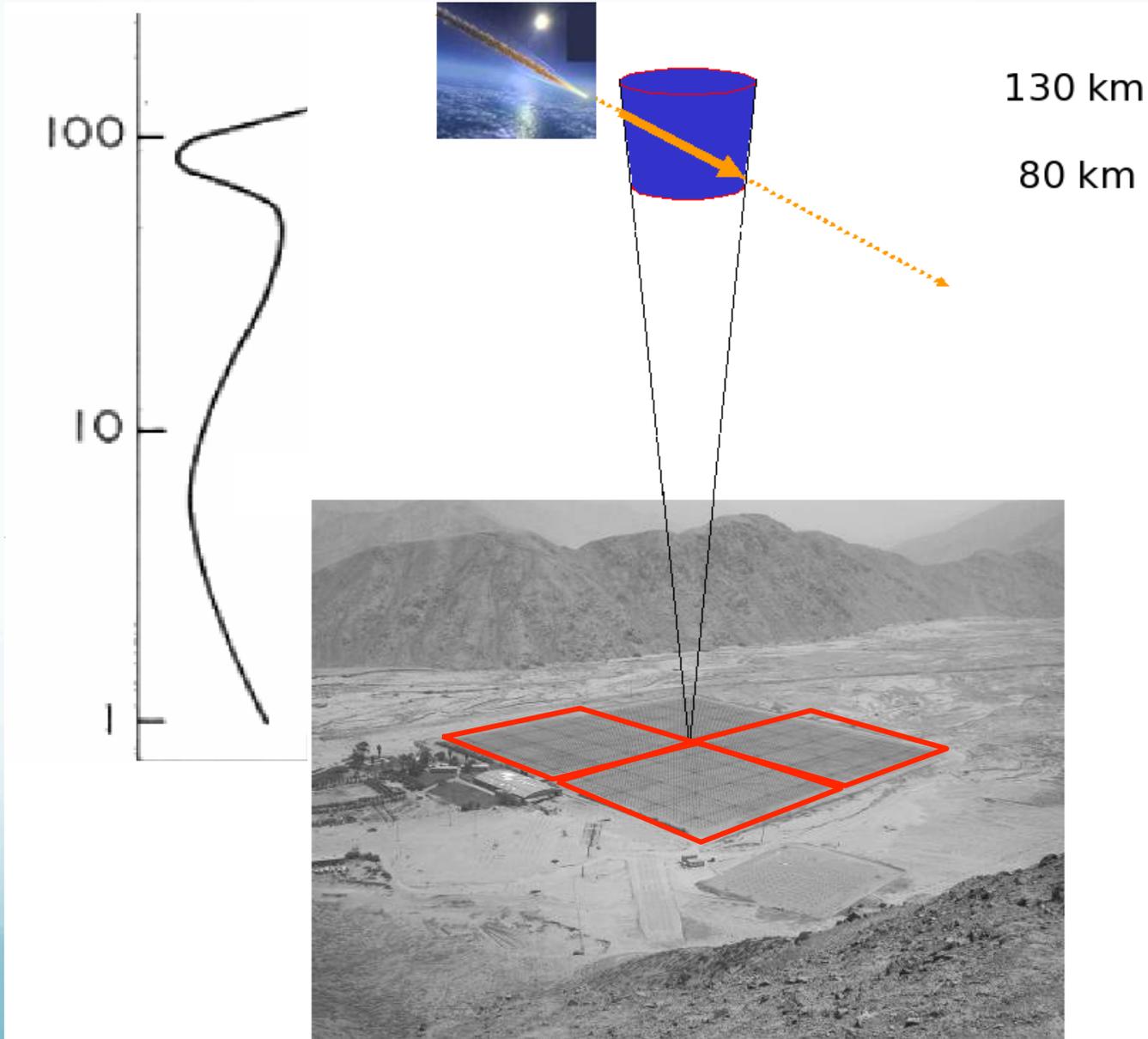
talco – polvo - arena



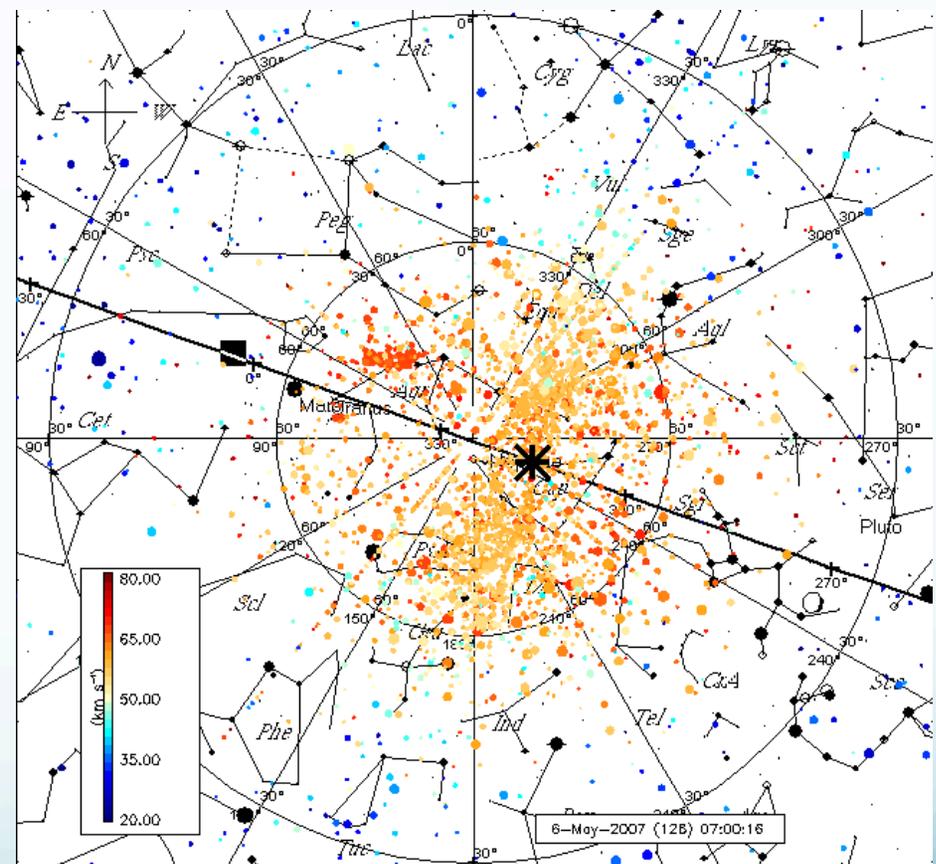
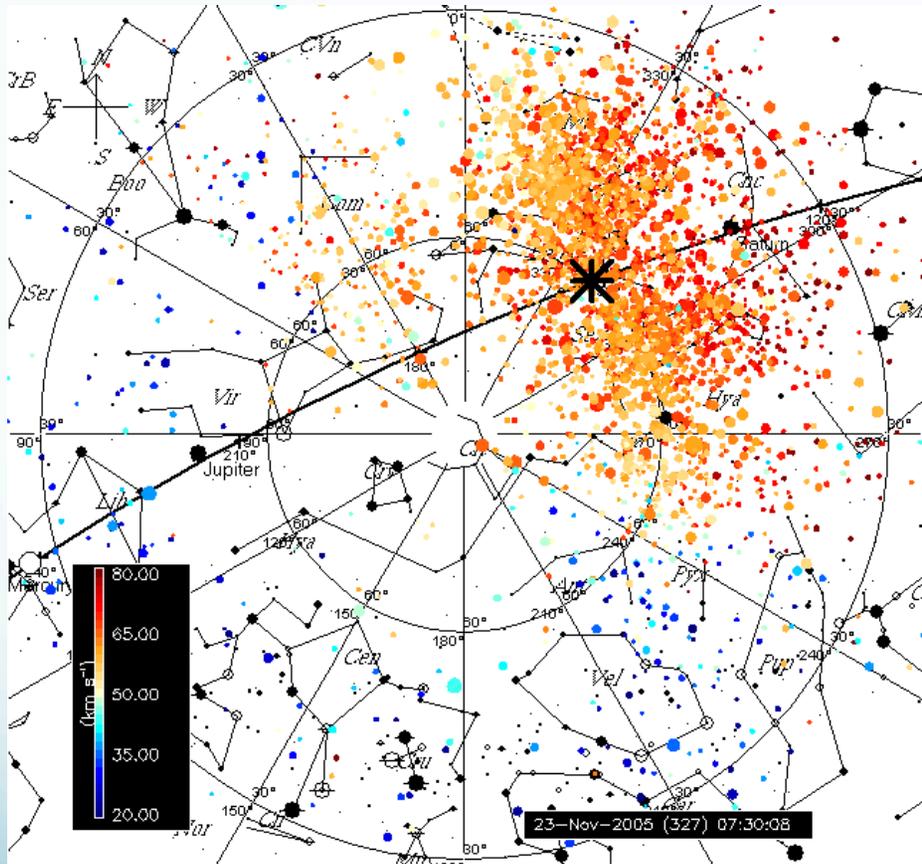
Observaciones de Meteoros con ROJ



El ROJ como detector de meteoros



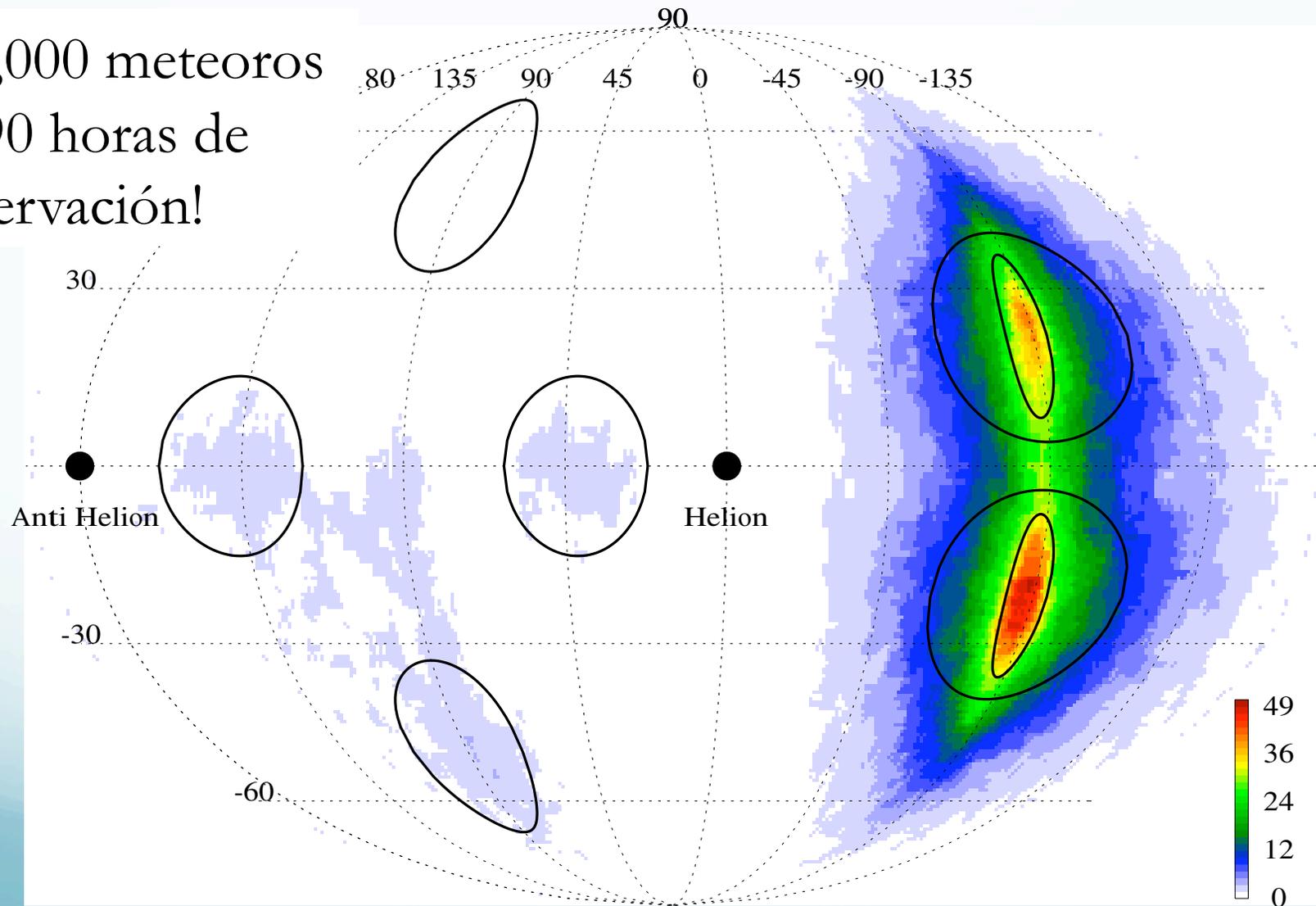
Condiciones normales y de lluvia



¿Qué encontramos?

Distributions of all meteors after removing Earth velocity

170,000 meteoros
en 90 horas de
observación!



All campaigns

El ROJ como Radio-Cámara



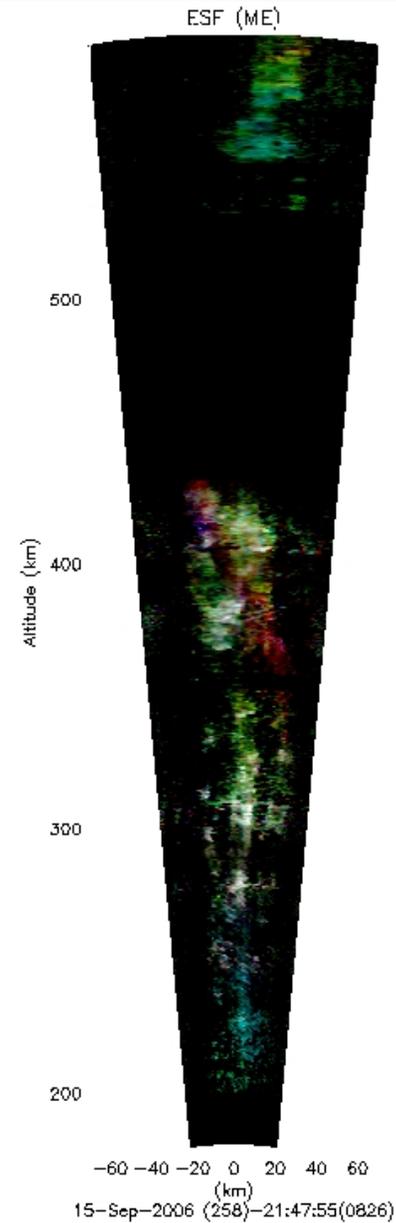
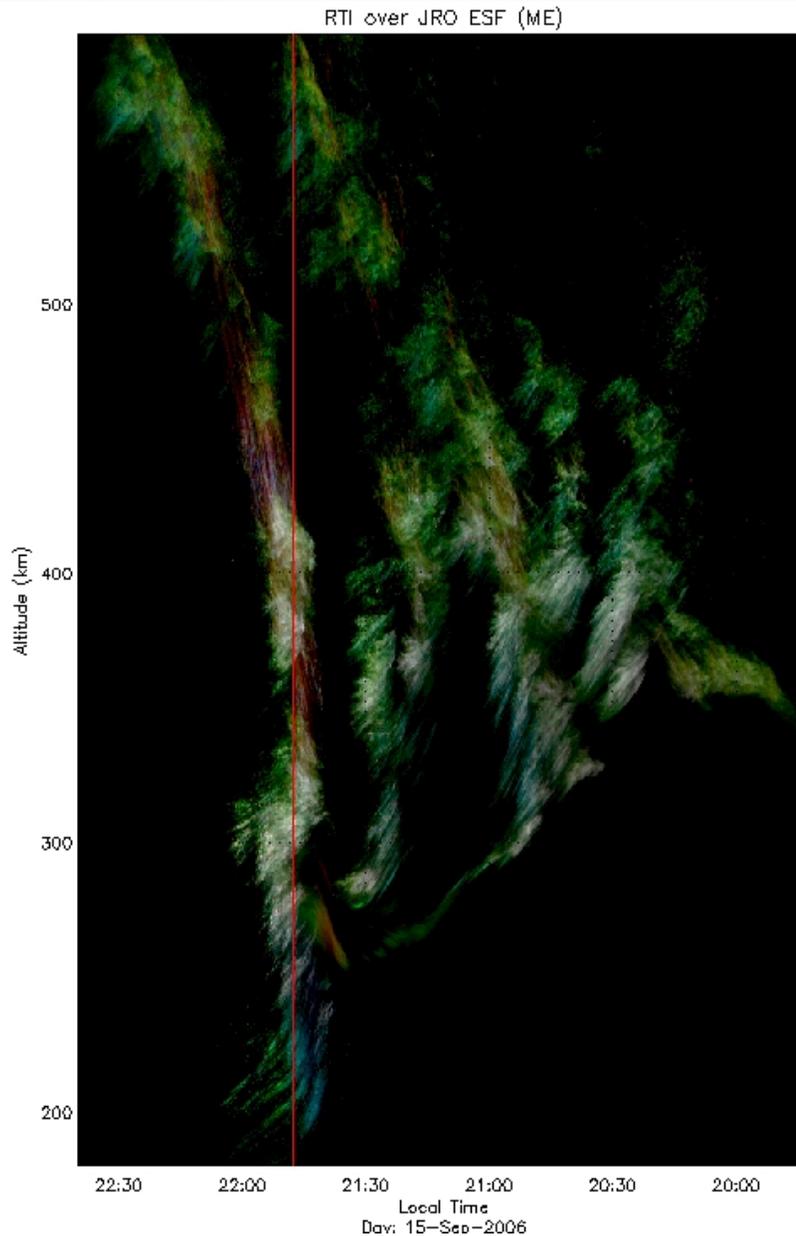
Radar típico vs. Radio Cámara

500

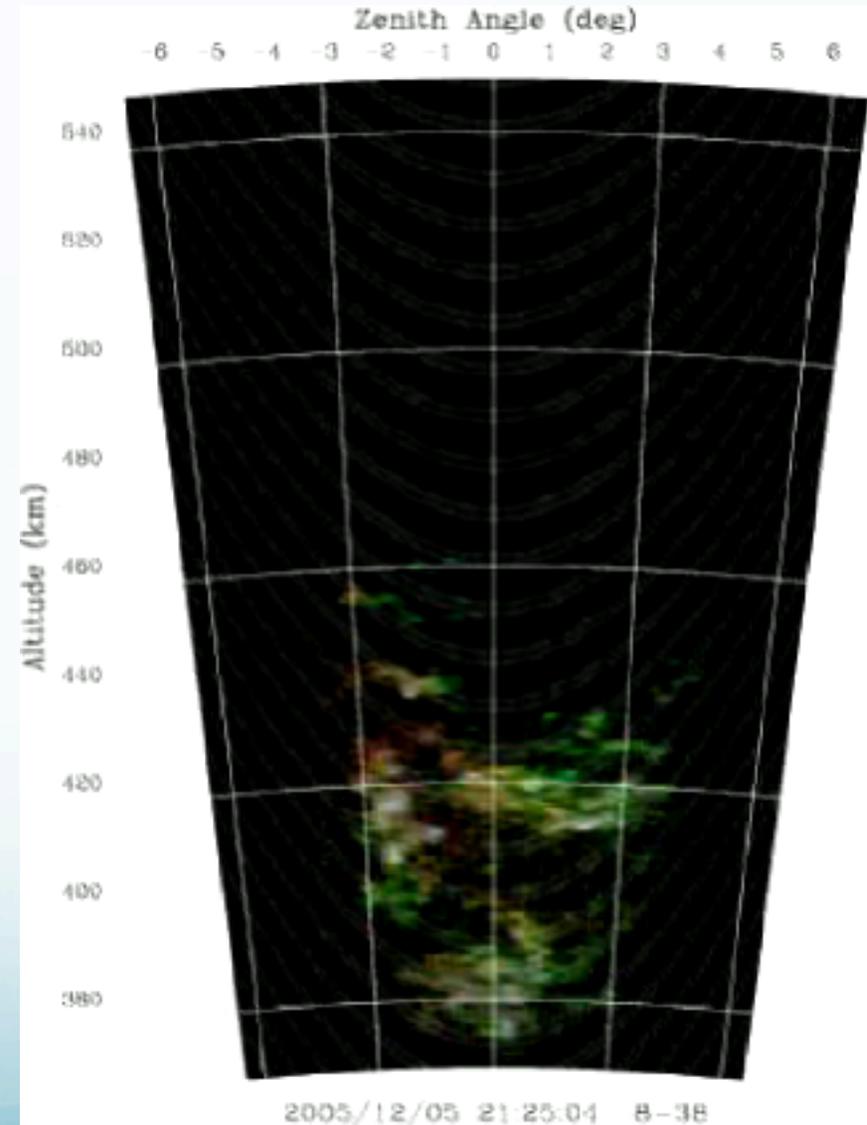
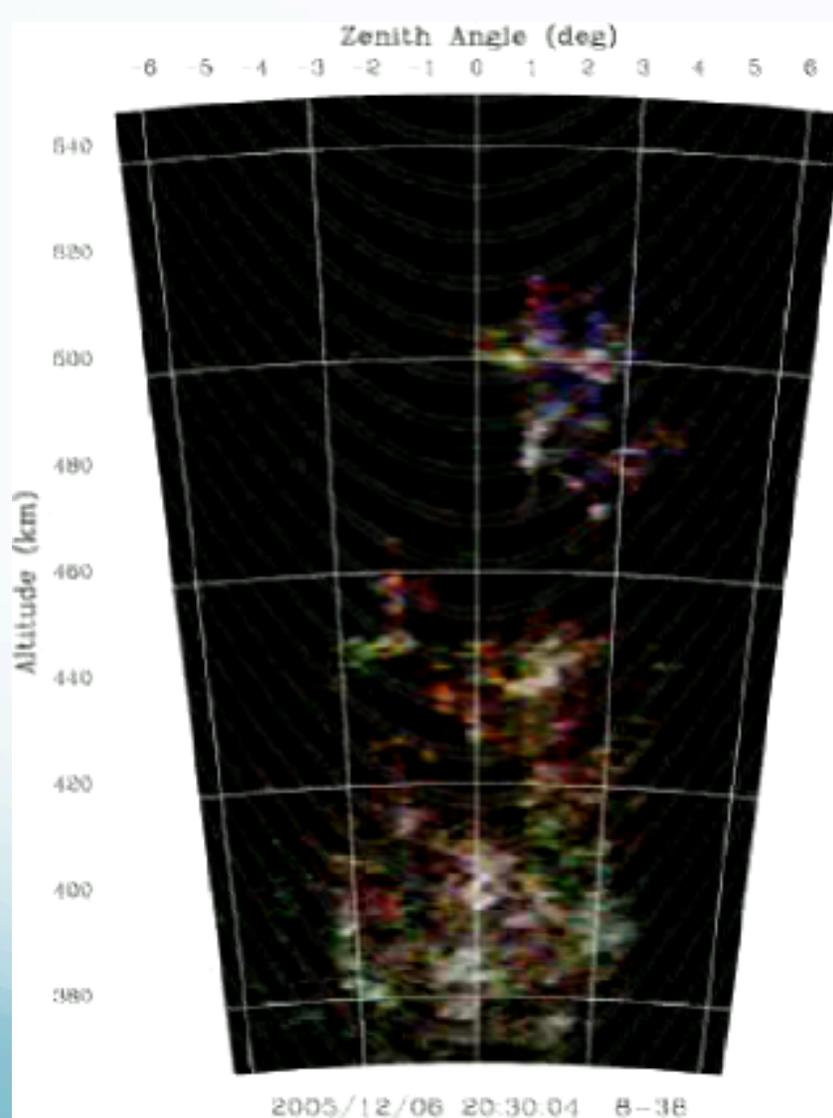
400

300

200



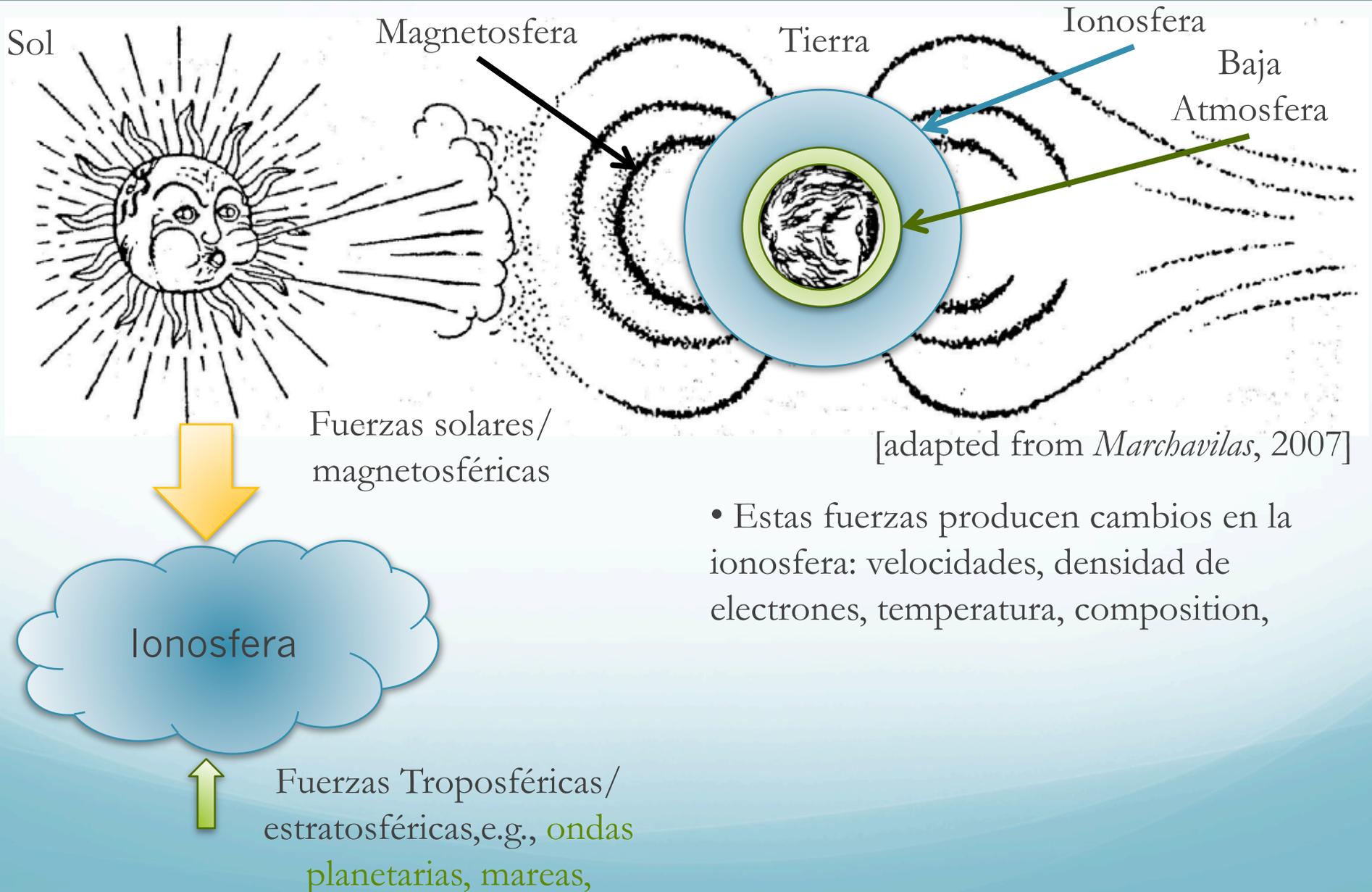
Radio-videos de “nubes” ionosféricas



“Exportación” de tecnología



Fuerzas que afectan la Ionosfera



Artículo en New Scientist

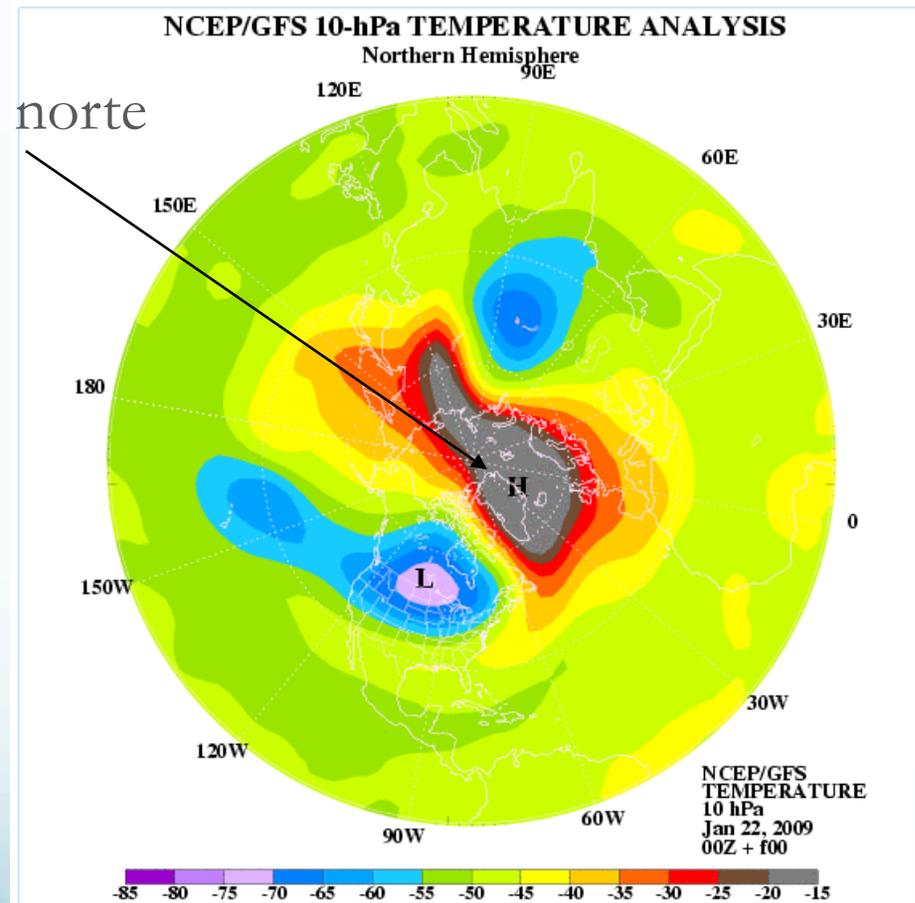
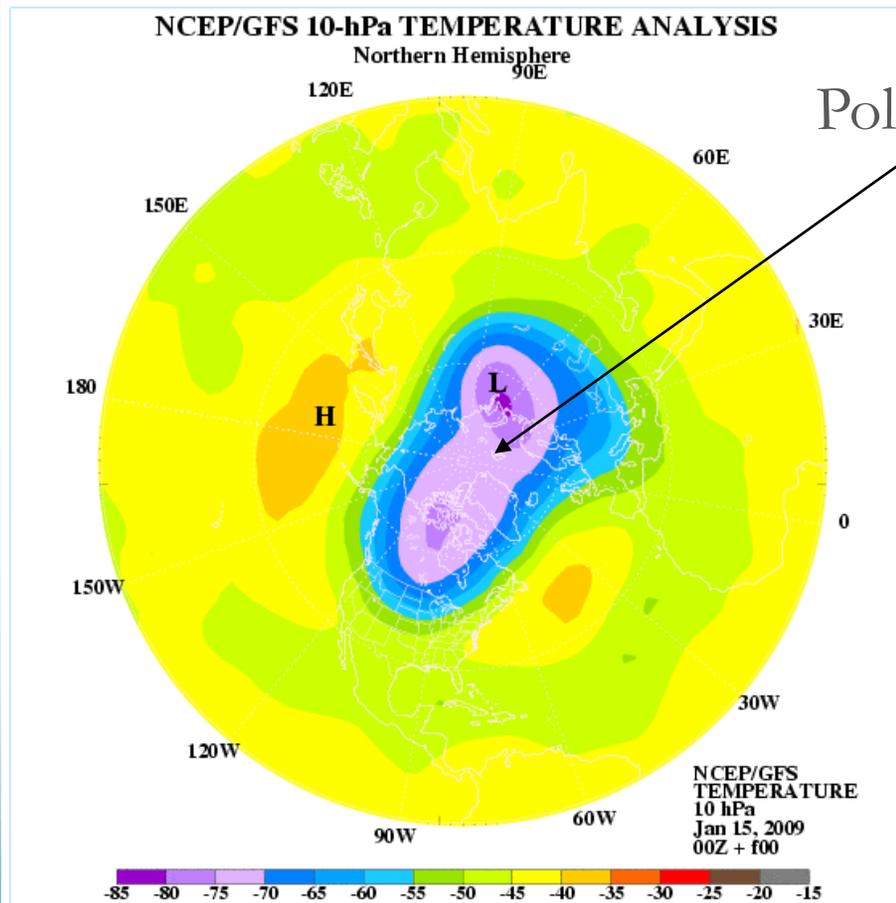
NewScientist

New explanation for space weather

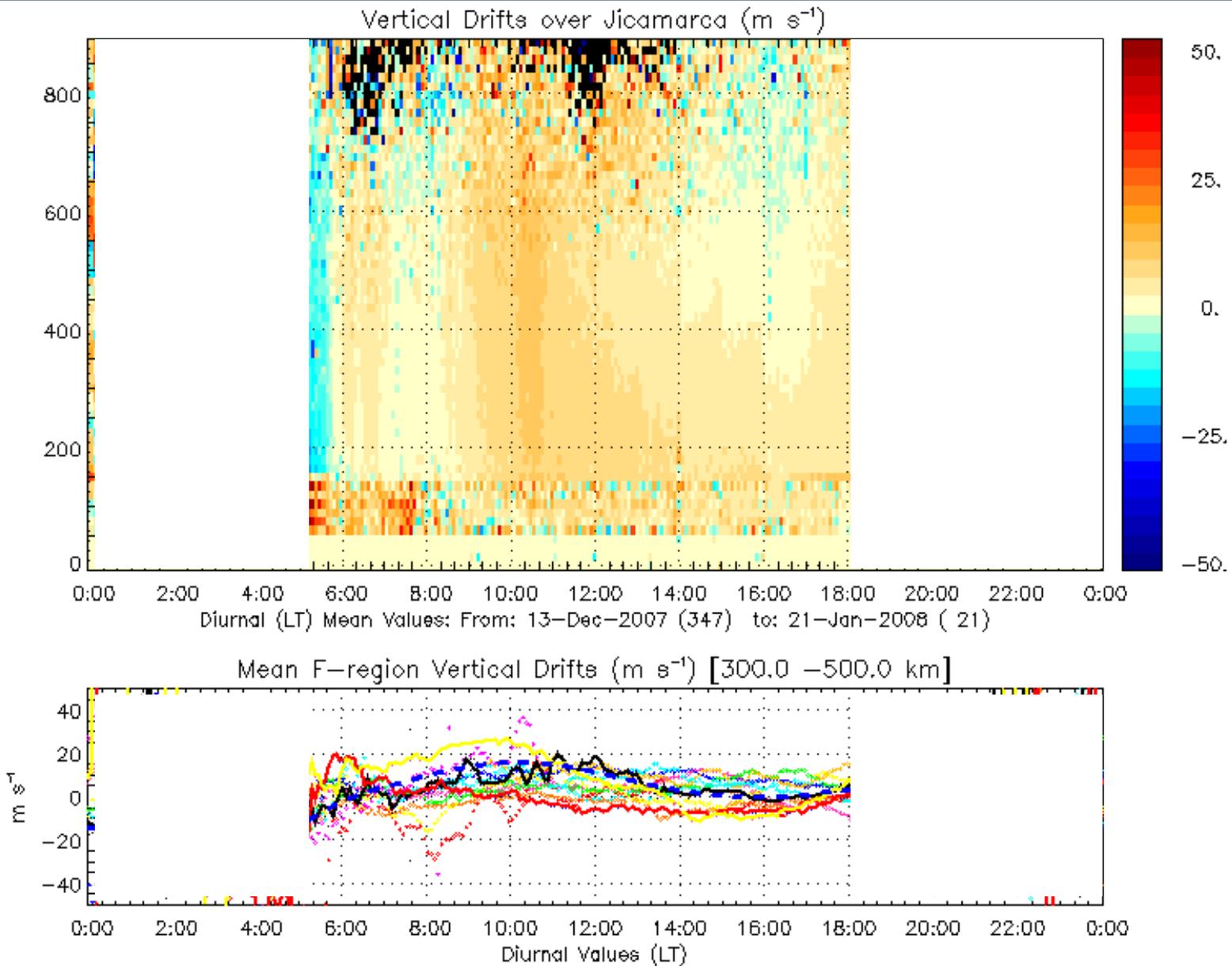
Temperaturas de la estratósfera Polar

antes de calentamiento

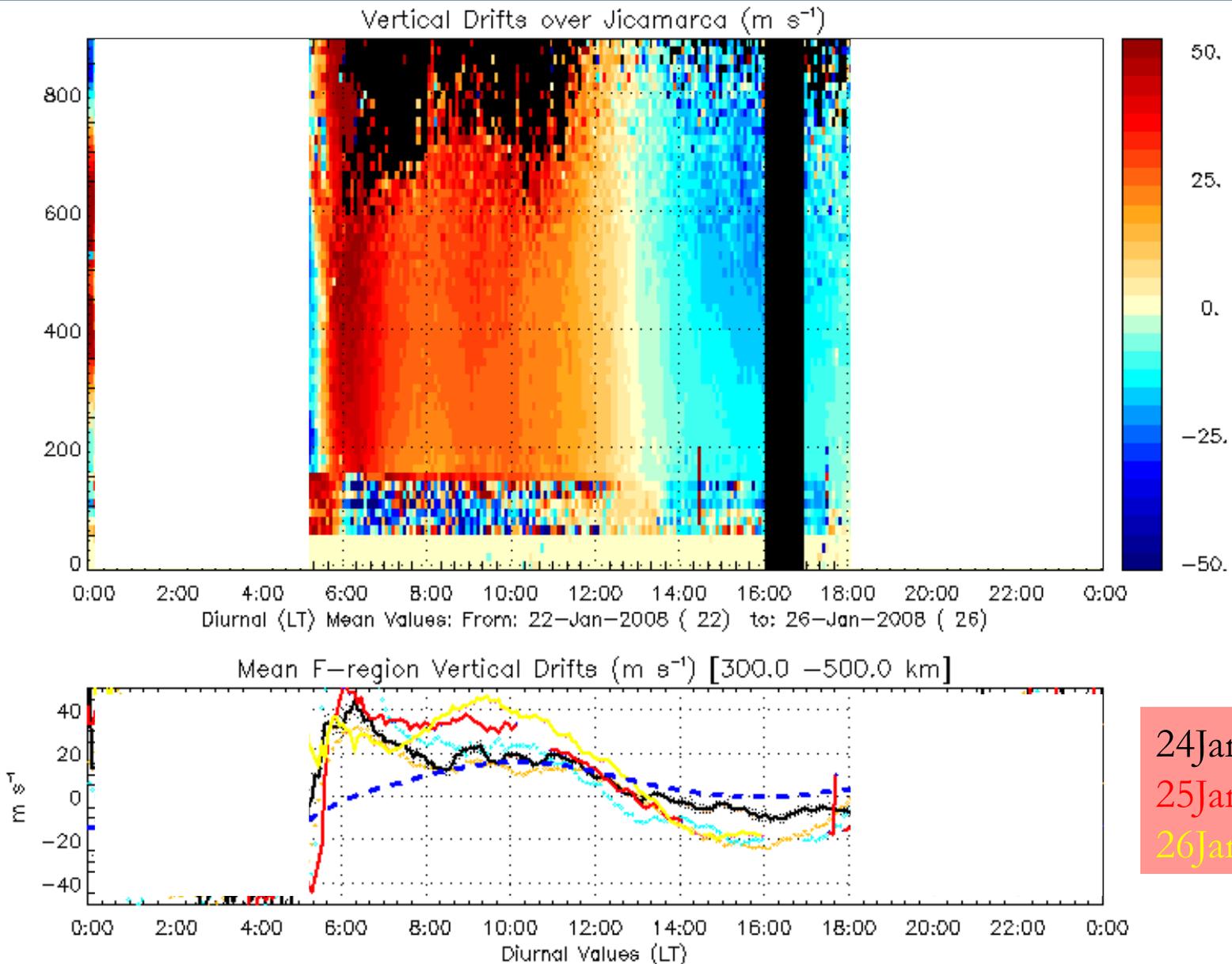
durante calentamiento



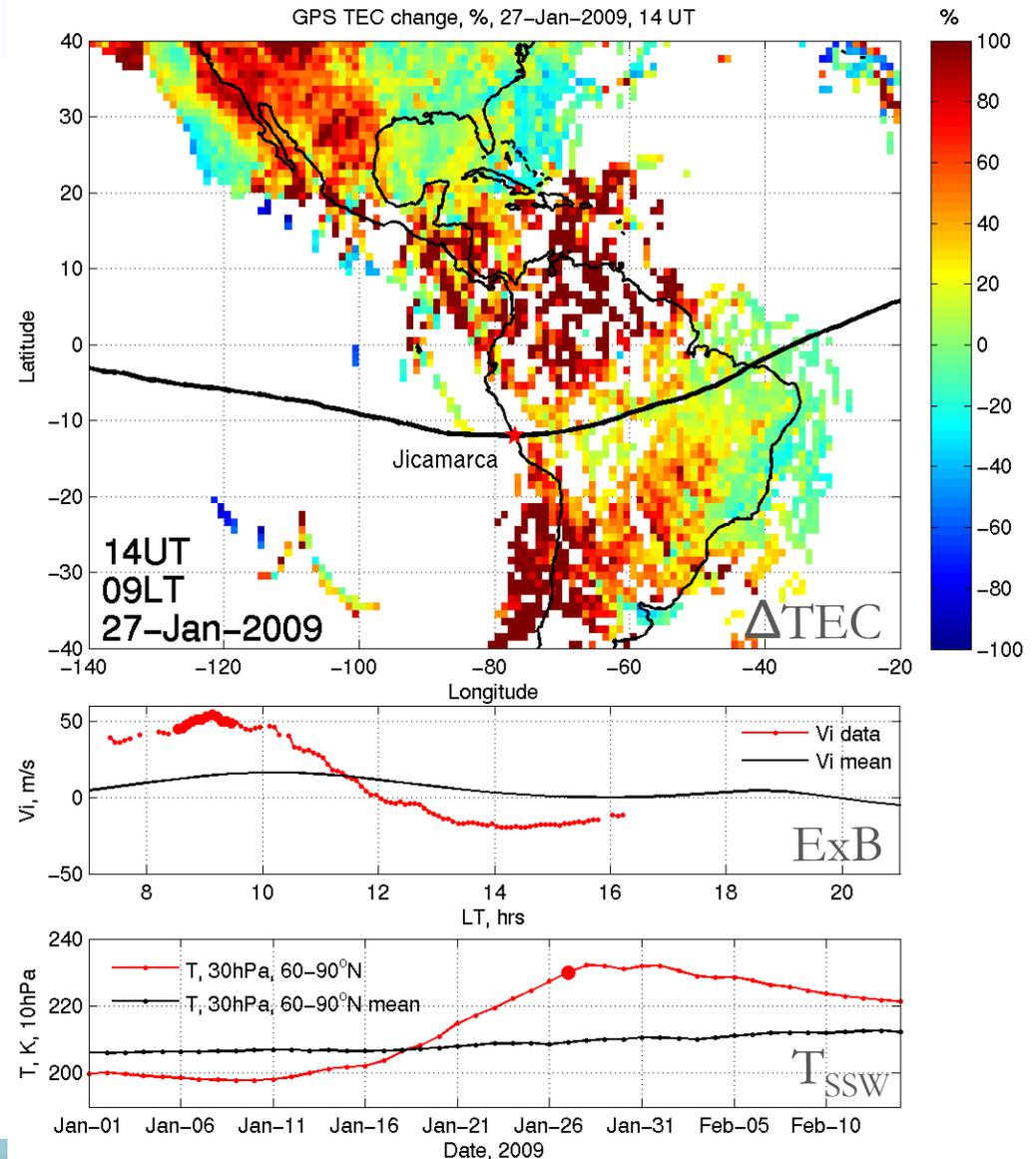
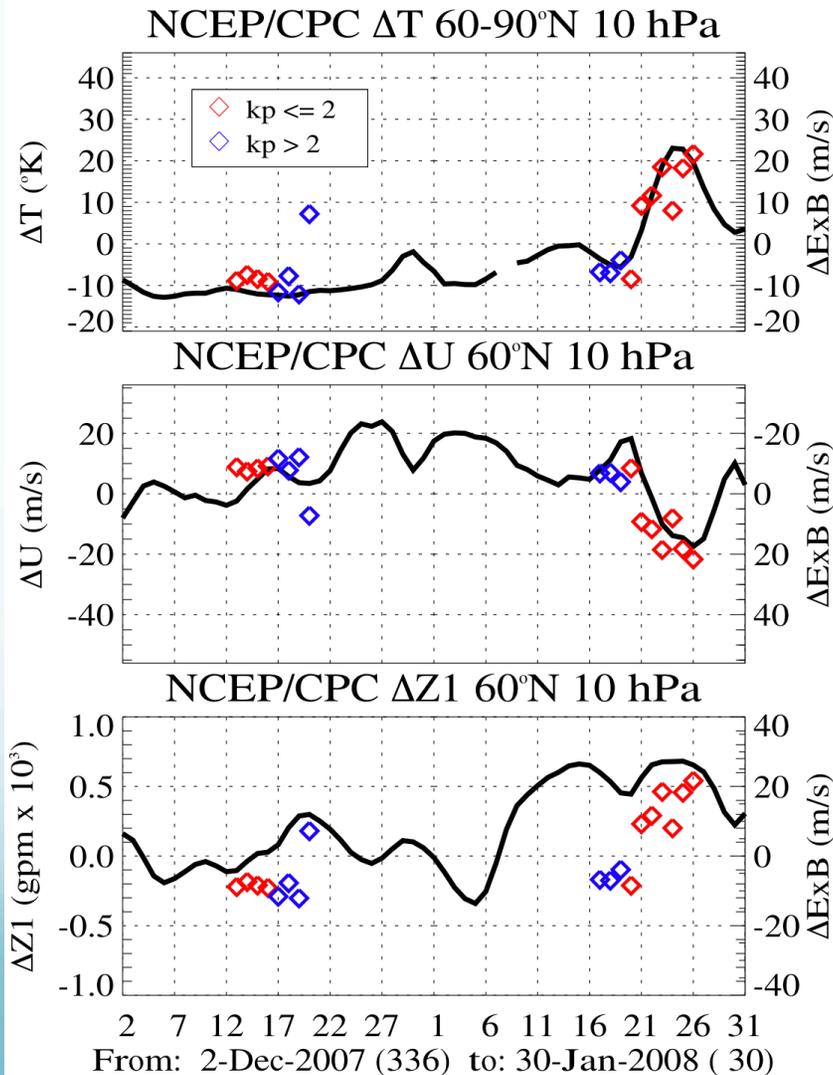
Campos eléctricos: Condiciones “Normales”



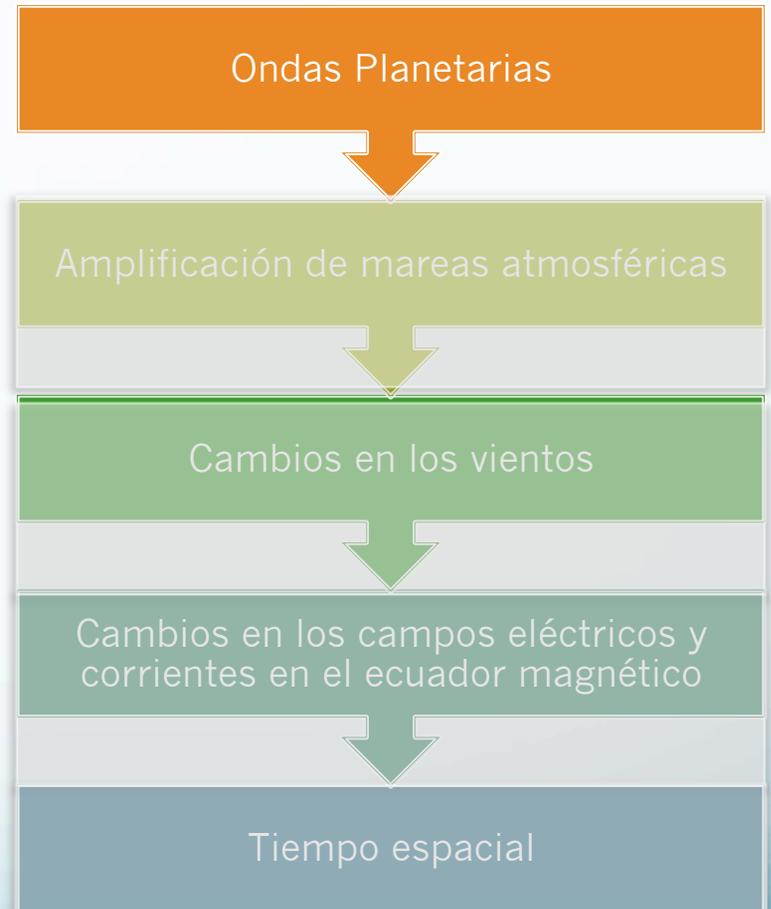
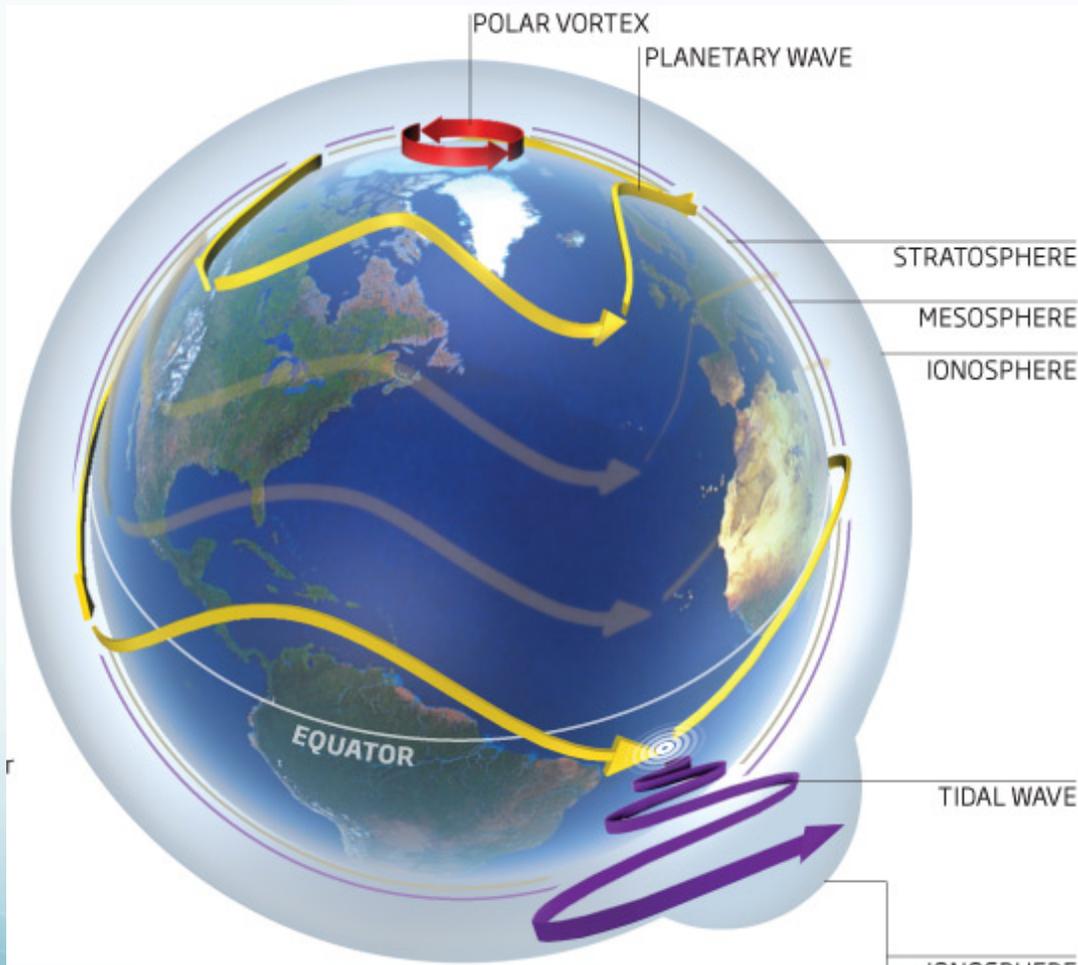
Campos eléctricos: Condiciones “Calentamiento”



Acoplamiento de regiones y sus efectos



Posible Escenario



[infográfico del artículo New Scientist
“Phantom storms: How our weather links into space”
por J. Cartwright]

