

First results from the
Bahir Dar Fabry Perot
Interferometer
Observatory
(Ethiopia – Eastern Africa)

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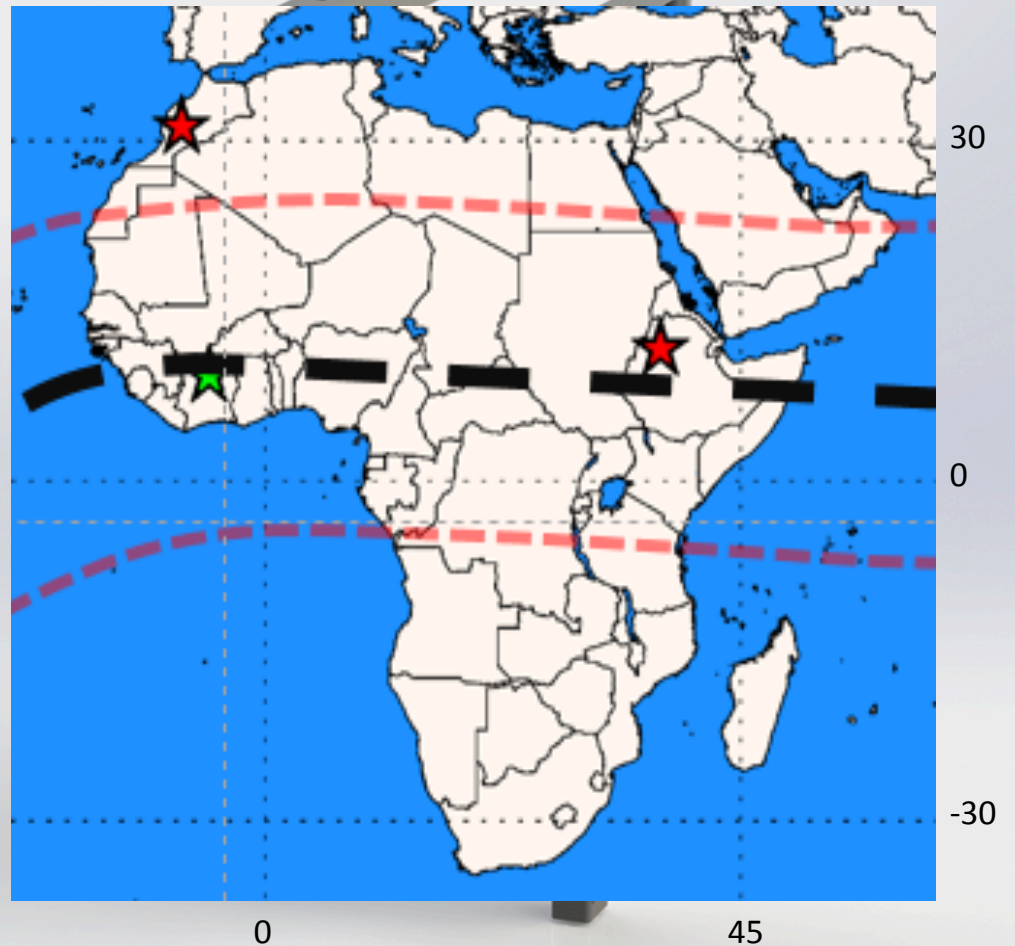
Luis Navarro

Daniel Fisher

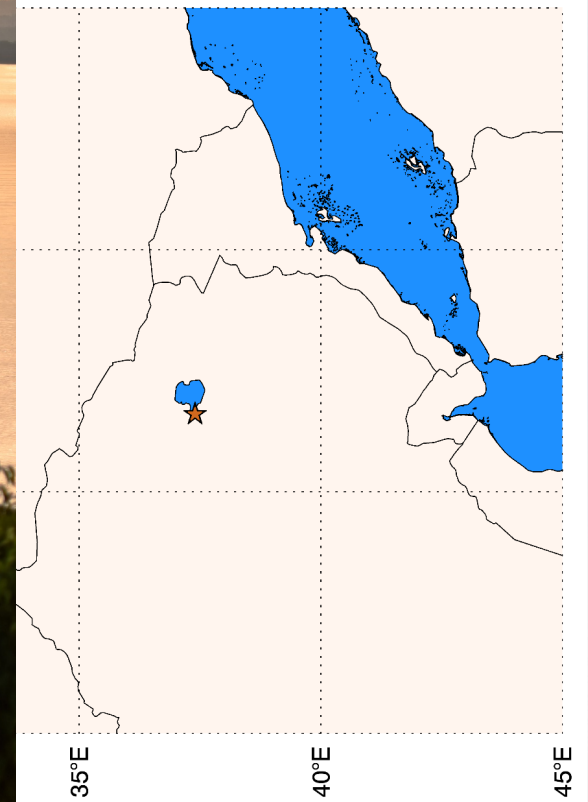


Outline

- Science question
 - Unique aspects of Africa and ionospheric research;
- Fabry Perot interferometer;
- Bahir Dar (BDR) – Ethiopia
- Deployment;
- First set of results;
- Current state of the sky;
- Summary...



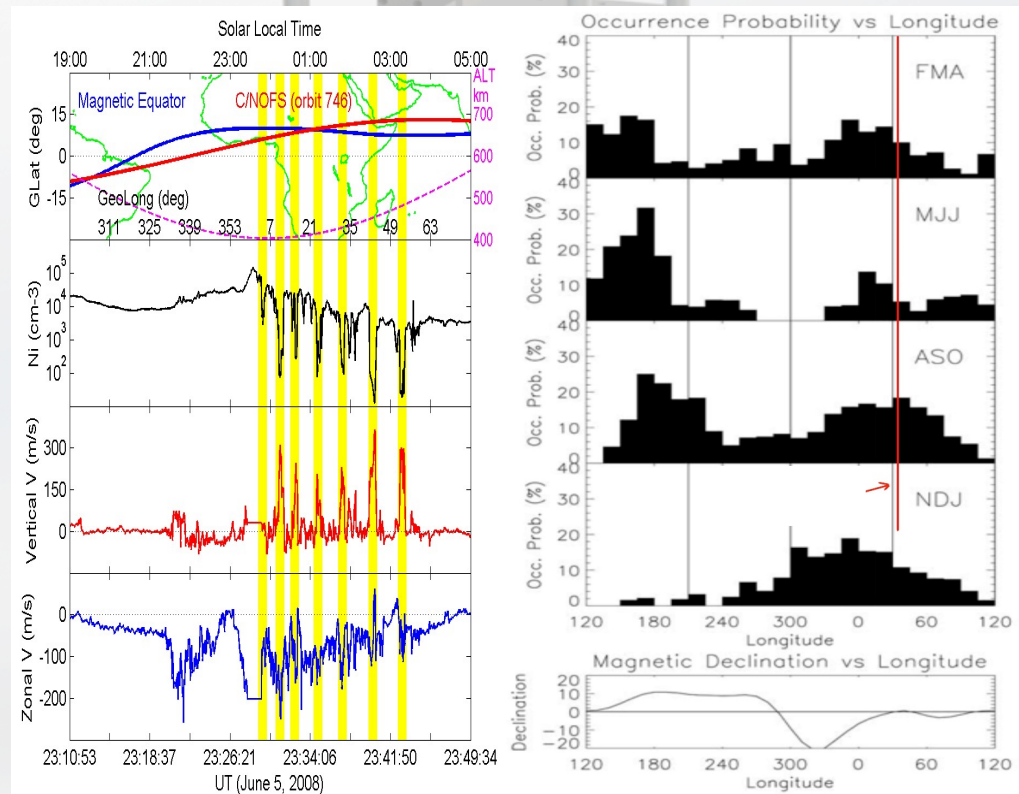
Bahir Dar – Ethiopia



PM

Unique aspects of the African region

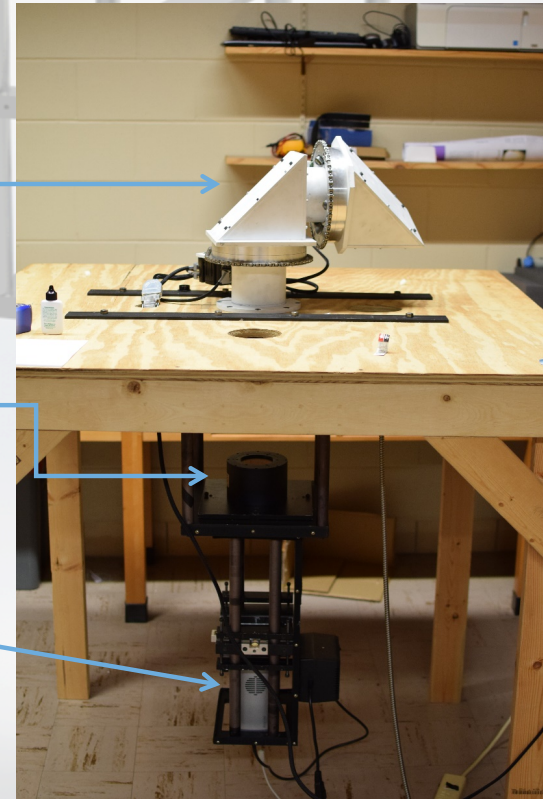
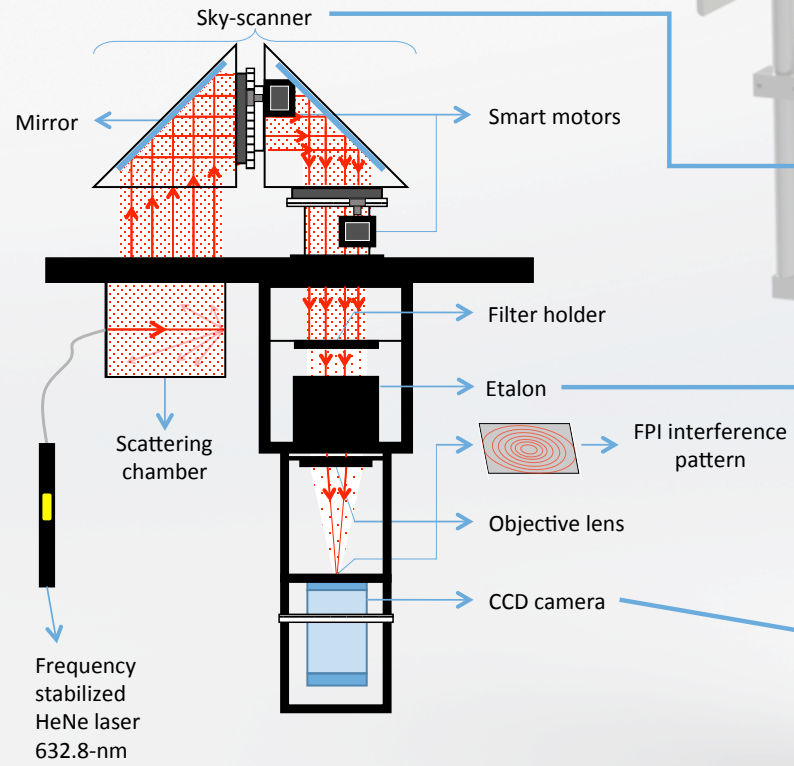
- Not a whole lot of attention and close proximity to the geomagnetic equator;
- Geomagnetic equator approximately parallel to the geographic equator;
- High occurrence of plasma depletions;
- Overlapping coherent radar data...



Courtesy of Dr. E. Yizengaw

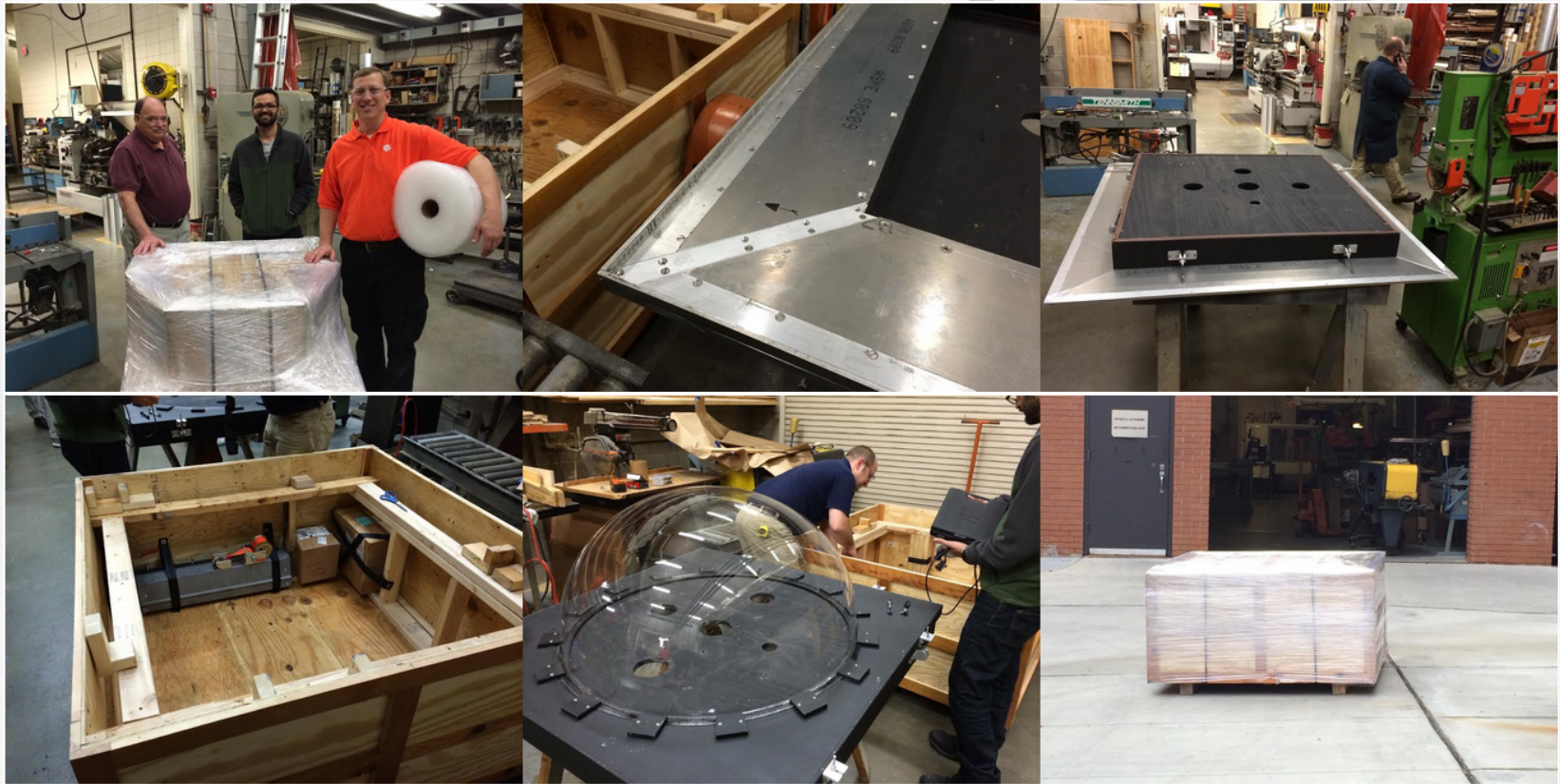
from Hei et al., 2005

FPI system



Test table (room 312)

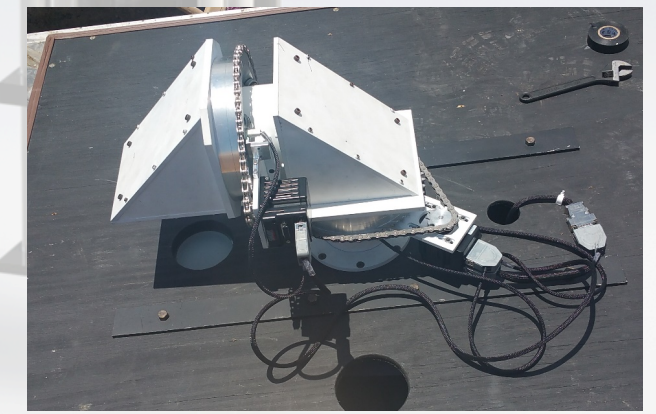
Deployment



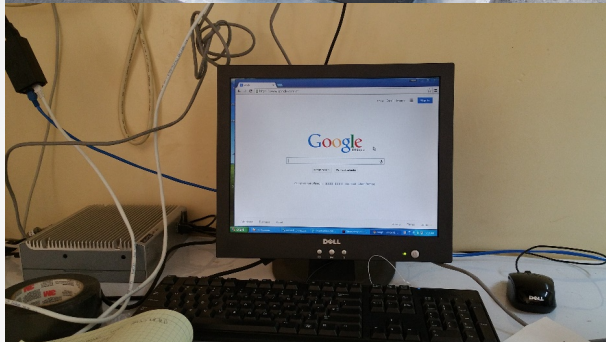
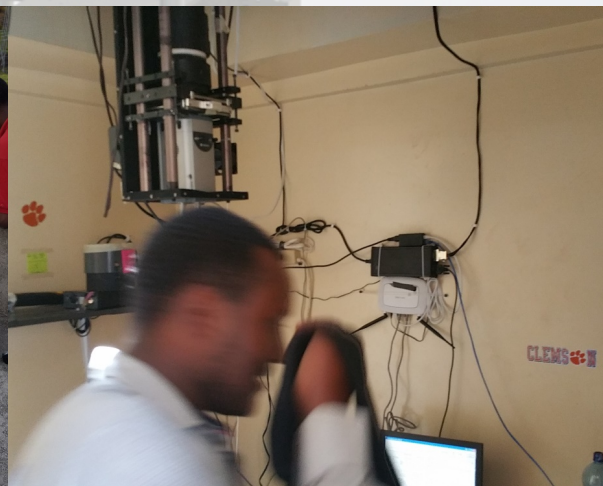
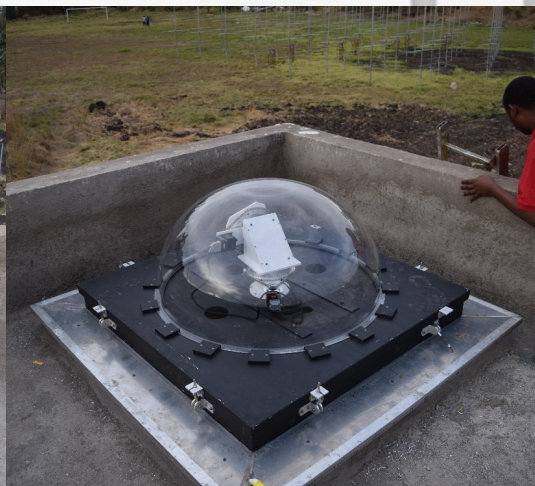
Deployment (2 months later)



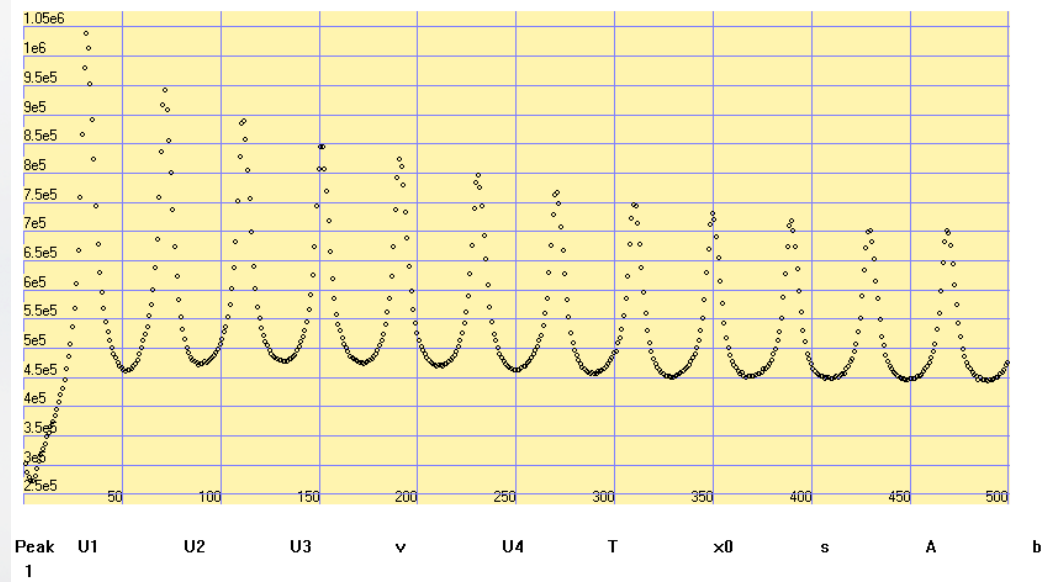
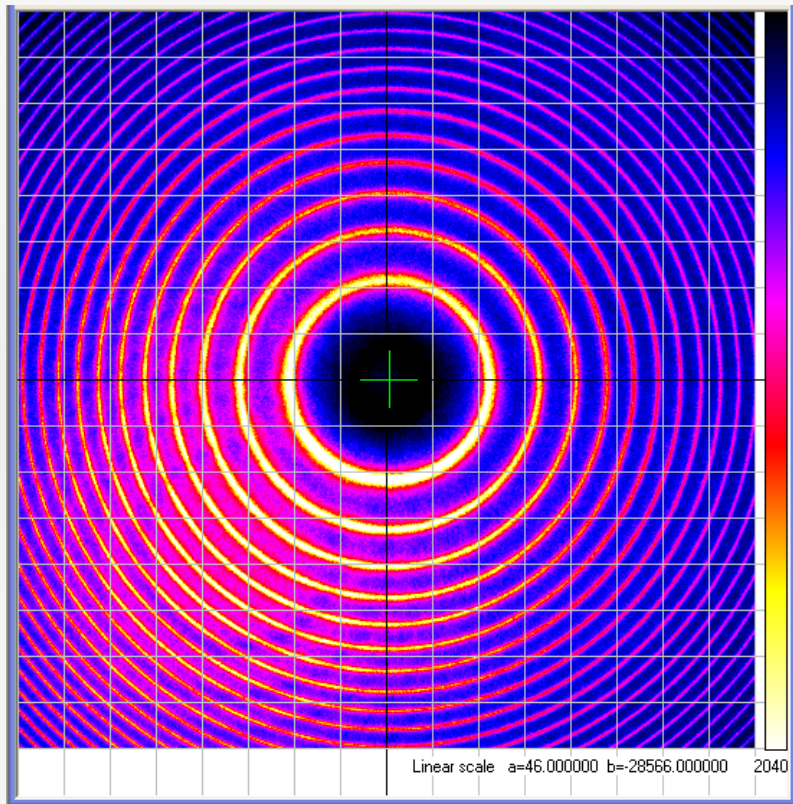
Deployment



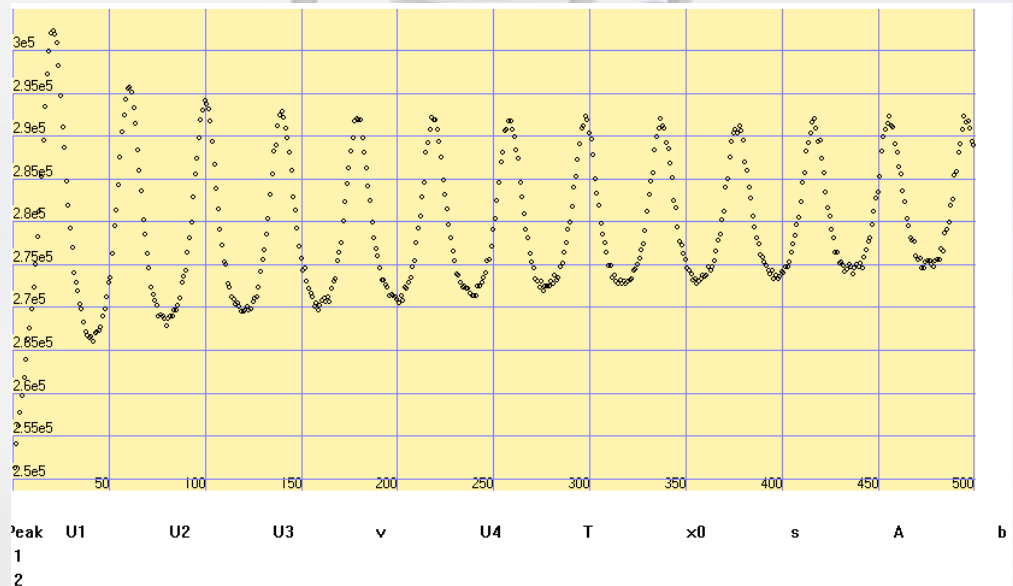
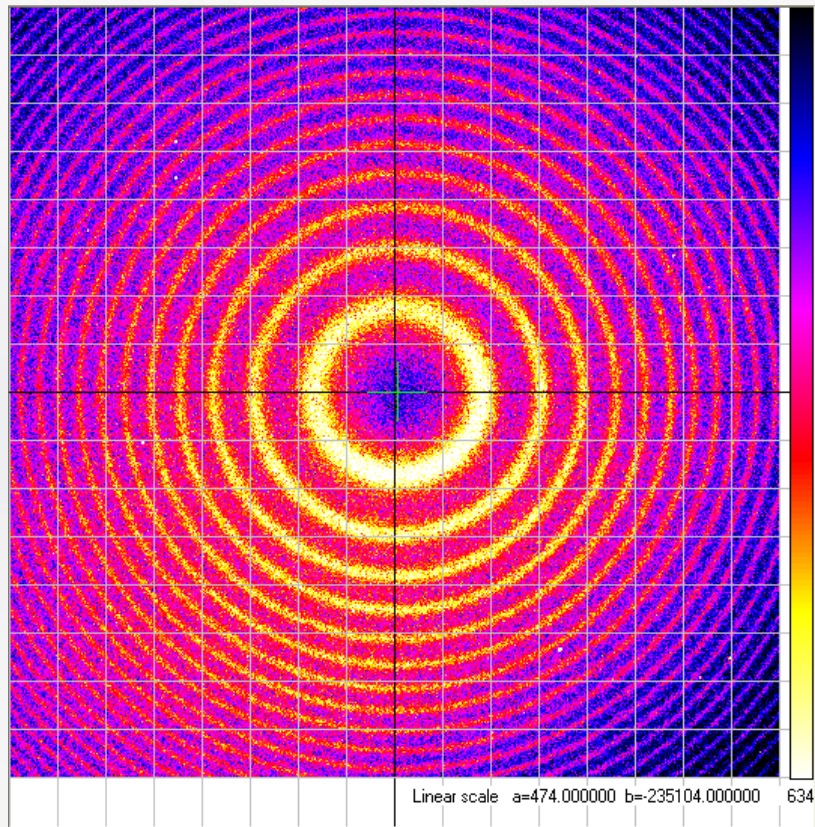
Deployment



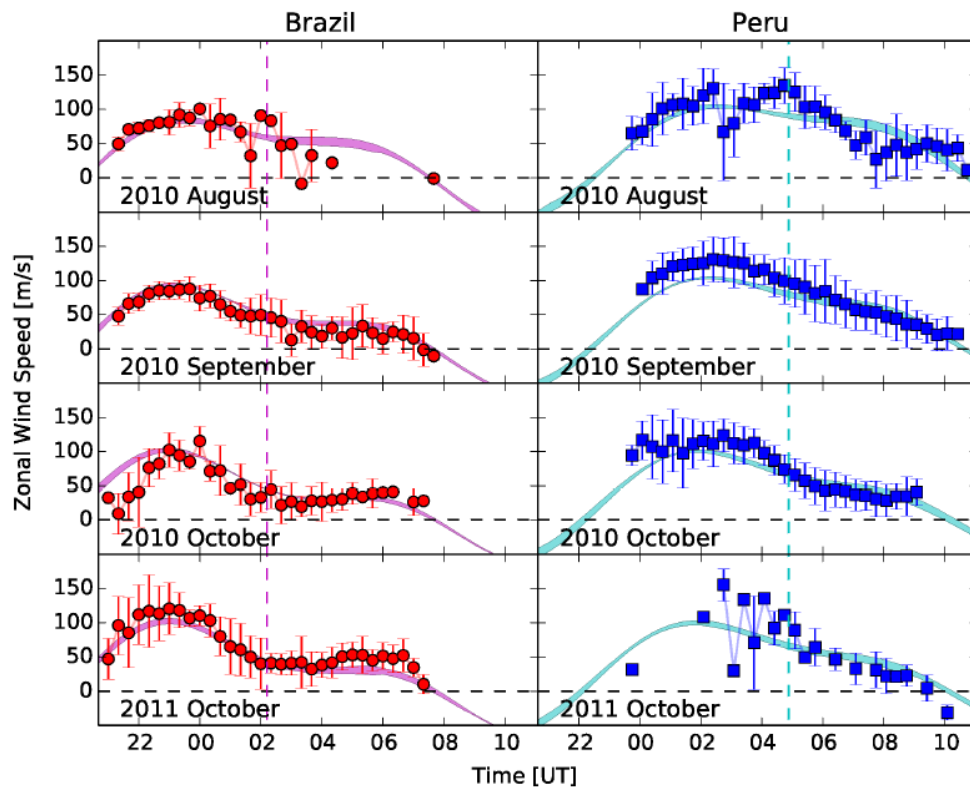
First good quality laser image



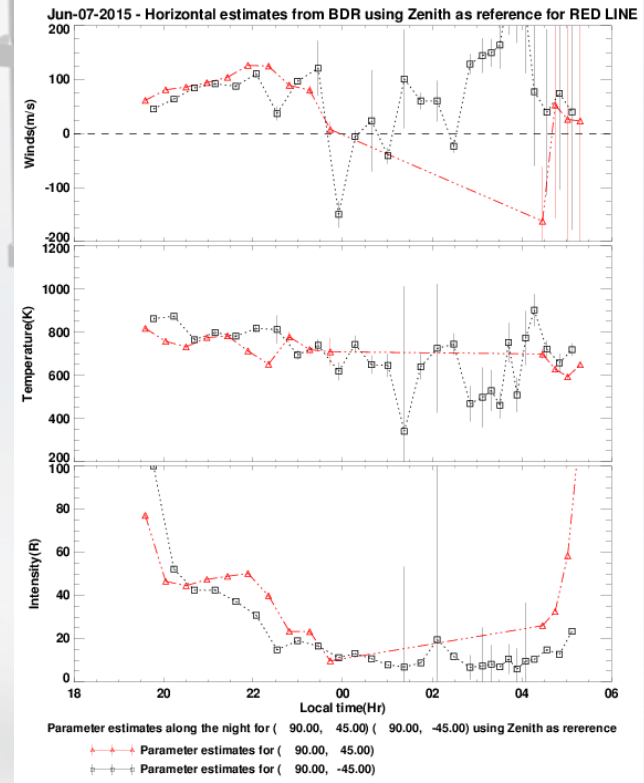
First sky image



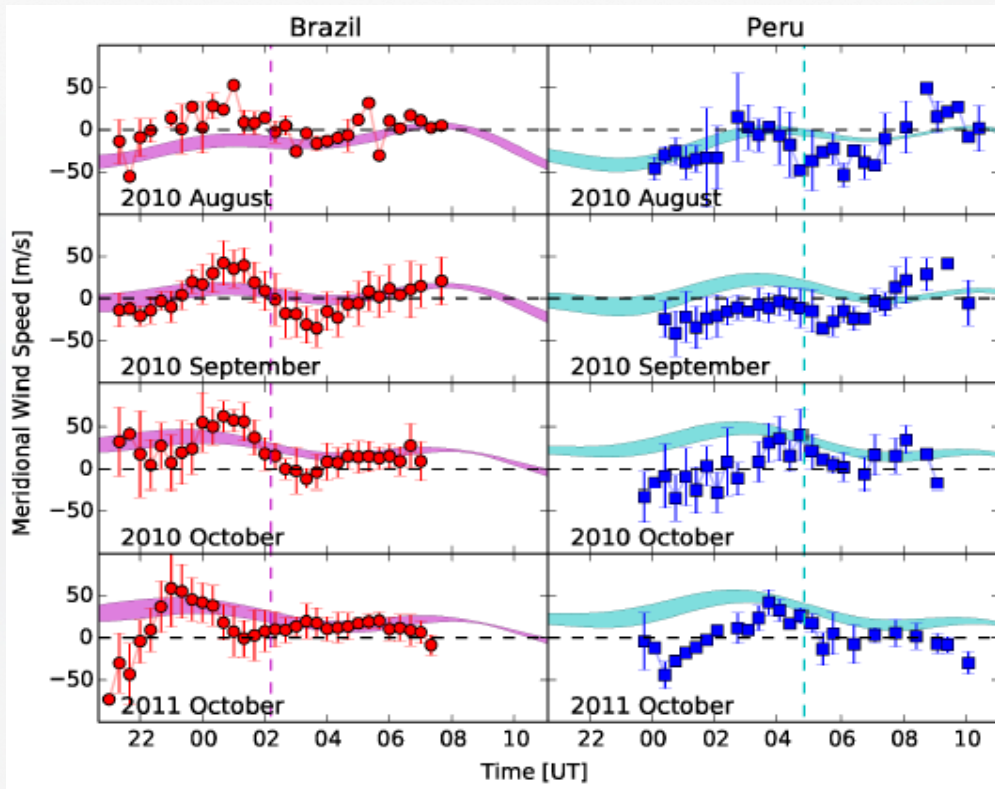
First set of results



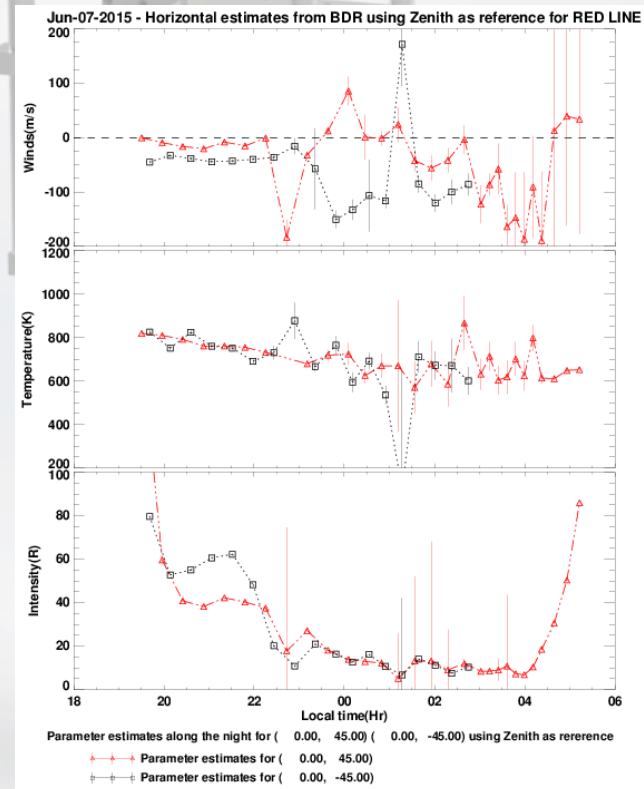
from Meriwether et al., 2015



First set of results



from Meriwether et al., 2015



First set of results

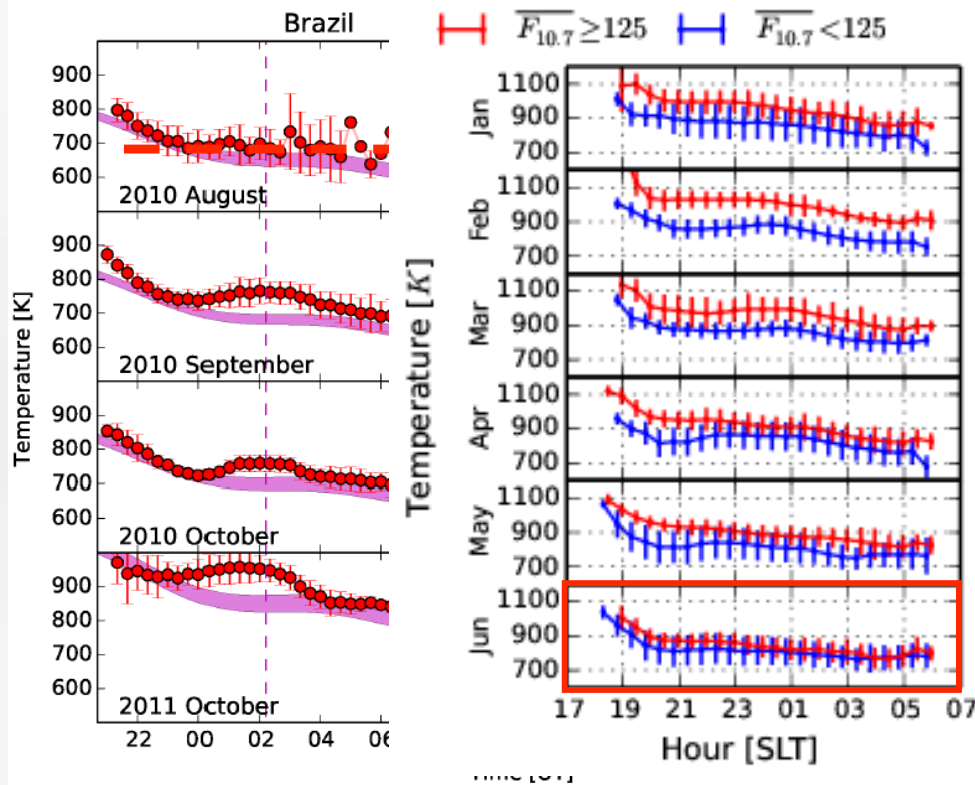
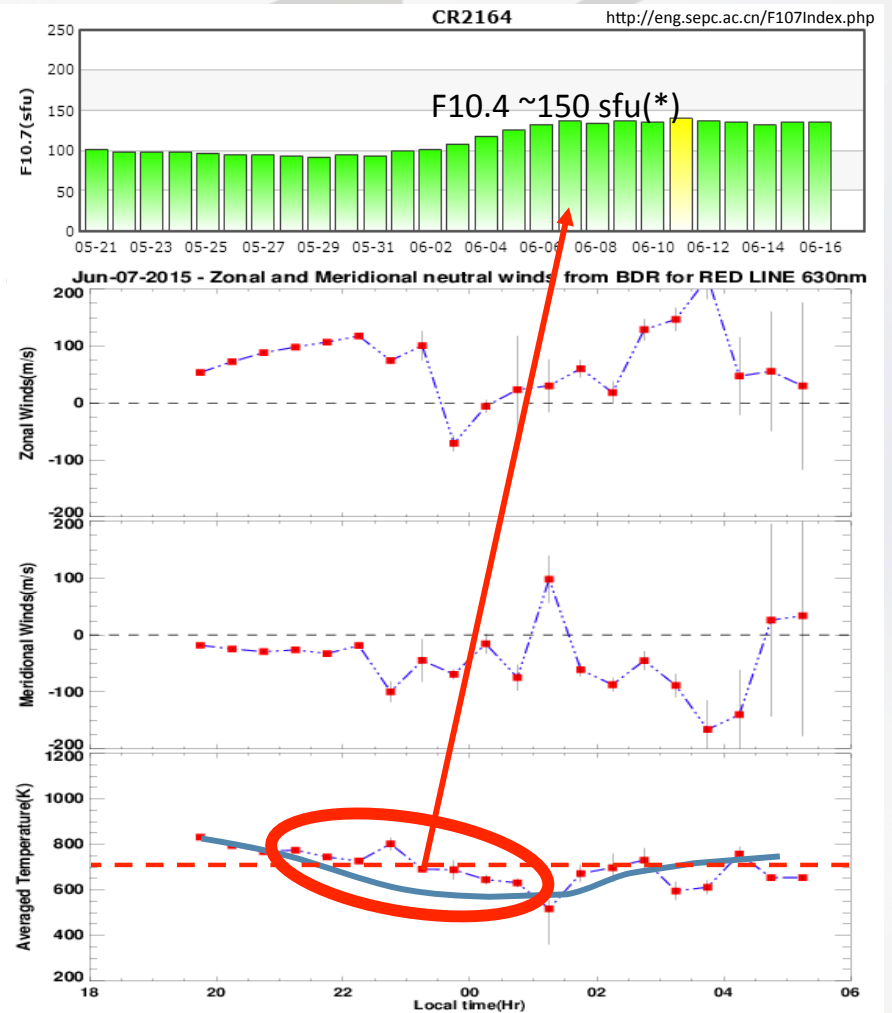


Figure from *Meriworth et al., 2015*



Summary

- The system is safe, healthy and operational;
- Cloudless measurements show consistency with the literature;

First ever heavily guarded FPI observatory in the world!!!



Fully auto AK-47
Cyclic rate of fire: 600 rds/min
Muzzle velocity: 715 m/s
Effective firing range: 350 m

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