

# Jicamarca contributions to UAF Coordination

David L. Hysell and Jorge L. Chau

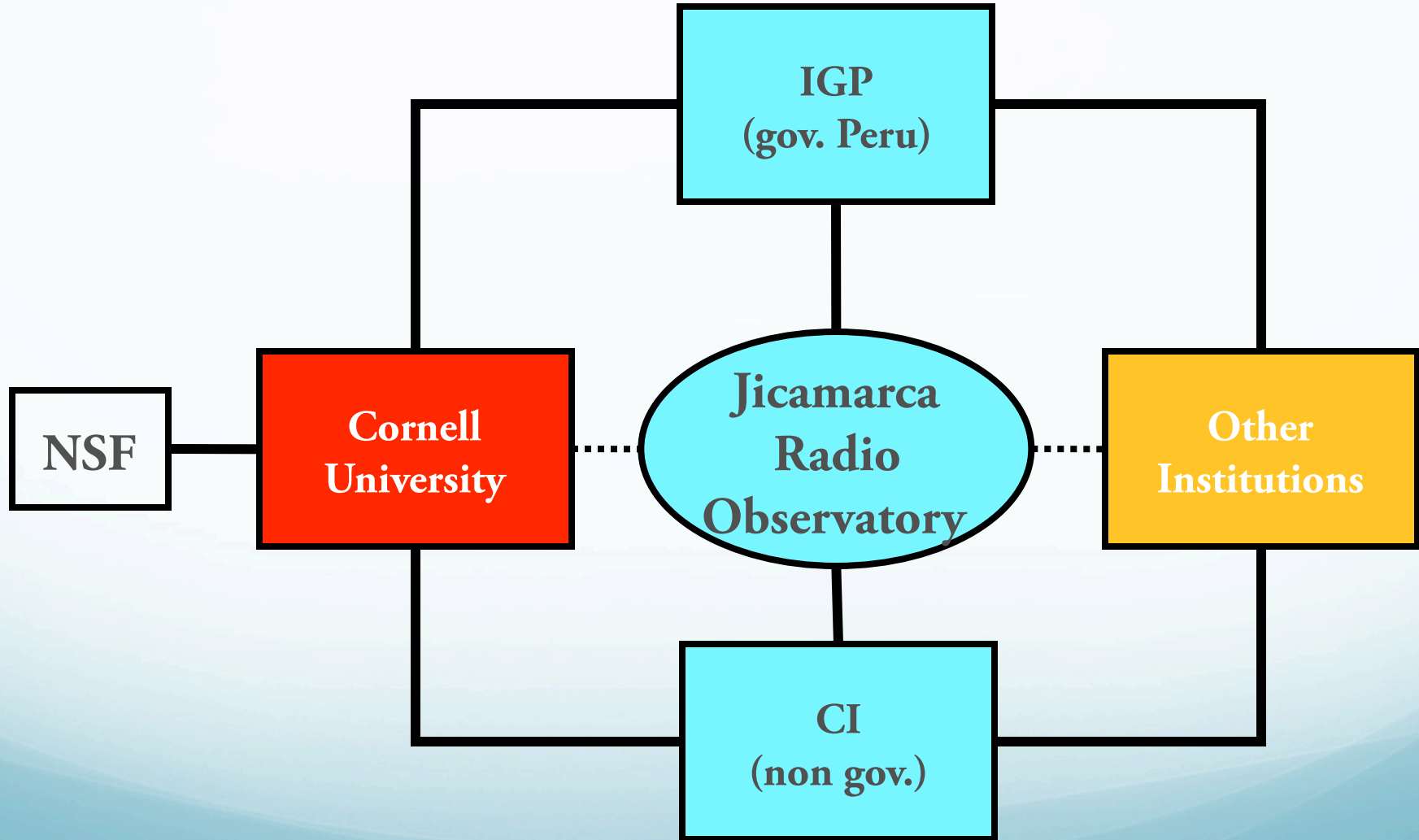
CEDAR 2009, Santa Fe, June 30, 2009

# JRO Considerations/Contributions

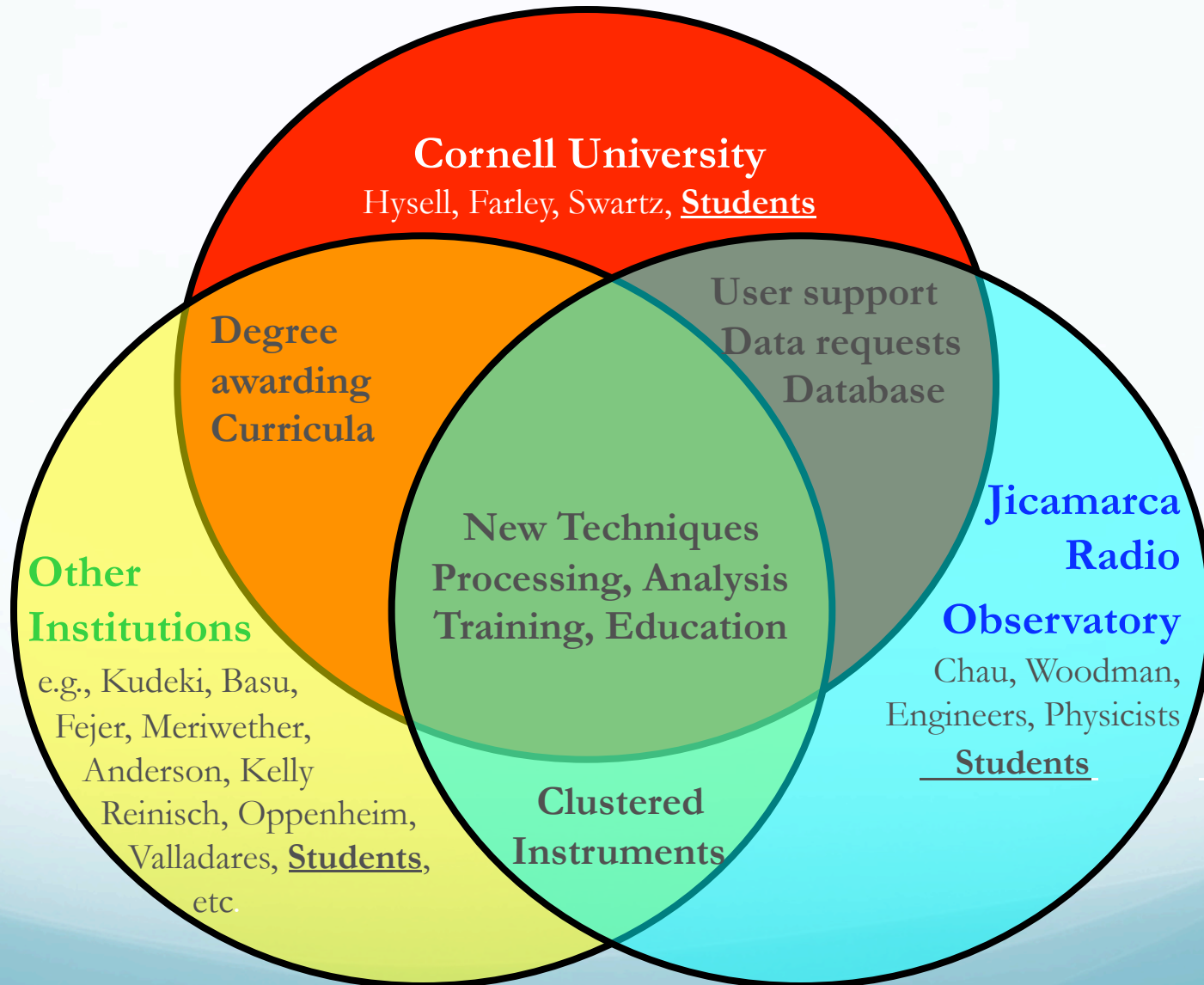
---

- Science planning
  - 5-year planning (PI, co-PI, users)
  - Curiosity-driven (all)
- On-site management
  - Peruvian Government + Non-profit organization
  - “Optimized” used of people’s time
- Engineering support
  - RF + Digital electronic expertise
  - Project management concept
  - Outsourcing (?)

# Current Links



# JRO Model



# Planned and curiosity-driven science

---

## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside

# Planned and curiosity-driven science

---

## Capability

- Radar imaging
- E region densities, winds
- MLT winds
- Comprehensive E-fields
- Coulomb collision model
- Perp. IS modes
- Low-power modes
- Full-profile mode



## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside

# Planned and curiosity-driven science

---

## Capability

- Radar imaging
- E region densities, winds
- MLT winds
- Comprehensive E-fields
- Coulomb collision model
- Perp. IS modes
- Low-power modes
- Full-profile mode



## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside

# Planned and curiosity-driven science

---

## Investigation

- Interferometry
- Bistatic Faraday Rotation
- Meteor-trails
- 150-km echoes
- Small aspect angle IS effects
- Mesospheric echoes
- EEJ, ESF, irreg,  $\mu$ physics
- Inverse methods



## Capability

- Radar imaging
- E region densities, winds
- MLT winds
- Comprehensive E-fields
- Coulomb collision model
- Perp. IS modes
- Low-power modes
- Full-profile mode



## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside



# Planned and curiosity-driven science

## Investigation

- Interferometry
- Bistatic Faraday Rotation
- Meteor-trails
- 150-km echoes
- Small aspect angle IS effects
- Mesospheric echoes
- EEJ, ESF, irreg,  $\mu$ physics
- Inverse methods



## Capability

- Radar imaging
- E region densities, winds
- MLT winds
- Comprehensive E-fields
- Coulomb collision model
- Perp. IS modes
- Low-power modes
- Full-profile mode



## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside

# Planned and curiosity-driven science

## Investigation

- Interferometry
- Bistatic Faraday Rotation
- Meteor-trails
- 150-km echoes
- Small aspect angle IS effects
- Mesospheric echoes
- EEJ, ESF, irreg,  $\mu$ physics
- Inverse methods



## Capability

- Radar imaging
- E region densities, winds
- MLT winds
- Comprehensive E-fields
- Coulomb collision model
- Perp. IS modes
- Low-power modes
- Full-profile mode



## Contribution

- C/NOFS Science
- ITM Coupling
- Stratospheric warming
- Storms and penetration
- Photoelectrons
- Enhanced IS
- Therm. grav. Wave
- Topside