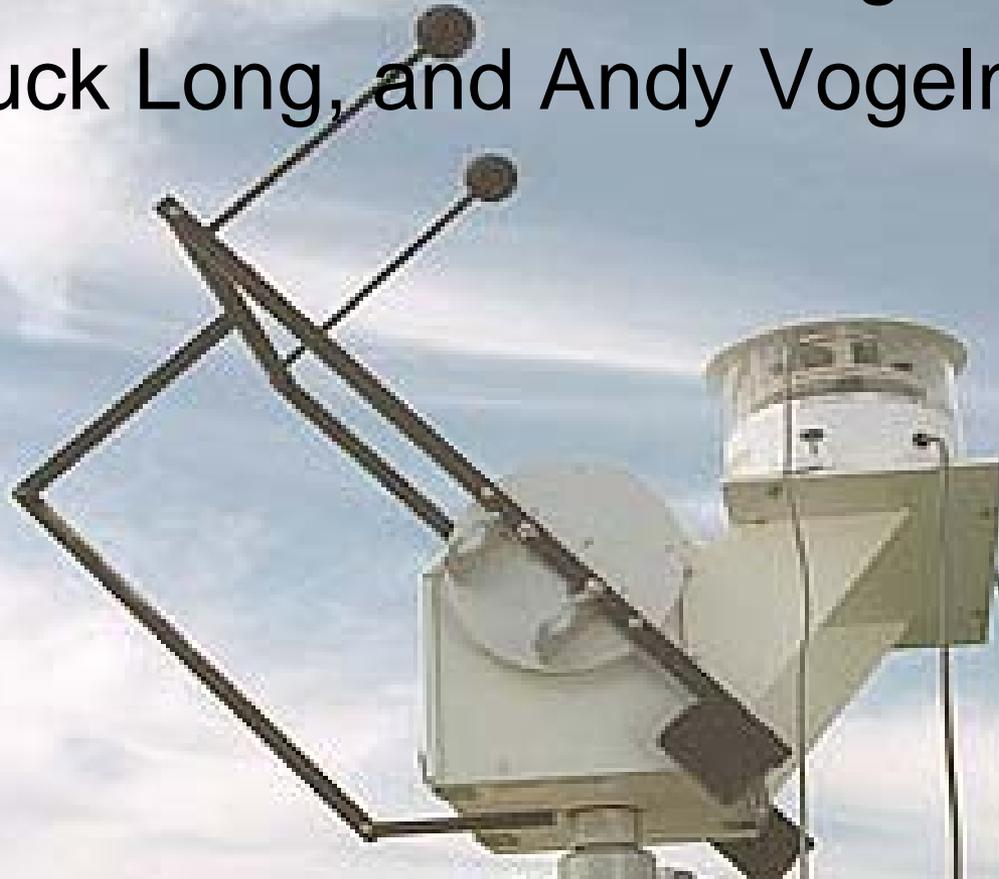


# Radiative Processes Working Group

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**RPWG Meeting  
Madison, WI  
17-19 Sep 2007**

# RPWG Survey (1)

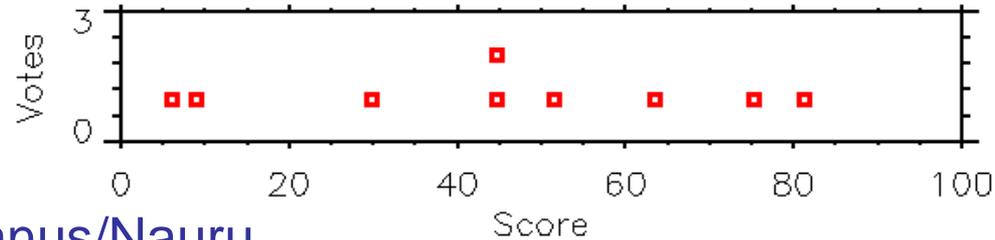
- Wanted to get feedback from the WG on the relative priorities of different instruments, VAPs, etc.
- Constructed an email survey similar to the one used by the CPWG last year
- Survey had 6 sections:
  - Instrument priorities (capital)
  - Instrument priorities (expense)
  - Operational VAPs
  - VAPs in development
  - Newly proposed VAPs
  - Overarching issues
- Asked responders to provide, for all items, both
  - High / Medium / Low rankings
  - Numerical score (1 - N, only use each digit once)

# RPWG Survey (2)

- In addition to ranking, responders were also encouraged to provide free-form comments
- 17 people responded (out of 38 who attended)
  - Many only partially filled out the survey
  - The “no opinion” made the analysis more challenging
  - Most common free-form comment (paraphrased): “This was a hard survey!”
- Assigned a “normalized score” to each item, where each H=3, M=1, L=0 and divided total score by amount possible
- A pretty consistent picture has emerged from the results between the normalized score and the numerical rankings

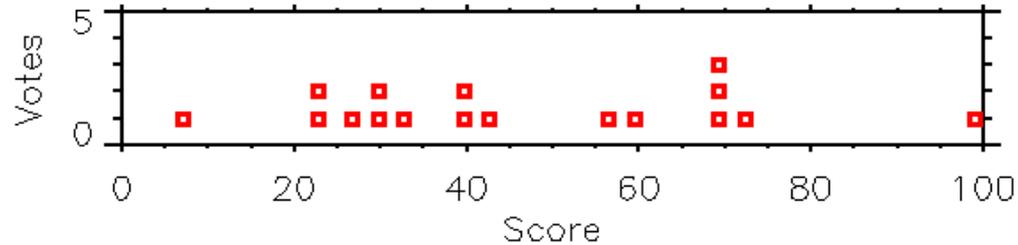
# Instrument Priorities (Capital)

- Two winners:
  1. Replace current MWRs with 3-channel systems
  2. Upgrade NSA MMCR processor to PIRAQ-III
- Next tier was fuzzier:
  3. MMCR future upgrades
  4. AVA at SGP
  5. Sonde digiCora-III at Manus/Nauru
  6. Raman lidar at NSA site (comment: conduct an IOP first)
  7. MPL polarization switching
- Overwhelming majority voted to delay AVA for at least 1 yr to allow more study/planning (11 yes vs. 2 no)
- Common thread: Maintain current measurement capability as high priority (i.e., don't let basic measurements degrade)



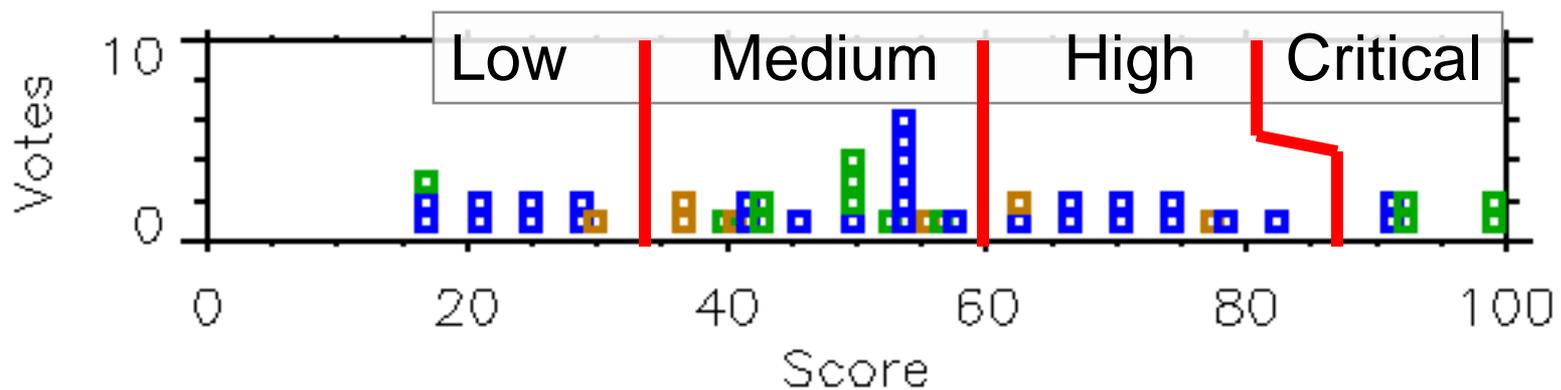
# Instrument Priorities (Expense)

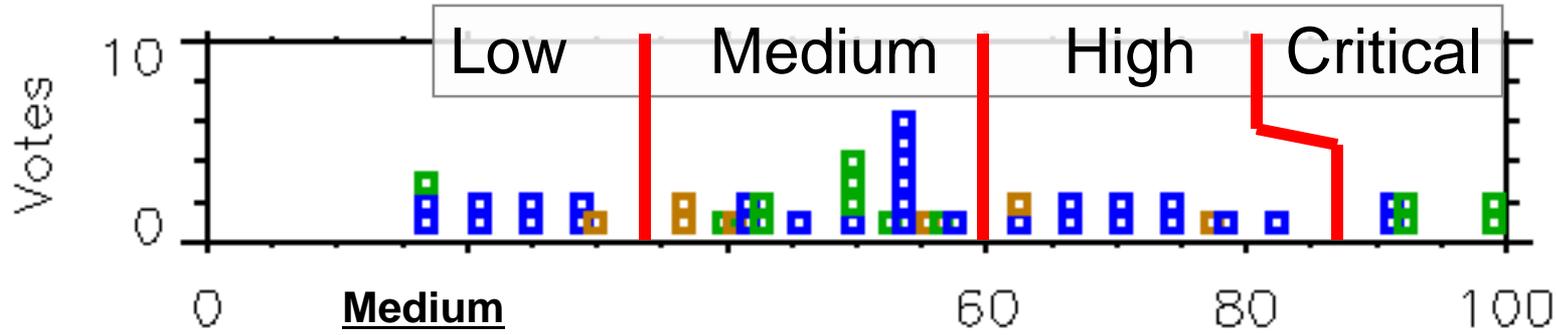
- One clear winner:
  - 2 sondes / day at NSA
- 2<sup>nd</sup> tier priorities
  - Upgrade/refurbish MMCR antennas
  - MFRSR for LWP retrievals
  - Upgrade 2 remaining AERIs
  - MFRSR 1.6  $\mu\text{m}$  channel
  - A-band spectrometer
  - Absolute scanning IR radiometer
- Basic comment of “maintain what you have” was echoed again by several responders
  - This is why most ranked new instruments (e.g., A-band spectrometer) below maintenance issues (e.g., MMCR antenna)



# VAP Priorities

- Includes
  - Operational (30 VAPs)
  - In Active Development (13 VAPs)
  - Newly Proposed (7 VAPs)
- 4 rough groupings:





- Low**
- MPL Depol Ratio
  - AERIPROF
  - AOS Fit RH
  - ~~QME AERIPROF~~
  - ~~LBL MWR~~
  - MWR AVG
  - QME Cloud
  - ~~LBL Cld Emis~~
  - ~~ARSCL Stat~~
  - TWR MR

- Medium**
- QC Rad
  - Micro-ARSCL
  - Local Cld Field QME
  - QME LW Flux
  - MPLNOR
  - RLPROF (ASR, EXT, DEP, BE, Merge, TEMP)
  - Aerosol Best Est
  - Sfc Spec Albedo
  - GSW Corr
  - Cld Vis
  - QME AERI LBL
  - Sfc Cld Grid
  - IAP
  - AIP
  - LW AERI QME to NSA/TWP
  - AOS Corr
  - RSS Langley/AOT
  - RS IRT Cld Screen

- High**
- BE Flux
  - SW Diff Corr
  - SW QME
  - SW Flux Anal
  - Langley
  - MFRSR Cld OD
  - RLPROF MR
  - MFRSR AOD
  - AERI NoiseFilter
  - Full Flux Anal
  - LBLRTM AERI

- Critical**
- MergedSounding
  - BBHRP
  - MWRRET
  - Microbase
  - ARSCL
  - LSSONDE

I personally recommend retiring these

# VAP Priorities

# Overarching Issues

- Four issues were considered:
  - VAP evaluation release
  - Manual VAP QC
  - Upgrading VAPs to new QC standards
  - Updating VAP webpages / documentation
- All were very close (normalized scores around 50-60)
- Slight edge (tie) to updating documentation and implementing new QC standards
- Final issue considered independently: to reprocess (or not) the AERI LBLRTM QME and its various components at the SGP. Normalized score of 36, so a medium-to-low priority.
- One of the more interesting recommendations: the archive should develop an “Amazon.com” capability