UV - Visible Systems

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Target Devices

- N Channel + P Channel + CMOS
- Inherently Low Noise Devices
- High Output Response Devices
- Moderate to High Pixel Rates
- Mosaics of Devices

MONSOON Approach

- One Size Fits All Approach ?
- No !!
- Four MONSOON Products Planned:
  - 1. Low Noise Moderate Pixel Rates
  - 2. Low Noise High Pixel Rates
  - 3. CMOS
  - 4. High Density Focal Planes

Specifications - Product 1
(Low Noise Moderate Pixel Rates)

- Under Development
- Based on IR Acquisition Design
- 8 Dual Slope CDS Signal Channels
- 32 High Voltage Biases
- 1 Digital Port
- Telemetry On All Biases

Applications

- Orthogonal Transfer Arrays
- Deep Depletion Devices
- Detector test and characterization Lab
- Retrofit to Existing Instrumentation

Deliveries

- CCD 8 Channel Prototype
- OTA Test System
- NOAO South Detector Laboratory
- QUOTA
- Irons In The Fire:
  - Fermilab Demonstrator
  - FhiRE Spectrograph
  - Kitt Peak Evaluation System

Specifications - Product 2
(Low Noise High Pixel Rates)

- In Preliminary Design
- Based on CCD 8 Channel Board
- n Channel Over Sampling design
- High Voltage Biases
- High Voltage Clocks (?)

Specifications - Product 3 (CMOS)

- Ready to test !
- Copy of IR Acquisition Design

Specifications - Product 4
(High Density Focal Planes)

- Definition Phase
- Small Size
- Low Power
- Dedicated Functionality
- CCD Prototype Experience
- ASIC Development (?)
  - Some Intellectual Property Exists
  - Shorter Lead Times / Lower Costs

Costs

- Reuse of MONSOON Technology
- Extensibility of Architecture
- COTS

Future Target Applications

- LSST
- GSMT
- ODI

Configuration Issues

- Three Configuration Contexts:
  - Pixel Acquisition Node
  - Detector Specifics
  - Operating Modes
- Use of XML as a Configuration Data Base

Documentation

- Creation of a Document Archive
- Open Source Domain
  - License Issues
  - Support Issues