RIMAS – Rapid Infrared iMAger-spectrometer

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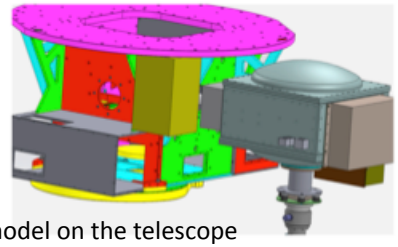
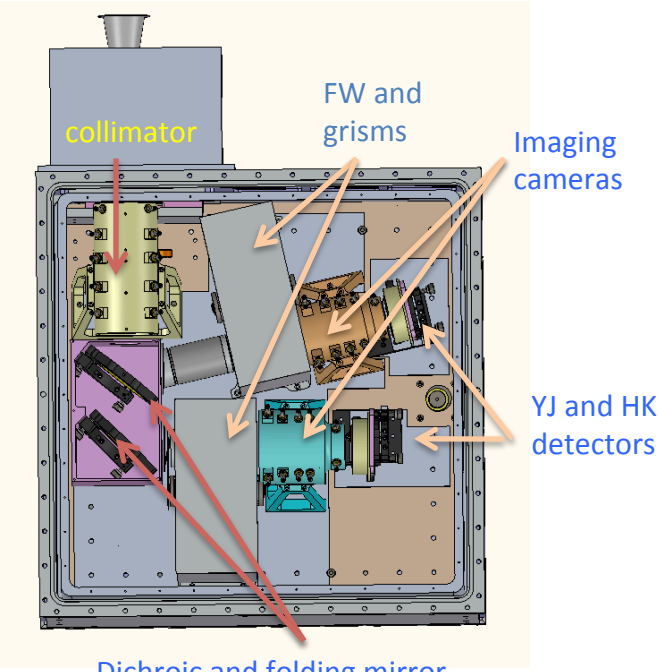
Joint project
NASA- GSFC, University of Maryland at College Park , Lowell observatory at the recently commissioned 4.3 meter Discovery Channel Telescope (DCT). Primary goal is the GRB follow up studies
http://www.lowell.edu/dct_instruments_rimas.php

- spectral range: 0.9 µm - 2.4 µm
- FOV : 3' diameter
- two spectral bands are split by a dichroic, imaged onto 2 detectors:
  - 0.9 µm to 1.4 µm ("YJ band")
  - 1.4 µm to 2.4 µm ("HK band")
- modes:
  - imaging in Y and J, and H and K bands,
  - low res R~25 grism : single object (long slit) or objective prism,
  - high res R~4000 grism: single object, slit ~ 7" long
- plate scale 0.35"/detector pixel; instrument imaging quality: 0.35" 50% EE as built

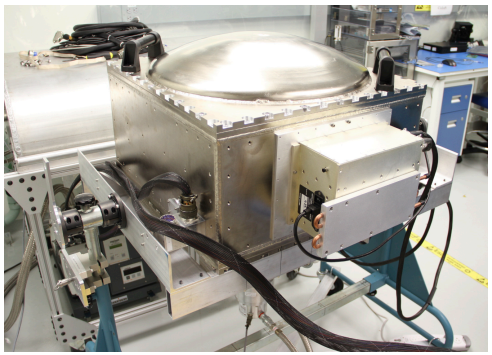


RIMAS model on the telescope

RIMAS layout



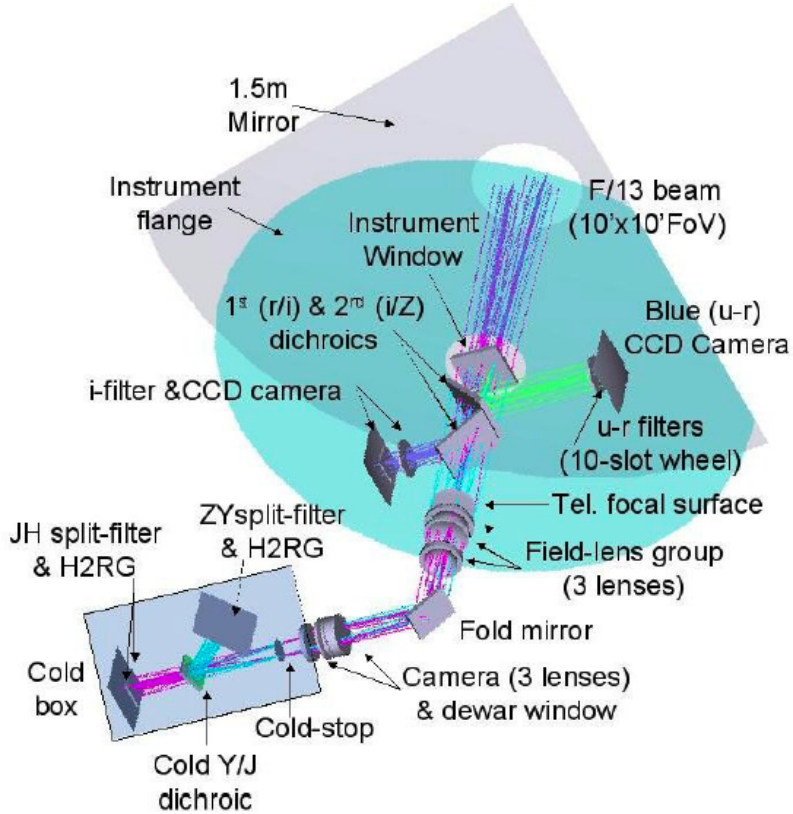
Instrument in the lab

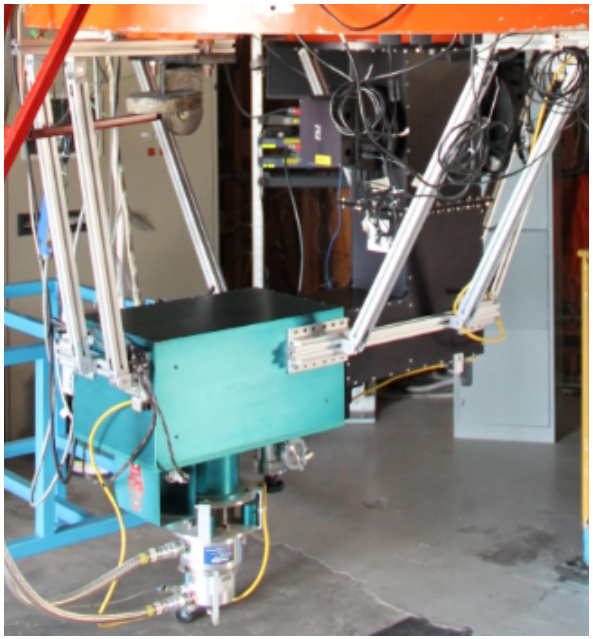


RATIR IR/VIS camera for fast GRB events follow up

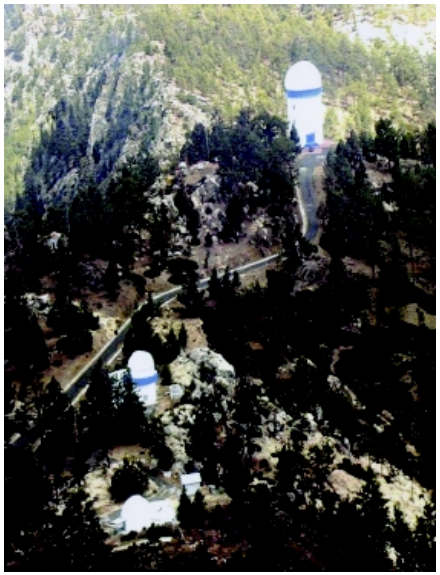
- VISIBLE and INFRARED camera for follow up of GRB afterglow
- automated trigger
- fast follow up: ~ few minutes
- simultaneous imaging in 4 bands: ugr, i, ZY and JH
    - FOV: IR: 5' x 10' rectangular , VIS: 5' x 5' square
- Telescope: Johnson 1.5 m at UNAM San Pedro Martir observatory

NASA GSFC
UC Berkeley, ASU
UNAM





RATIR on the telescope
observing GRBs since Dec 2012



UNAM Sam Pedro Martir
observatory, Baja California
Excellent astro site