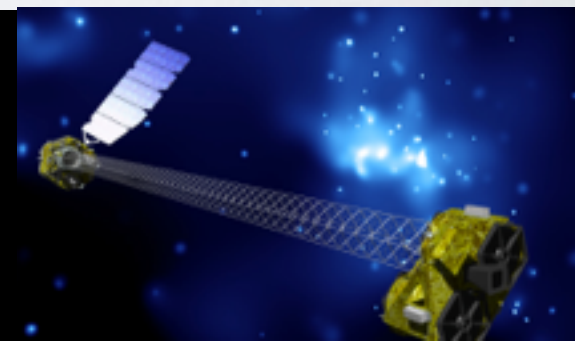


# NETWORK for MULTI-WAVELENGTH ASTRONOMY

## REPORT/UPDATE ON A COMMUNITY PROJECT

<http://www.isdc.unige.ch/SMARTNet/>

Piergiorgio Casella  
(OAR)





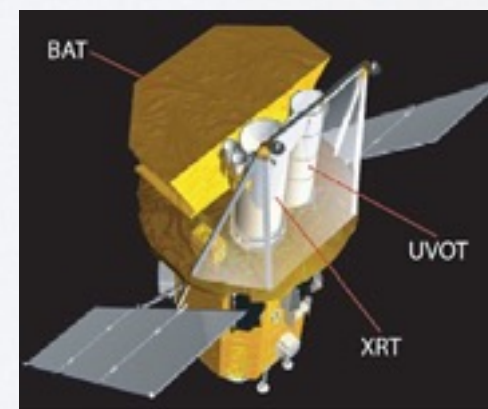
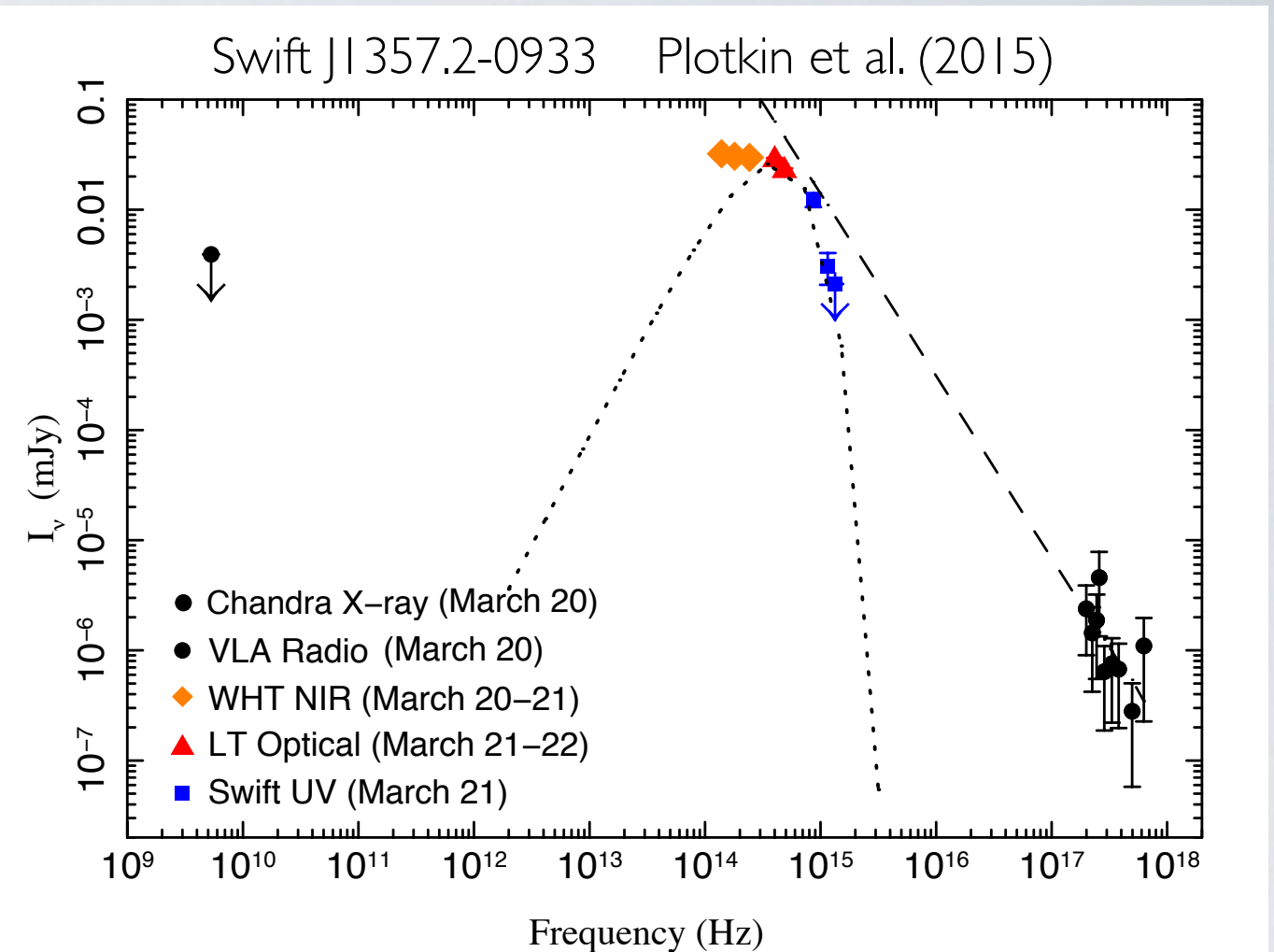
VLA



WHT



Liverpool Telescope



Swift

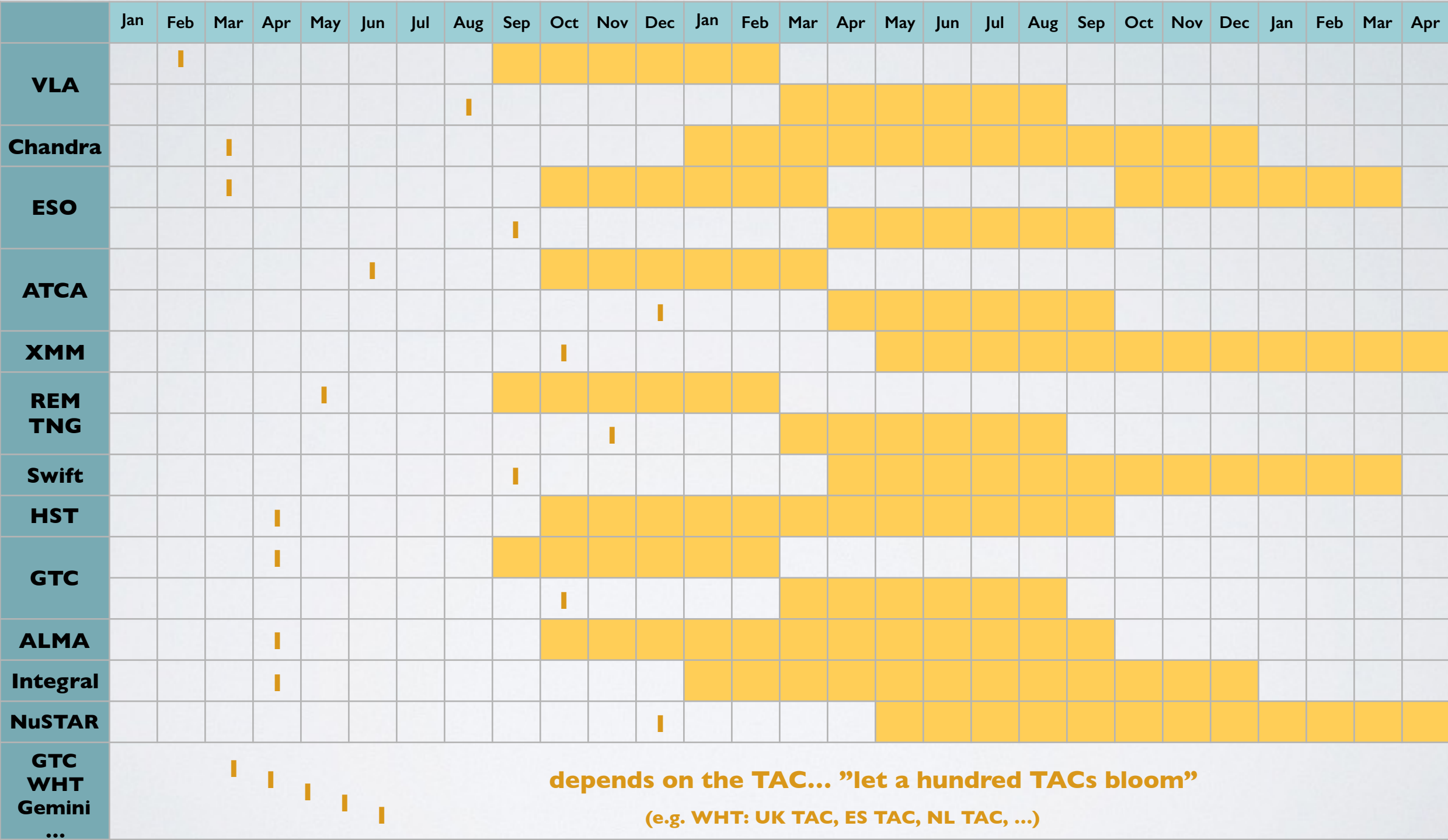


Chandra





# THE DIFFICULTIES OF “MULTI-WAVELENGTH”



## THE DIFFICULTIES OF “MULTI-WAVELENGTH”

**Deadlines** and observing periods are often misaligned.

Multiple **jeopardies**: proposals rejected  
“because time at other wavelengths cannot be guaranteed”.

Very few **joint programs**. And limited: what if there is no “main wavelength”?

The **scheduling** nightmare: visibility, policies, etc.

**Human limitations**: we can’t work on everything,  
we can’t keep track of everything.

Waste of resources: lack of **information**.

Easy so far... but we are now entering in the era of “**Synoptic Astronomy**”!

*Our job is changing.*



# THE DIFFICULTIES OF “MULTI-WAVELENGTH”

**Lorentz center**

**Paving the Way to Simultaneous Multi-Wavelength Astronomy**

Workshop: 13 – 17 July 2015, Leiden, the Netherlands

**Scientific Organizers**

- Piergiorgio Casella, INAF OA-Roma
- Poshak Gandhi, U Southampton
- Matthew Middleton, U Cambridge

**Theme**

- An International Workshop to Consolidate Multiwavelength Observational Strategies

The Lorentz Center is an international center in the sciences. Its aim is to organize workshops for scientists in an atmosphere that fosters collaborative work, discussions and interactions. For registration see: [www.lorentzcenter.nl](http://www.lorentzcenter.nl)

Uniting the multi-wavelength community - Dutch style Mondrian style world map by Michael Tompsett, artpause.com  
Poster design: SuperNova Studios, NL

Universiteit Leiden, FOM, STW, NWO, Lorentz center

[www.lorentzcenter.nl](http://www.lorentzcenter.nl)

- July 2015: a meeting to get a discussion started
- Directors from all major facilities (including e.g. Chandra, XMM, MWA, VLA, LSST, JWST, ...)
- Most of time devoted to discussion:

**“what can the community do to improve efficiency?”**

- ➔ The ball is rolling
- ➔ ESO representative: “open to discuss ToO limitations for VLT-XMM joint program”
- ➔ Chandra Director: “willing to change policies”
- ➔ Chandra policies: changed!! (new “Joint Contingent Large Projects” category)
- ➔ White Paper in preparation
- ➔ Multi-wavelength Astronomy Network proposed





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Lorentz center

www.lorentzcenter.nl

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 Klaas Wiersema (Leicester, UK)  
 Belinda Wilkes (CfA, USA)  
 Joern Wilms (Bamberg, DE)  
 Patrick Woudt (Cape Town, ZA)



- ▶ Broadsword - BROADening Strategies for Wide bandpass Observing and Rapid Detections
- ▶ CHROMA - Consortium for the Health of Research in Observational Multi-wavelength Astronomy
- ▶ coordination.net
- ▶ MWN - Multi Wavelength Network
- ▶ MONK - Multiwavelength Observing Network
- ▶ MONET - Multiwavelength Observing NETwork
- ▶ MANET - Multiwavelength Astronomy NETwork
- ▶ MCN - Multiwavelength Coordinating Network
- ▶ MuWaCoN - Multi Wavelength Observation Coordinating Network
- ▶ CiNEMAS - Coordinating NETwork for Multiwavelength AStronomy
- ▶ SIMIAN - SImultaneous Multiwavelength Astronomy Network
- ▶ SPAN - Simultaneous Panchromatic Astronomy Network

## ➔ Simultaneous Multiwavelength Astronomy Research in Transients NETwork

### SMARTNet

<http://www.isdc.unige.ch/SMARTNet/>

(currently setup in progress by Enrico Bozzo)





## Current members

- Matt Middleton
- Poshak Gandhi
- Piergiorgio Casella
- Stefanie Komossa
- Elena Maria Rossi
- Gregory Sivakoff
- Alessandra Corsi
- Belinda Wilkes
- Phil Uttley
- Dave Russell
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- James Miller-Jones
- Christian Knigge
- Felix Fuerst
- Stephen Eikenberry
- Peter Jonker
- W. Niel Brandt
- Chris Done
- Enrico Bozzo
- Joern Wilms
- David J. Thompson
- Nathalie Degenaar
- ...
- ...
- ...

...this is just the start

Once the network website is ready, we'll send out a call for registration

<http://www.isdc.unige.ch/SMARTNet/>

(currently setup in progress by Enrico Bozzo)





- A tool for the community to:
  - ★ support collaborative approach
  - ★ aid collecting & sharing information
  - ★ optimise observing campaigns
  - ★ boost communication in the community
  - ★ speed up coordination for rapid transients
  - ★ develop community resources

Not a solution to all our problems...  
...but perhaps to some of them?

A first step to discuss and find more solutions...?

- NO binding policies, NO tight rules
  - ★ use it if you feel like it
  - ★ contact only those you want to contact
  - ★ handle the collaboration as you wish

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## Sentences we don't want to hear!

- ✓ “You should have asked me, I had time on that telescope!”
- ✓ “I didn't know you were also observing it!”
- ✓ “Have you tried to use the facility X?”
  - “...ahem...
  - ...what's exactly the facility X?!”
- ✓ “Oh yes, I could have used that instrument mode, I didn't know somebody was interested”
- ✓ “Do you know if somebody is monitoring this source?”
- ✓ “I stopped the monitoring, nobody seemed to be interested...”

<http://www.isdc.unige.ch/SMARTNet/>

(currently setup in progress by Enrico Bozzo)





<http://www.isdc.unige.ch/SMARTNet/>

- ✓ Have an idea, as usual
- ✓ Try to get your 2, 3, 4... proposals through, as usual
- ✓ Contact your 2, 3, 4... collaborators, as usual
- ✓ OR / PLUS: send a “call for campaign” on SMARTNet
  - Select only missing wavelengths?
  - Select only people with accepted proposals?
  - Select only experts in your target type?
  - Select only people with access to given facilities?
  - Ask for technical support at some wavelength?
  - Ask for theoretical support/feedback?
  - Provide the scheduling to be matched?
  - Set and find agreement on **your** collaboration policies for **your** campaign, as usual
- ✓ Build a campaign with way more facilities than usual!
- ✓ Hope for the best in scheduling...

You choose (as usual)

*“I don’t want people to scoop me, I prefer to observe silently and publish quickly”  
fair enough, do it*



All this is community driven

No “leaders”, no “PIs”, no “special role”  
(need to agree on joining rules though)

Once the network website is ready, we’ll send out a call for registration

The network is NOT a COMPLETE solution, it’s just a “new generation tool”

Great times ahead: Synoptic Astronomy will demand way more than this to  
handle the data/information complexity

Further community meetings ahead (next one in Rome?)

