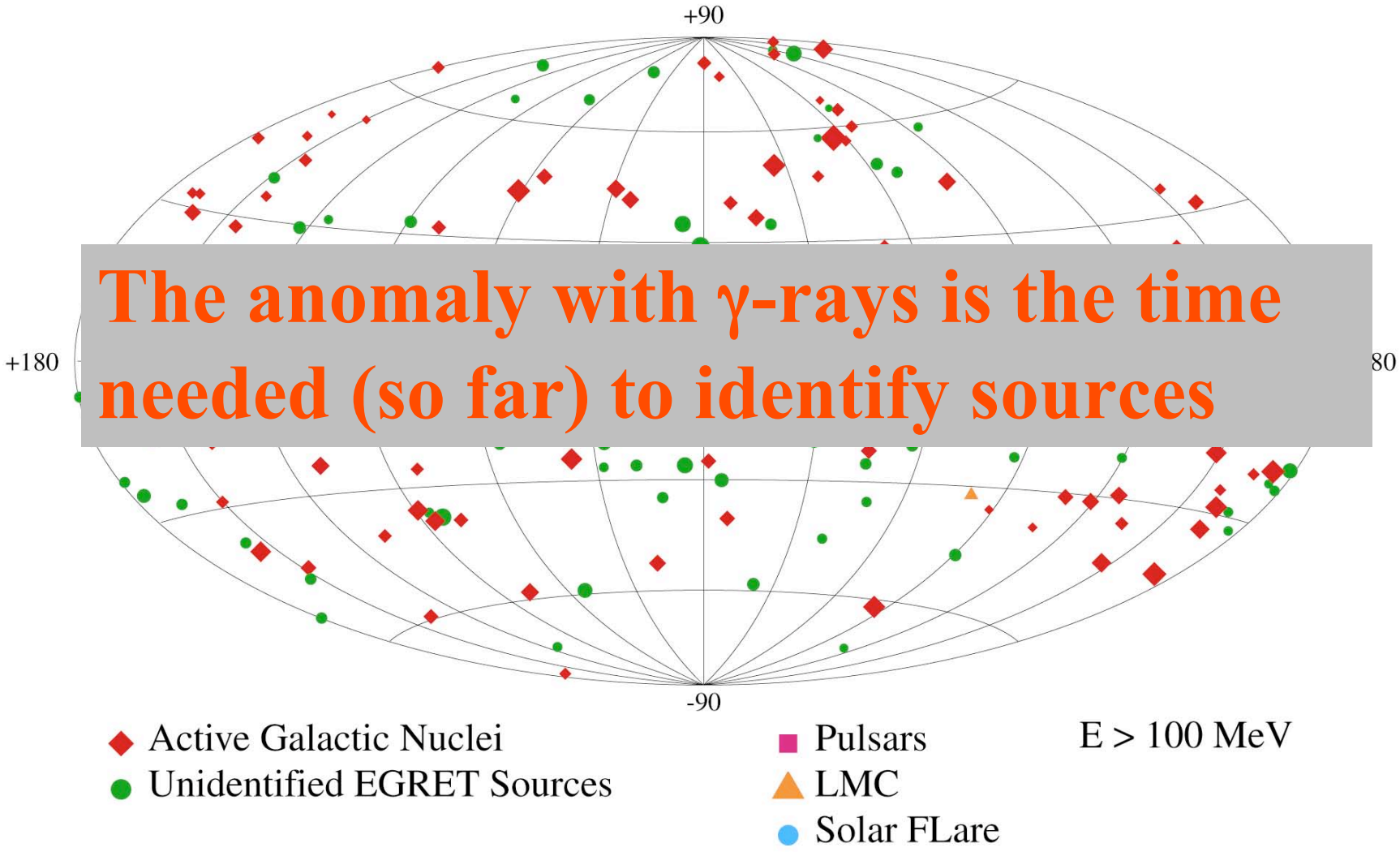
3rd EGRET Source Catalog

- **271 sources 172 UGO**



The anomaly with γ-rays is the time needed (so far) to identify sources

ONLY two classes of γ-ray sources are certified

PWN, SNR, μQSO are probable γ-ray sources

What can an unidentified source be

Genuinely **new** class of objects

Known objects with a new phenomenology

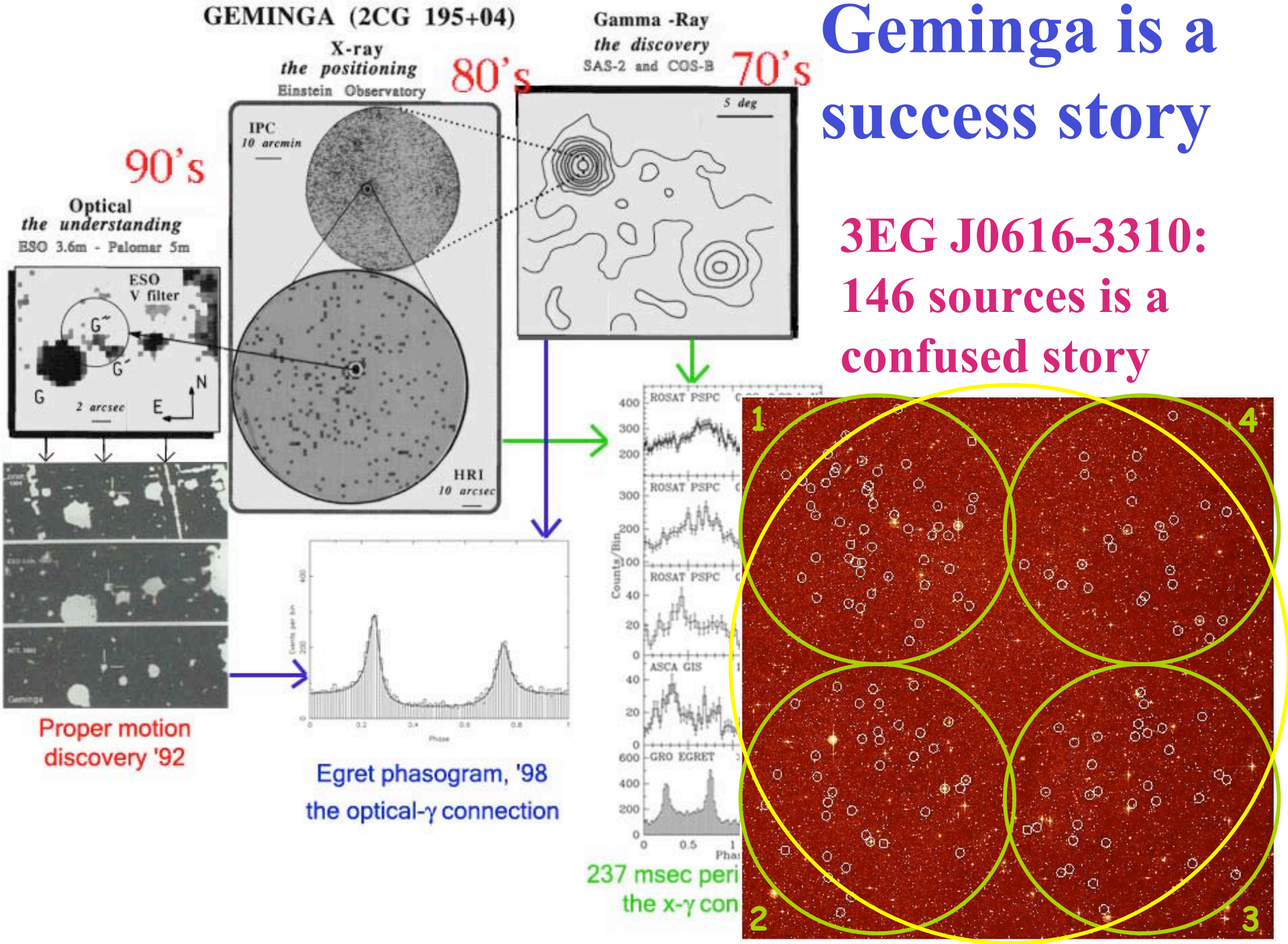
unknown phenomenology
Multiλλλ approach

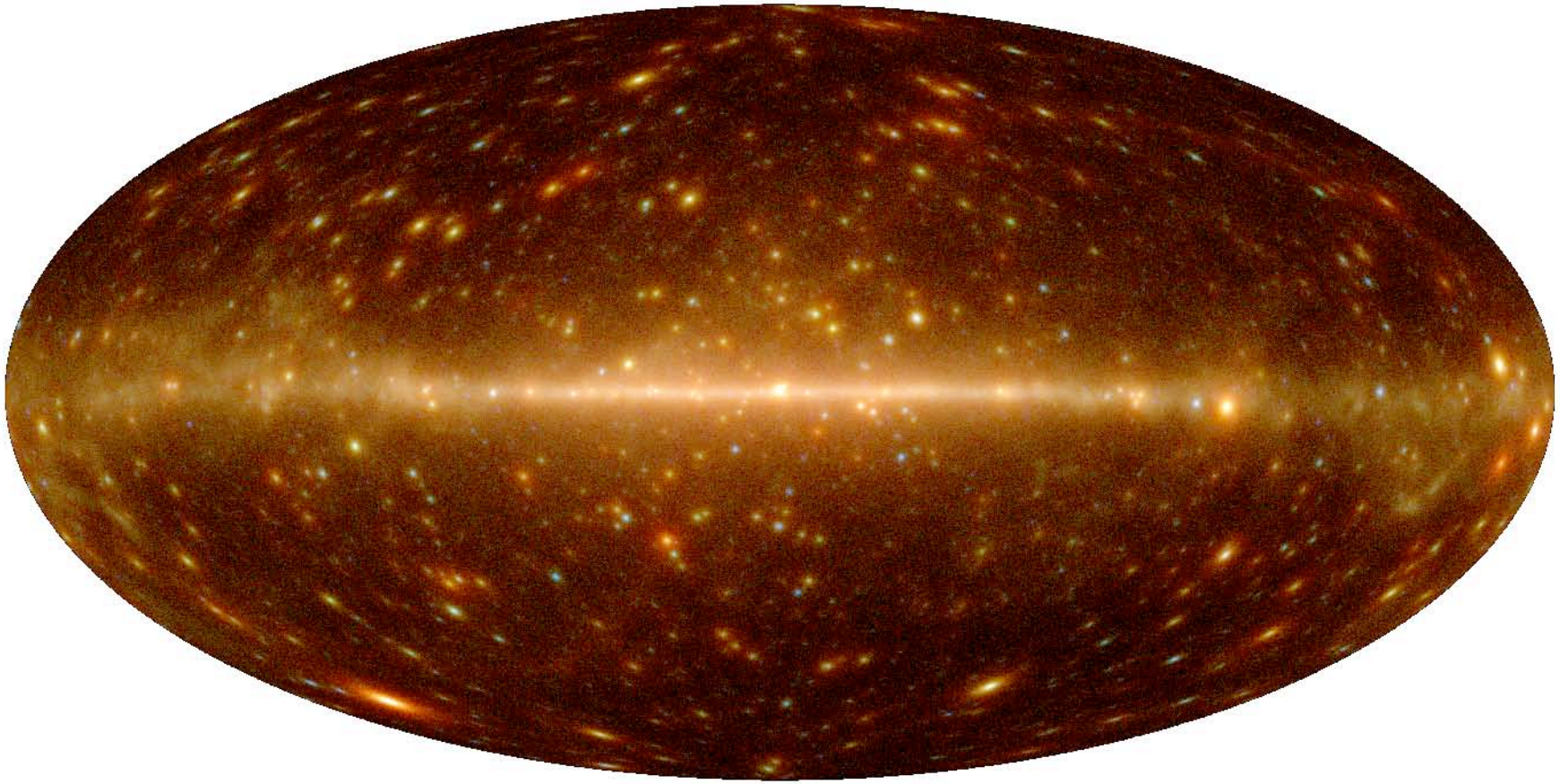
Known (catalogued) objects, floating in big error boxes

known phenomenology
VARIABILIY

Geminga is a success story

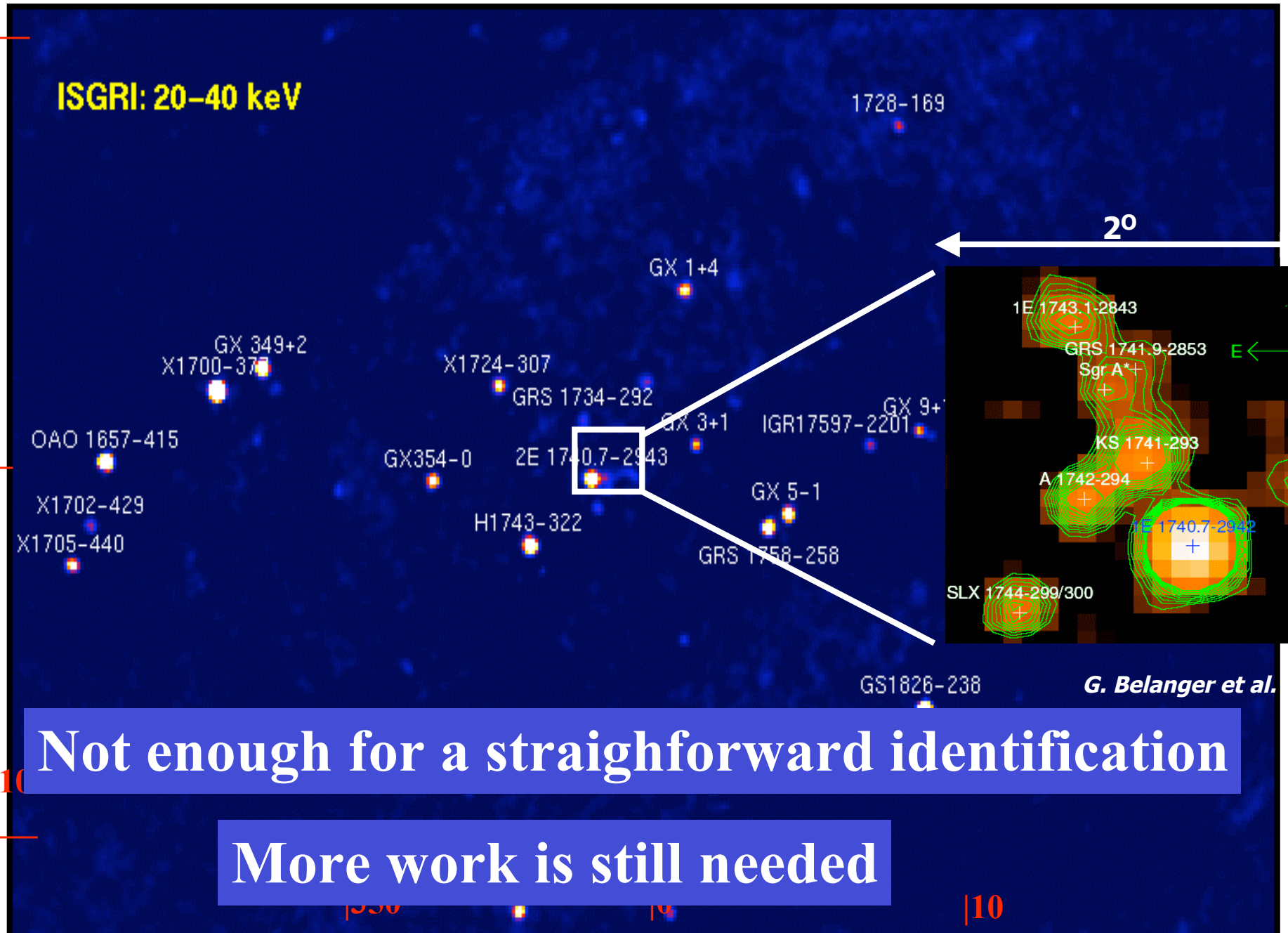
3EG J0616-3310: 146 sources is a confused story





Glast will detect hundreds of sources which will be positioned at a 5-10 arcmin level

INTEGRAL Map of the Central Galactic Region



G. Belanger et al.

Not enough for a straighforward identification

More work is still needed

Massive multiλλλ approach

Requires lot of obs. time (organization)

Often not conclusive

Shallow XMM observations (10 ksec) yield 150 sources /sq deg., i.e.:

- **Error radius 10' → 15 sources**
- **Error radius 5' → 4 sources**
- **Error radius 3' → 1-2 sources**

} → Optical/radio follow-up difficult

Known source classes

Figure of merit approach

Smart use of catalogues

FoM from:
- educated guesses on c.o.p.
- variability,
- energetics
- extension

FoM suggests plausible associations

From association to identification

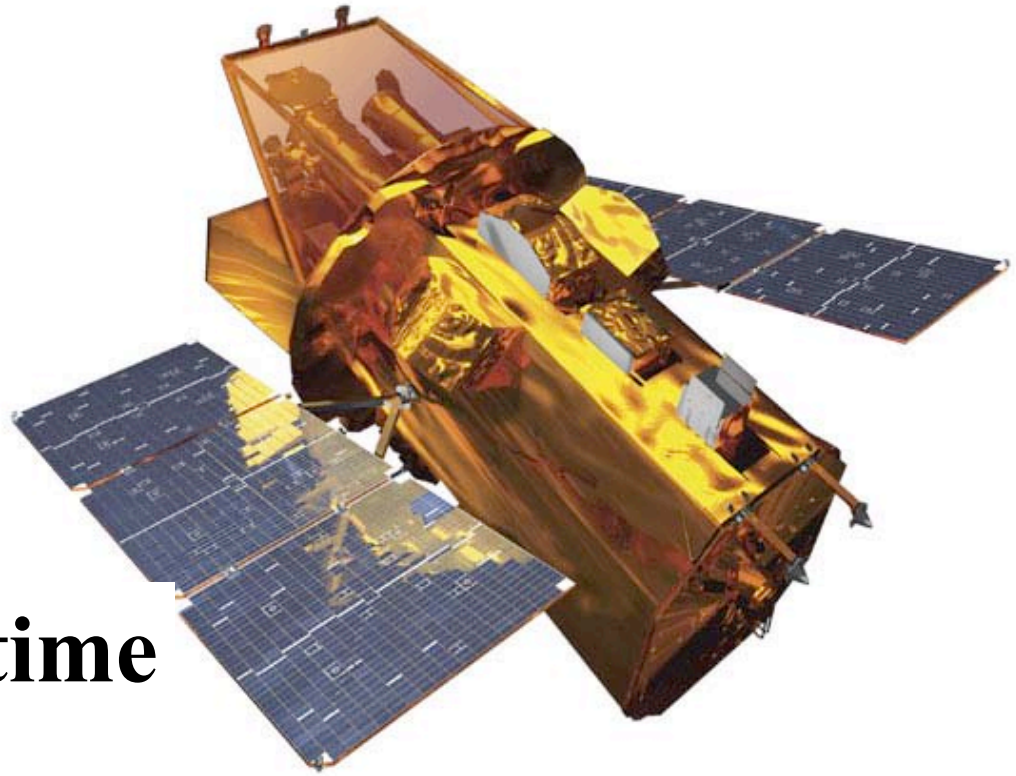
Multiλλλ ob's (archival searches) of high FoM targets can secure identifications (single trial)

Correlated variability

Timing

Extension

For NEW source classes
→ Start a multiλλλ campaign



e.g.:Swift filler obs time

The magnitude of the problem

End 2007-mid 2008

AGILE: 50 new γ-ray sources

10 ksec x 50 sources = 500 ksec

10% of the filler programme

End 2008-mid 2009

GLAST: 500 new γ-ray sources

10 ksec x 500 sources = 5 Msec

100% of the filler programme

NOT a GO programme

rather a strategic programme

in need of a sizeble fraction of the filler targets observing time

to turn SWIFT into an ID machine

FIRST PRIORITY

Identify new classes of sources

to start population studies