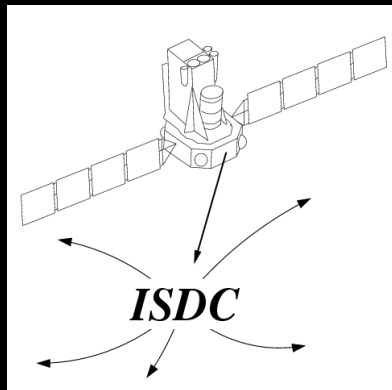




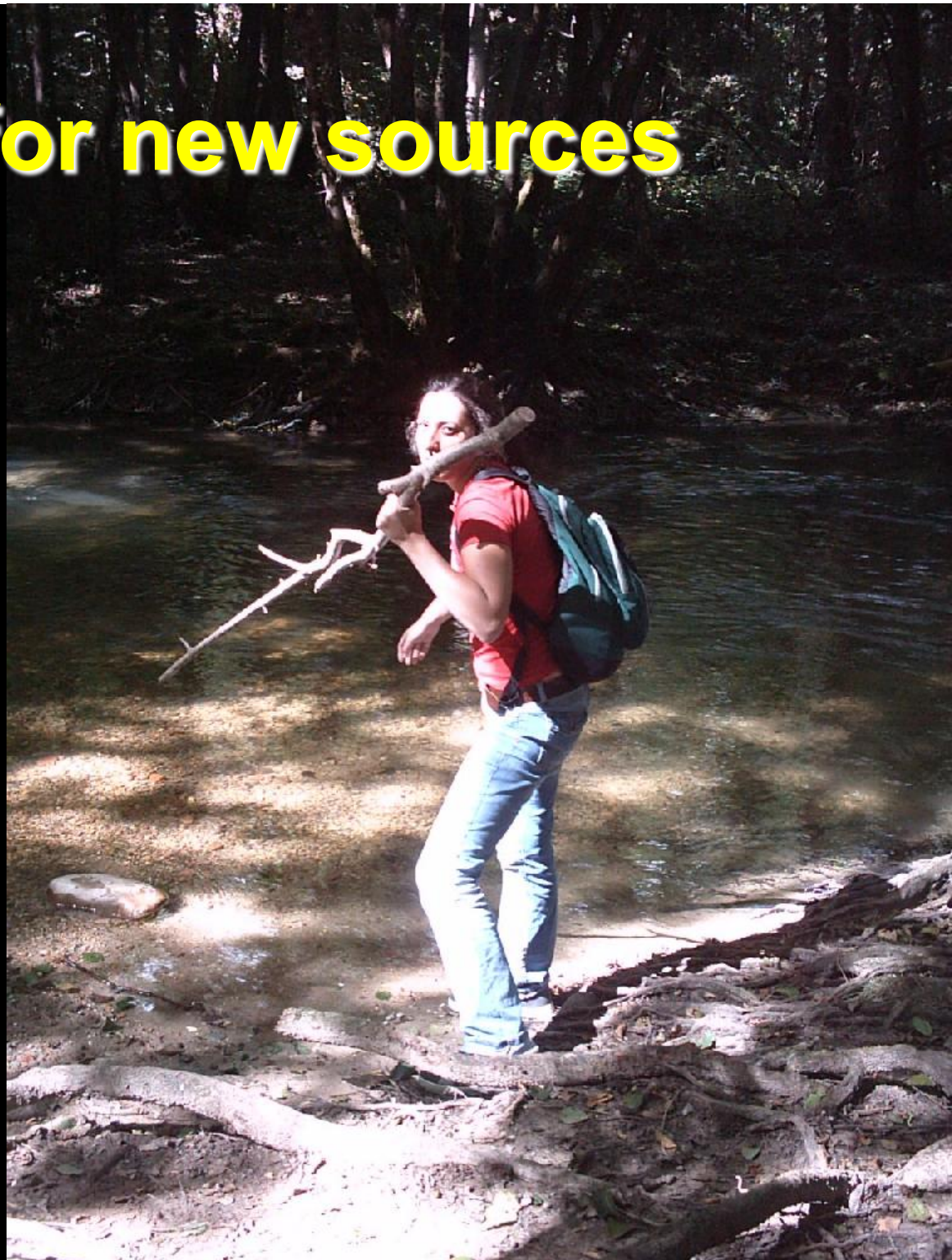
- INTEGRAL launched October 2002
- Ambition: quick-look analysis to detect new sources and transient behaviour in near real time
- Challenge: software and calibration maturity
- Different level of experience of scientists on duty (scody)



How to hunt for new sources



**INTEGRAL Science Data
Centre
December 2007**



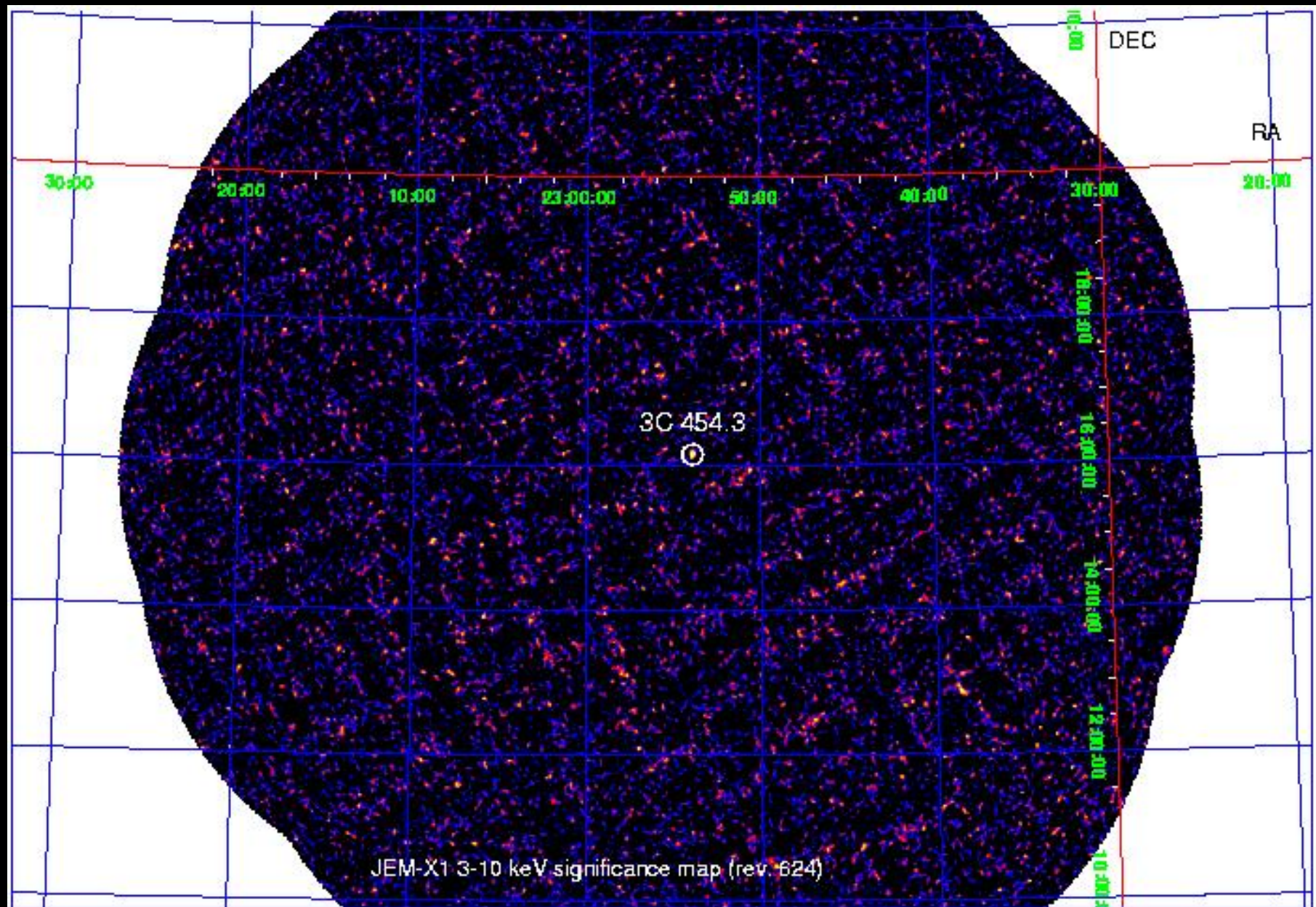


INTEGRAL quick-look



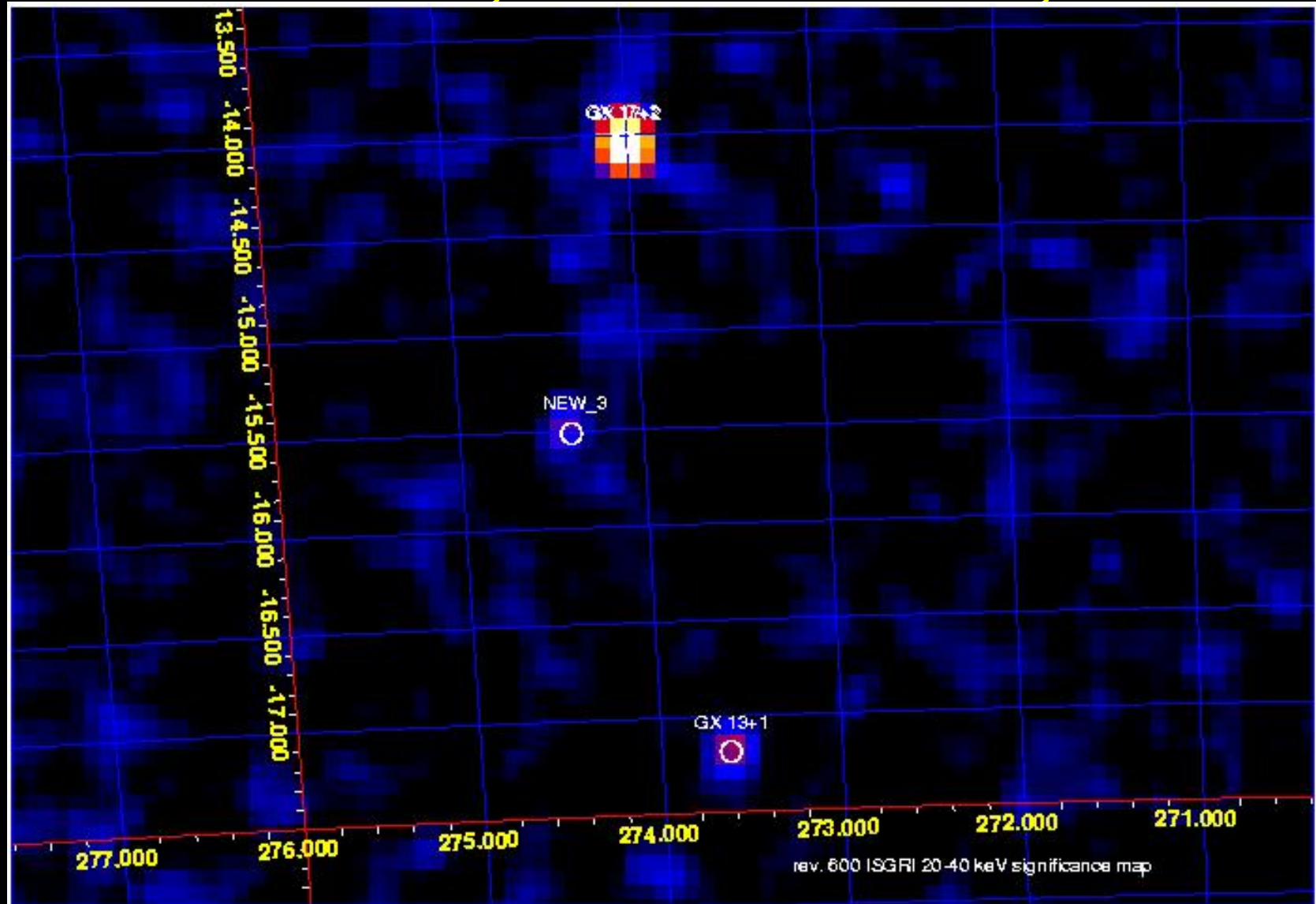
- 4 instruments (IBIS, SPI, OMC, JEM-X)
- Only 2 used for quick-look
- JEM-X (3-30 keV) and IBIS/ISGRI (20-80 keV)
- 2 bands each
- Significance maps

JEM-X significance map



It's not always easy

IGR J18175-1530, Paizis et al. 2007, ATel 1248





Quick look



- Detection in « single science window » (~ 30 min)
- Detection in mosaics (here: up to 200 ksec; sometimes also per observation)
- > 5 sigma

- Reference catalogues
- Previous X-ray missions, RASS, ...
- Reference list has to be up-to-date at all times



Quick look



Source candidate found? Then ...

- Check previous / following science window
- Check previous mosaic
- Check hard / soft band

« If you find the source, it is probably real.

If you do not find the source, it still can be real.”

- Lightcurve per science window (~ 30min)
- Check for ghost pattern
- Extract spectra (rough binning)
- Create mosaics based on different data subsets



Conclusion



- 2 bands for ECLAIRs sufficient
- Not too fine binning in time
- Low resolution spectra
- Possibility to create mosaics / light curves / spectra
- Mosaics / lightcurves: 2 bands sufficient
- Spectra: ~8 bins
- Important to have robust s/w and well-defined decision paths



Additional slides
matériel supplémentaire
noch mehr Folien
materiale aggiuntivo
aanvullend materiaal