

What future for European large format IR detectors ?

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Some high-level messages from talks

- Astro applications: small numbers, low flux
- > 10-yr investment (CNES, ESA, FOCUS, H2020 / LETI-IRFU-Lynred-ESO) : large format, low flux. « size matters », full-chain combination of know-how ; strong equipment-expertise needed
- A lot works well ; some items still to be improved (QE = 0.6 ; RON_CDS : 70e- , not reducing as $\sqrt{\text{readouts}}$, some ROIC functional issues)
- Already usable for astronomy (CAGIRE, not very demanding in DC, RON, but interest in high dynamic and small persistence)
- Complementary technos → complementarity SFD-CTIA ; on-going work for LmAPD (widen bandgap → reduce DC)
- Current astronomical use : HxRG !!! (> 20 for ground and space each) + Geosnap + LmAPD
- ESA needs analysis, from proposals (selection from 50-60 / calls,) and long term consultation process

Some high-level questions

- Know-how : status, expected future actions ? Identified show-stoppers ?
- Infrastructure/expertise : test platforms, evolution ? Complementarity ?
- Situation wrt programmatic issues, astronomical use cases ?
- Position in world-wide context ?
- Development plan ?