

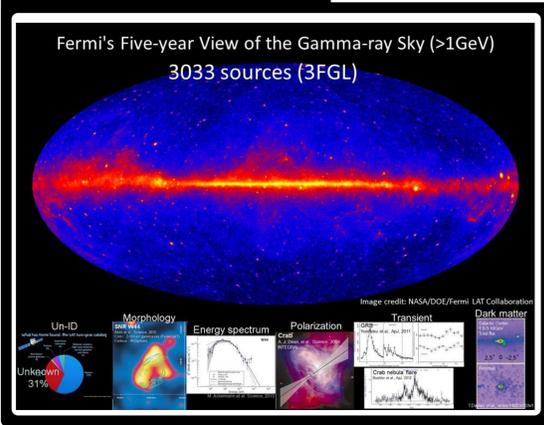
GRAINE project: An overview and status of the 2015 balloon-borne experiment with emulsion gamma-ray telescope

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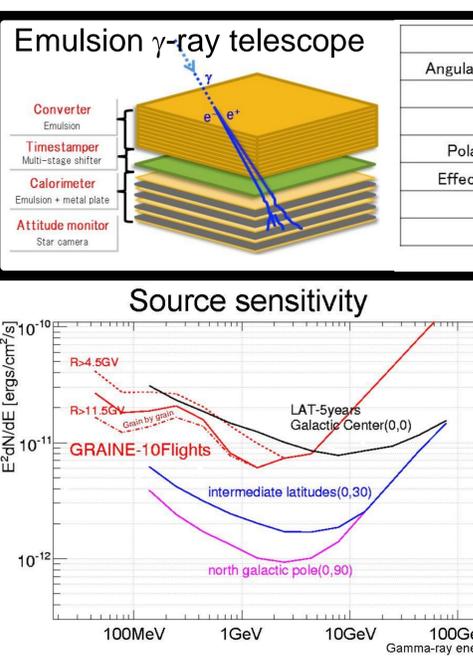
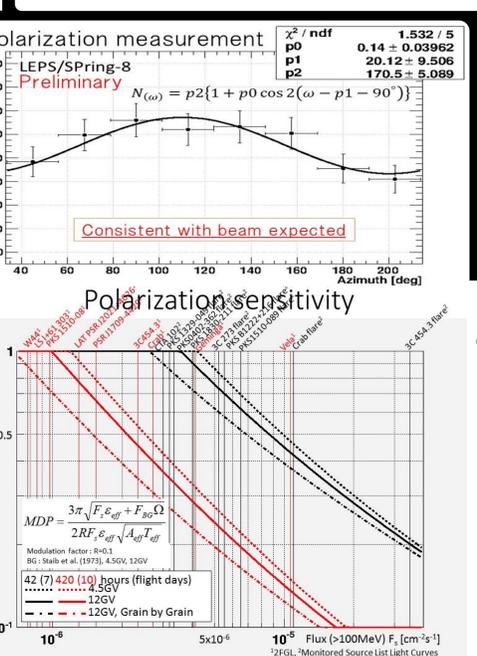
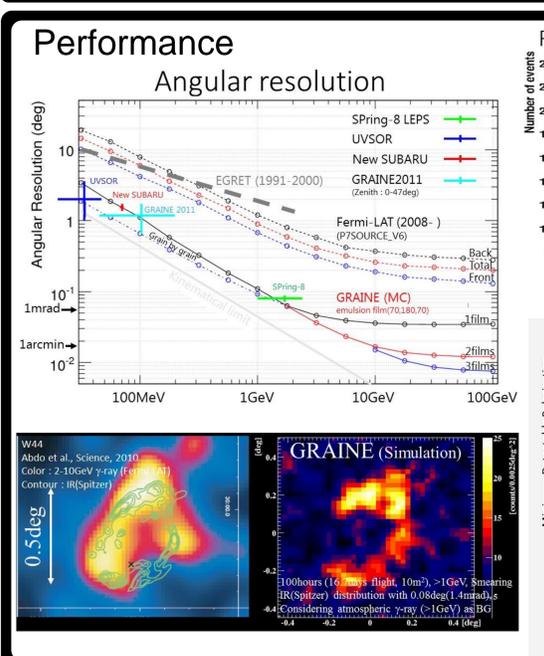
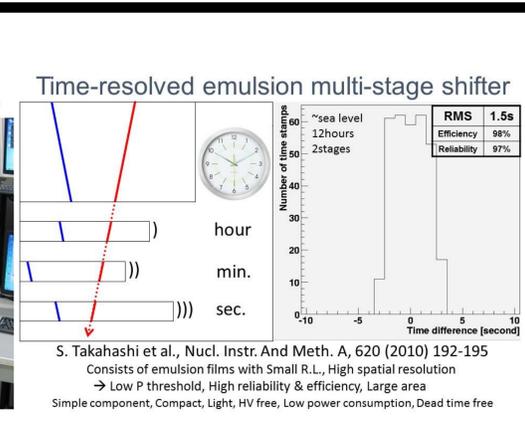
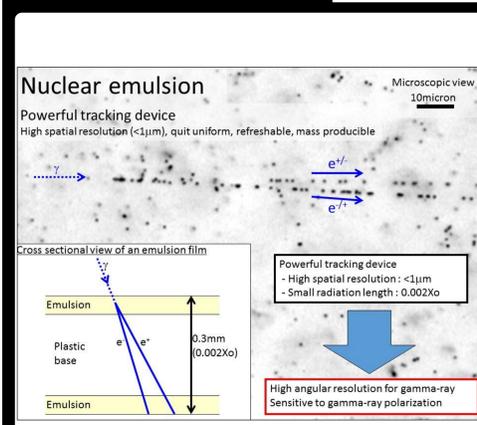
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Abstract : We are furthering GRAINE project of 10MeV-100GeV cosmic gamma-ray observation with precise (0.08deg@1-2GeV) and polarization sensitive large aperture area (~10m²) emulsion telescope by repeating long duration balloon flights. An overview and a status of the GRAINE project and the 2015 balloon-borne experiment are presented.

Current situation



GRAINE project



	Fermi LAT	GRAINE
Angular resolution @100MeV	6.0deg (105mrad)	1.0deg (17mrad)
@ 1GeV	0.90deg (16mrad)	0.1deg (1.7mrad)
Energy range	20MeV – 300GeV	10MeV – 100GeV
Polarization sensitivity	---	Yes
Effective area @ 100MeV	0.25m ²	2.1m ² *
@ 1GeV	0.88m ²	2.8m ² *
Dead time	26.5 μsec (readout time)	Dead time free

* 10m²*ε_{trans}*ε_{conv}*ε_{det}

