AGILE is 10

Piergiorgio Picozza
INFN and University of Rome Tor Vergata

15th AGILE Science Workshop

Rome, May 23-24, 2017

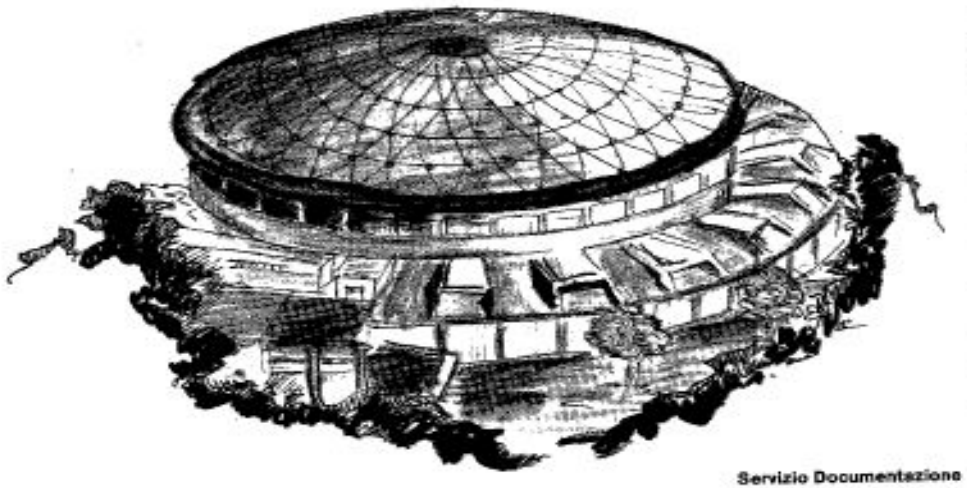
ISTITUTO NAZIONALE DI FISICA NUCLEARE – ISTITUTO NAZIONALE DI FISICA NUCLEARE – ISTITUTO NAZIONALE DI FISICA NUCLEARE – ISTITUTO NAZIONALE DI FISICA NUCLEARE – ISTITUTO NAZIONALE DI FISICA NUCLEARE – ISTITUTO NAZIONALE DI

Laboratori Nazionali di Frascati

LNF-91/048 (IR)
9 Luglio 1991

G. Barbiellini, G. Basini, V. Bidoli, M. Bocciolini, F. Bongiorno, A. Buccheri, M. Candusso, F. Celletti, C. De Fabritiis, M.P. De Pascale, F. Fratnik, A. Inciochitti, F. Massimo-Brancaccio, M. Menichelli, A. Morselli, A. Perego, P. Picozza, D. Prosperi, M. Ricci, I. Salvatori, P. Schiavon, P. Spillantini, A. Vacchi, N. Zampa:

SILICON TRACKING CALORIMETER FOR ANTIMATTER SEARCH IN SPACE: FIRST EXPERIMENTAL RESULTS FROM A PROTOTYPE



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Barbiellini

2 - THE TRACKING CALORIMETER

The test calorimeter, 9.5 X_0, consists of 20 layers of X and Y pairs of silicon detectors(*) of area (60 x 60) mm^2, alternated with 19 planes of high Z material (tungsten), each of 0.5 X_0 (1.75 mm). The detector planes are equally spaced, with a pitch of 24 mm and the tungsten in the middle. All the material crossed by the incident beam before the prototype corresponds to 0.2 X_0.

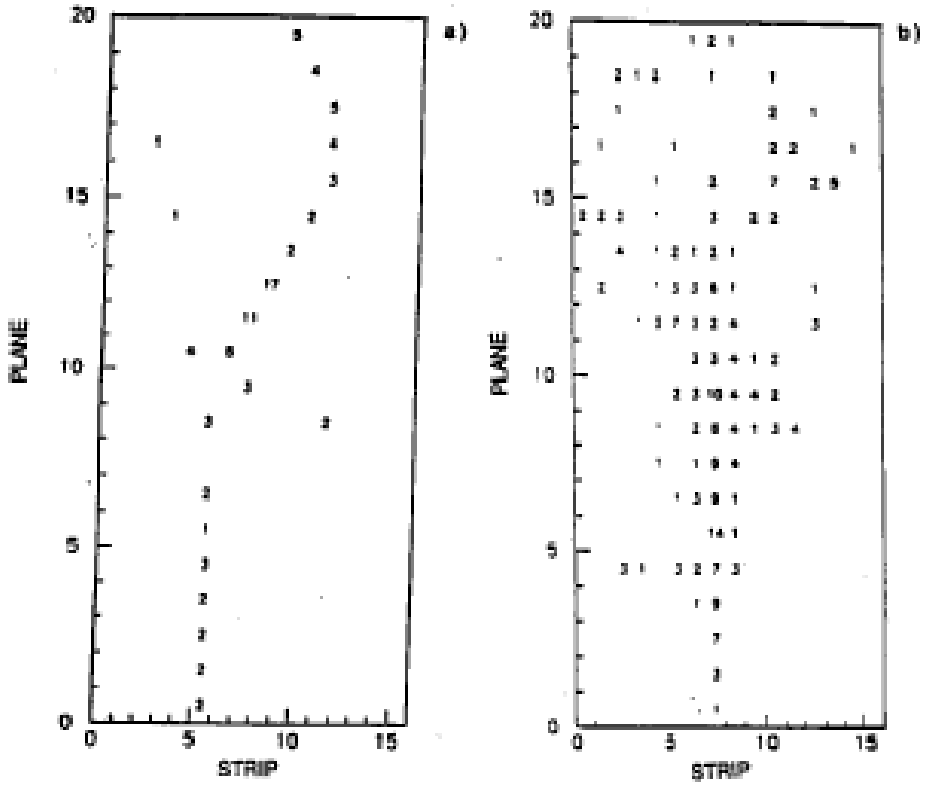

FIG. 14 - Examples of pattern reconstruction for 2 GeV/c particles: a) interacting pion; b) electromagnetic shower. Numbers are given in m.i.p. units.

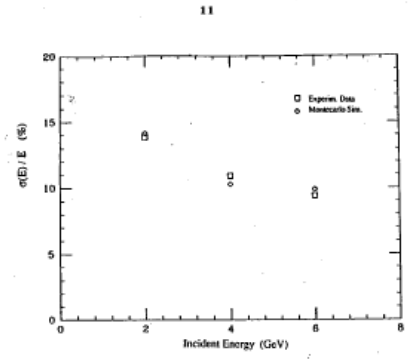

FIG. 7 - Energy resolution for the measured energies (2, 4, 6 GeV) compared with Montecarlo simulation.

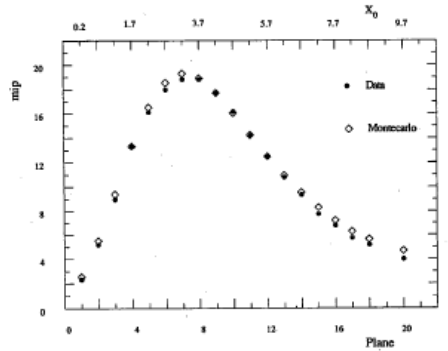

FIG. 8 - Longitudinal development (experimental and simulated) of 2 GeV electron shower. The energy is sampled over 20 sensitive planes.

Nuclear Instruments and Methods in Physics Research A 333 (1993) 560–566
North-Holland

NUCLEAR
INSTRUMENTS
& METHODS
IN PHYSICS
RESEARCH
Section A

A silicon imaging calorimeter prototype for antimatter search in space: experimental results

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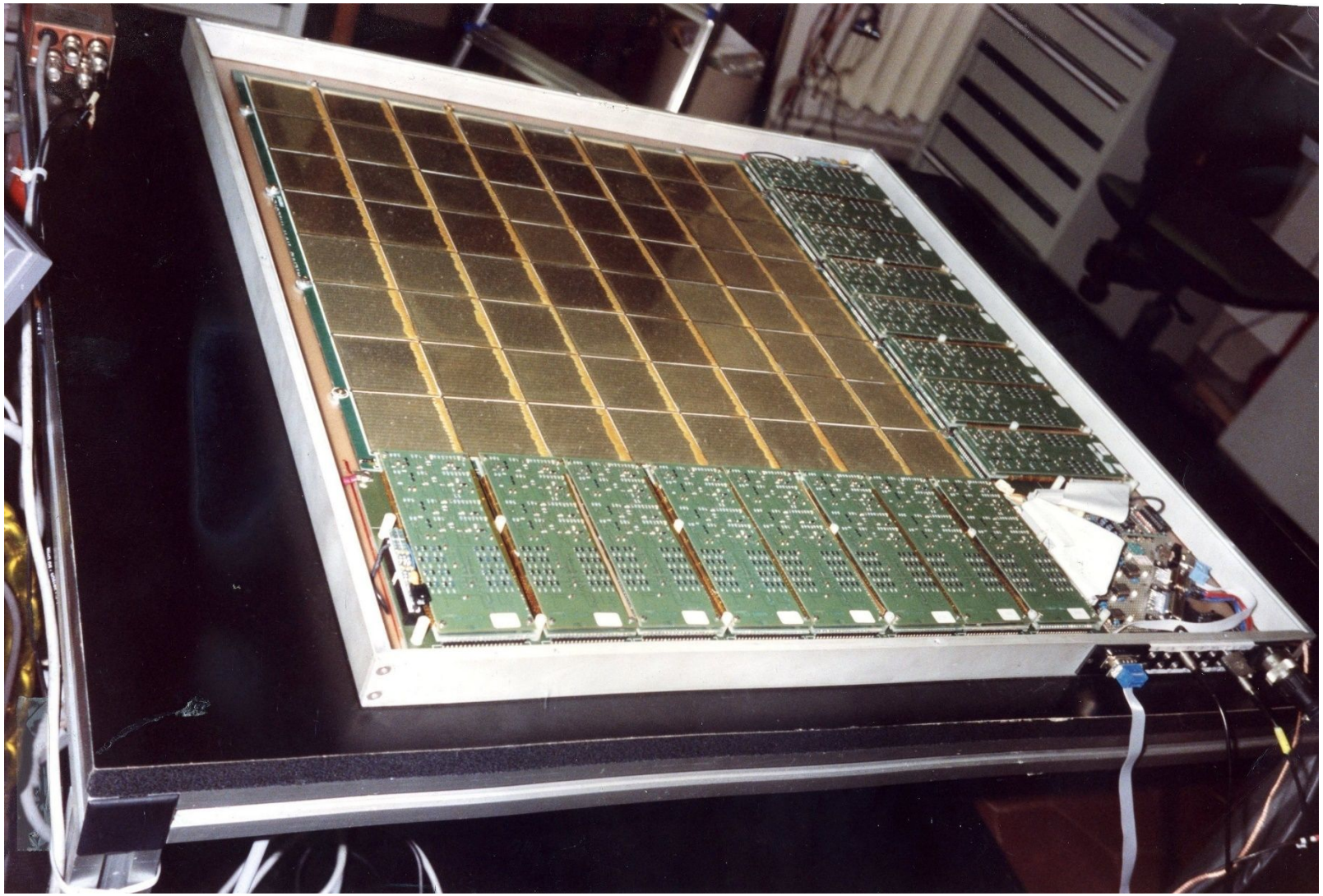
Received 3 August 1992 and in revised form 19 January 1993

TS93 Calorimeter



Wizard Si-W Calorimeter

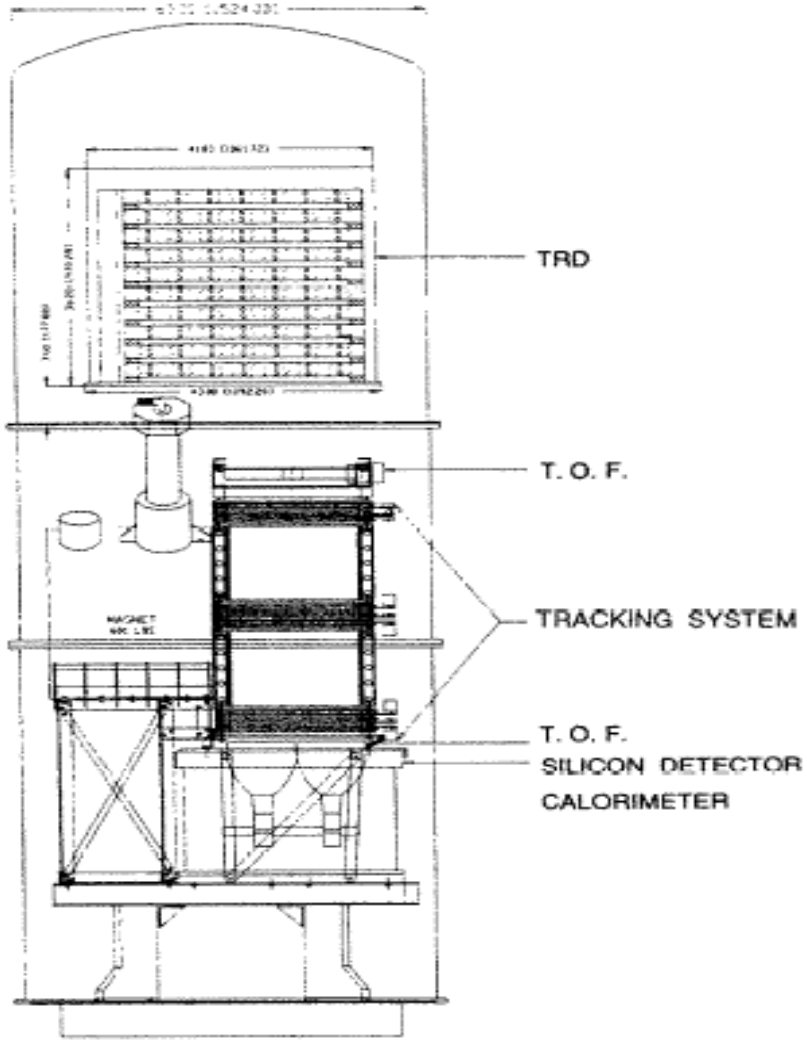
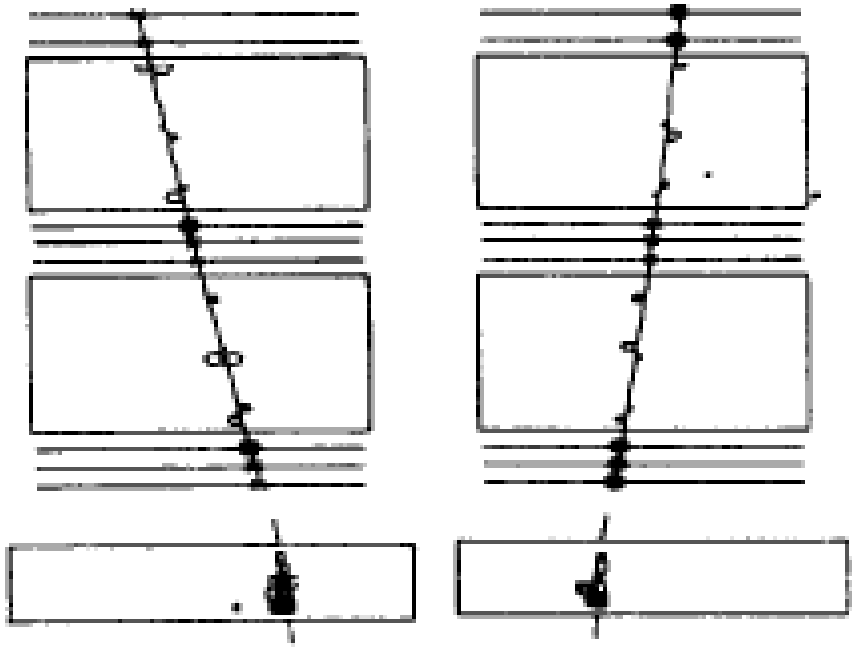


Fig. 2. TS93 apparatus configuration.



electron positron

ELSEVIER

Nuclear Instruments and Methods in Physics Research A 354 (1995) 547–552

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH Section A

The GILDA mission: a new technique for a gamma-ray telescope in the energy range 20 MeV–100 GeV

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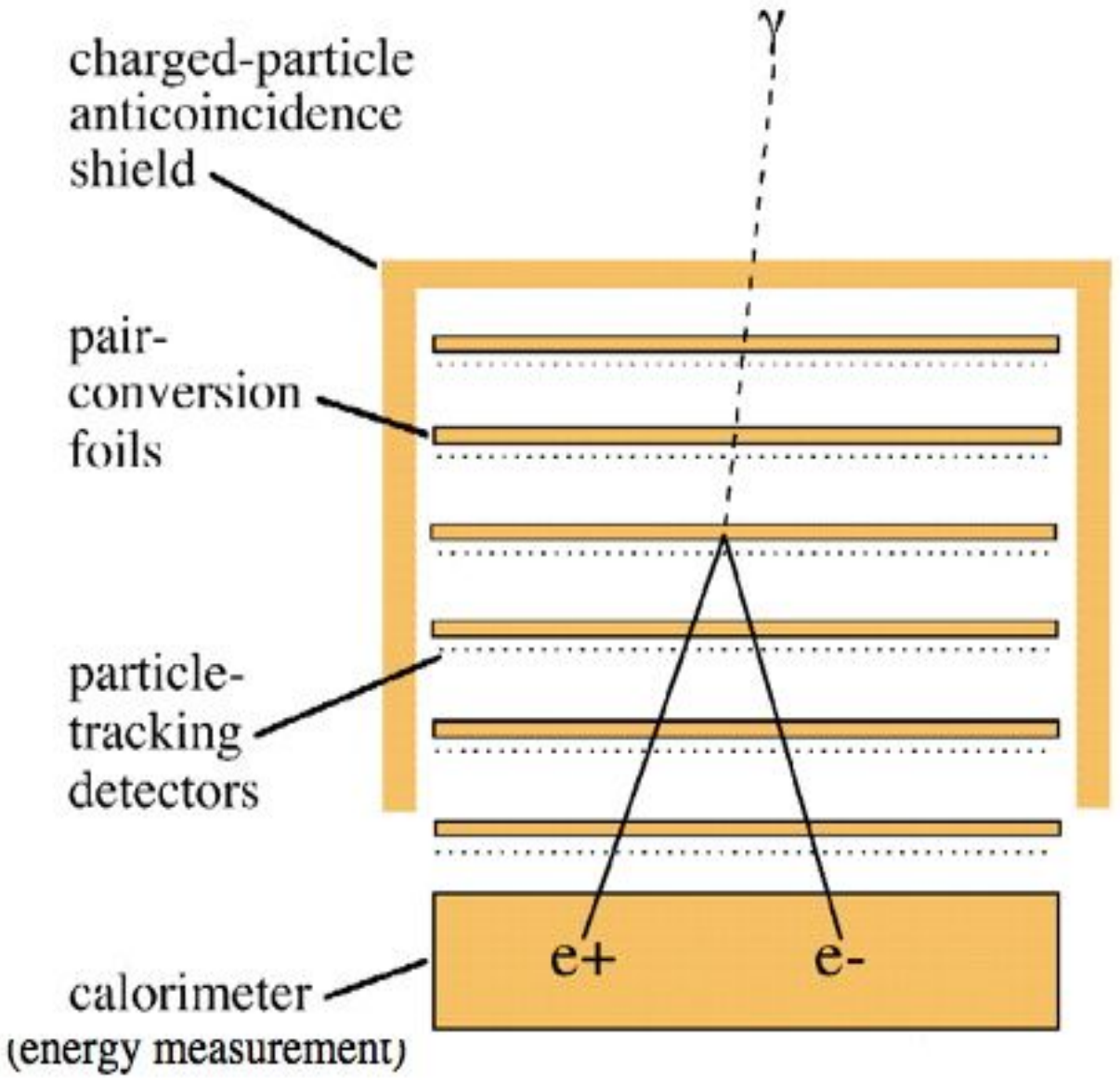
Received 5 August 1994

Abstract

In this article a new technique for the realization of a high energy gamma-ray telescope is presented, based on the adoption of silicon strip detectors and lead scintillating fibers. The simulated performances of such an instrument (GILDA) are significatively better than those of EGRET, the last successful experiment of a high energy gamma-ray telescope, launched on the CGRO satellite, though having less volume and weight.

Morselli-Sparvoli

Elements of a pair-conversion



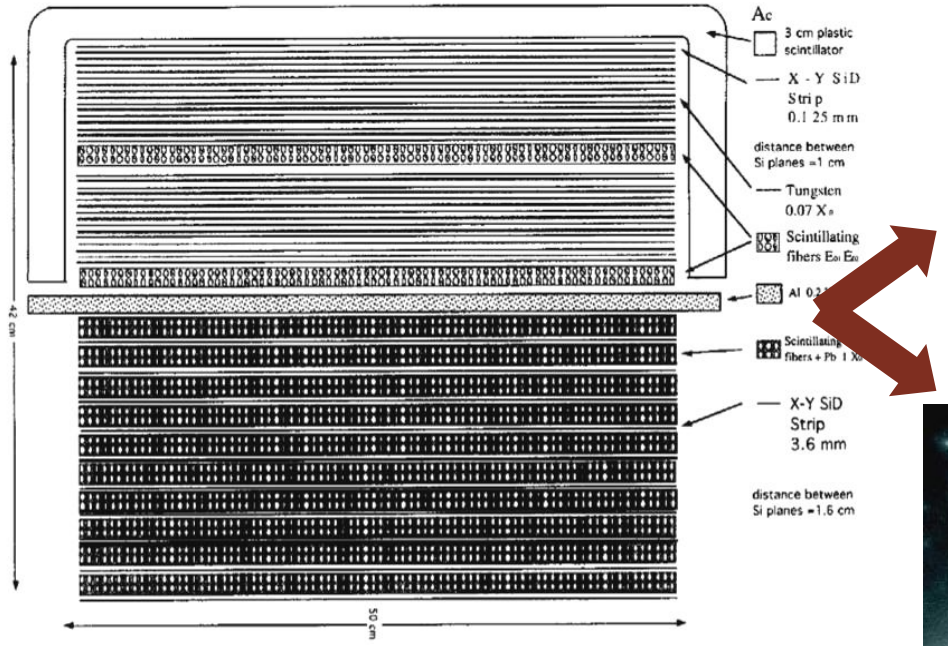
- photons materialize into matter-antimatter pairs:

  E_γ --> $m_{e^+}c^2 + m_{e^-}c^2$

- electron and positron carry information about the direction, energy and polarization of the γ-ray

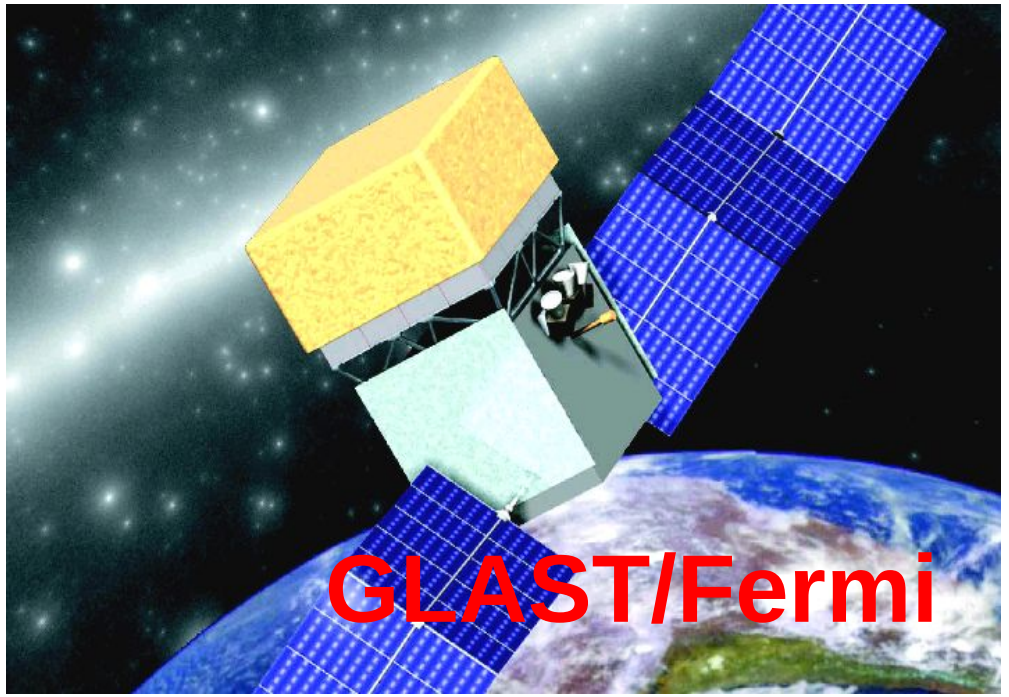
giugno 1997 all'ASI

GILDA



Negli stessi anni

PAMELA AMS



C O N F I D E N T I A L SECTION 01 OF 02 ROME 001168

SIPDIS

SIPDIS

STATE PASS TO PM/DTCP DIRECTOR ANN GANZER
STATE ALSO FOR EUR/WE AND OES/SAT
PARIS PASS TO NASA REP - D. MILLER

E.O. 12958: DECL: 05/29/2017
TAGS: ETTC KOMC PARM TSPA IT IN

SUBJECT: DEMARCHE: AGILE LAUNCH; PROTEST OF USML TRANSFER TO INDIA

REF: A. SECSTATE 71981 (NOTAL)
¶B. NEW DELHI 2455 (NOTAL) C. ROME 310
Classified By: ECMIN T. DELARE PER E.O. 12958 REASONS 1.4 (B) AND (D)

¶1. (C) SUMMARY: On May 29, ECMIN delivered points regarding the launch from India of the Italian AGILE satellite, and the related, unlicensed re-export from Italy to India of USML-listed items (ref A), to the MFA official responsible for Space and Science and Technology Cooperation. The latter responded that in the year preceding AGILE's April 23 launch, the MFA had arranged meetings in Washington and Rome to clarify the U.S. regulations. The MFA Director General for Multilateral Economic and Financial Affairs (The MFA's equivalent to ""E"") also had advised the Italian Space Agency (ASI) and the Ministry of Universities that launching AGILE from India could have negative consequences for bilateral economic relations. Our interlocutor explained that the MFA does not have ""hierarchical"" authority over ASI or the Ministry of Universities and Research, and could not force them to follow the MFA's counsel. He added that the decision to proceed with the AGILE launch was taken while ASI was being run by an interim External Commissioner, prior to the entry on duty on April 26 of ASI President Giovanni Bignami. Emboffs have appointments on May 30 and May 31 to deliver the same message to the Ministry of Universities and Research and ASI in advance of NASA Deputy Administrator Shana Dale's June 1 meeting with ASI President Bignami. Results of those meetings will be reported

Inediti

- Ricerca di Marco Tavani
- I due Marco: Tavani e Pascucci
- Il mediatore