



Enabling Grids for E-science

## Building Blocks: more realistic examples

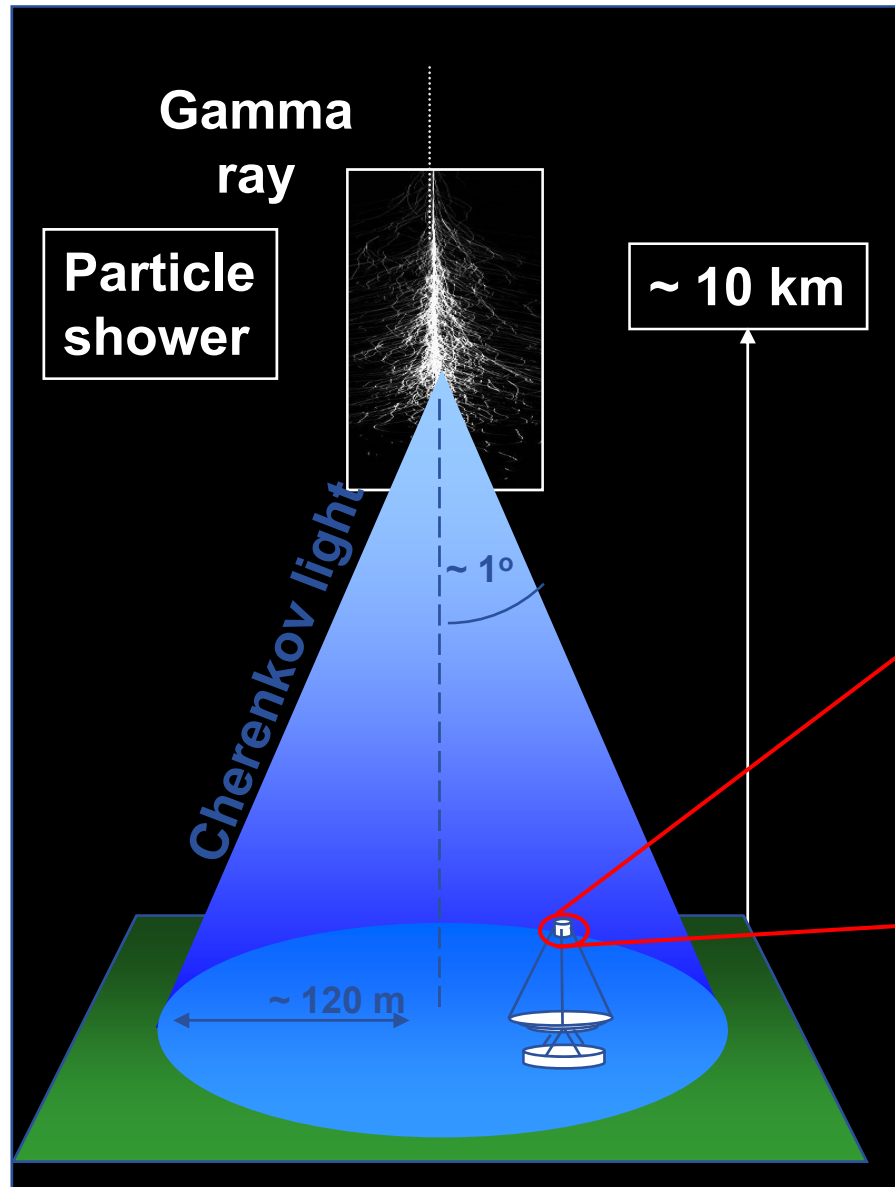
[www.eu-egee.org](http://www.eu-egee.org)



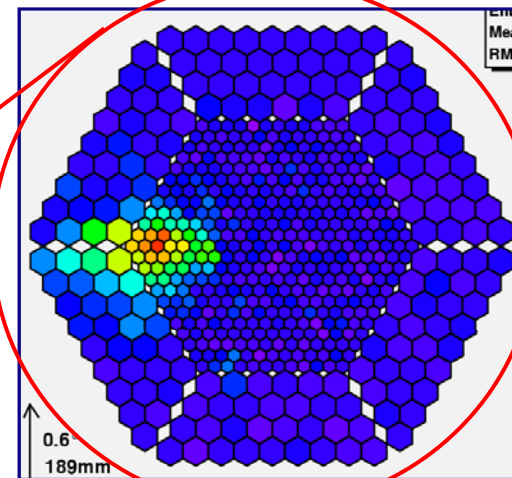
- **We've separately used:**
  - AuthZ and AuthN (proxies, VOMS)
  - Simple Workload Management (Resource Broker)
    - Run hostname
    - Send and run an executable
  - Information System (IS)
  - Data management (DM)
- **Its time to put these together!**
- **The goal of this practical is to show some building blocks that can be used in realistic applications on a grid**

- **Ground based Air Cherenkov Telescope 17 m diameter**
- **Physics Goals:**
  - Origin of VHE Gamma rays
  - Active Galactic Nuclei
  - Supernova Remnants
  - Unidentified EGRET sources
  - Gamma Ray Burst
- **Grid added value**
  - Enable “(e-)scientific” collaboration between partners
  - Enable the cooperation between different experiments
  - Enable the participation on Virtual Observatories





Cherenkov light Image of particle shower in telescope camera



reconstruct:  
 arrival direction, energy  
 reject hadron background  
 Requires Monte-Carlo  
 analysis: writes data to a SE

# Practical overview: 4 examples

1. Run a more realistic job, an example provided by the MAGIC project
    - Sends **script** to CE
    - Sends **executable** in sand-box – note need to “chmod +x”
    - Writes **file** to SE
  2. Run a job “**close**” to SE with required input /output data
    - simple script to copy file from SE to Worker Node
  3. Script to run **multiple** jobs
    - Create JDL files in the script
    - Submit multiple jobs to Resource Broker
  4. How to **control access** to files – so collaborators can share data
- The wiki page leads you through submitting all these, then invites you to explore what is happening while the jobs run.
  - **READ INSTRUCTIONS CAREFULLY** – you need to be alert and to understand what is happening for this to work
    - For “sofia” read “singapore” !