THE PROPOSAL DOES NOT SUFFICIENTLY DESCRIBE HOW A COMMON RESEARCH PROGRAM IN PARTICLE PHYSICS, IN DARK ENERGY AND IN GRAVITATIONAL WAVES WILL BE IMPLEMENTED BEYOND THE AIM OF BIG DATA ANALYSIS. IN PARTICULAR, IT IS NOT CLEAR HOW PHD STUDENTS CAN BE INVOLVED IN SO DIVERSE AREAS WHILE BENEFITING FROM THE PROGRAM AS A WHOLE

- COMMON WORK ON MACHINE LEARNING TECHNIQUES IS A DEFENDABLE BENEFIT IN MY OPINION.
- IF I UNDERSTOOD CORRECTLY THE COMMENT, SOMETHING MORE RELATED TO THE SCIENCE CASE IS REQUESTED
- WE CAN ADD SOME ARGUMENTS ABOUT THAT (SEE NEXT SLIDE FOR SOMETHING I HAVE IN MIND).

- A POSSIBLE CONNECTION IS (FROM MY VIRGISH POINT OF VIEW) THE INVESTIGATION OF GRAVITATIONAL WAVE STOCHASTIC BACKGROUND
  - ASTROPHYSICAL: BACKGROUNDS FROM CBC, ESPECIALLY BH-BH
    - PROMISING CANDIDATE FOR DETECTION
    - PROPOSED CONNECTION WITH DARK MATTER
    - FROM BIG DATA PERSPECTIVE: STUDY OF NON GAUSSIAN BACKGROUNDS, IN PRINCIPLE MORE INFORMATION TO EXTRACT ABOUT SOURCES
  - COSMOLOGICAL: BETTER UNDERSTANDING OF FIRST PHASES OF EVOLUTION OF THE UNIVERSE
    - MODELS BEYOND GR
    - CONSTRAINT ON INFLATION MODELS
    - CAVEAT: THIS IS **NOT** THE MOST PROMISING SOURCE TO LOOK AT IN ADVANCED DETECTORS
    - IT WILL BE BETTER IN THIRD GENERATION AND SPACE DETECTORS AS LISA: WE CAN PUT THIS OBJECTIVE AS A GOOD WAY TO PREPARE A FUTURE COMMUNITY OF SCIENTIST WITH AN INTERDISCIPLINARY BACKGROUND