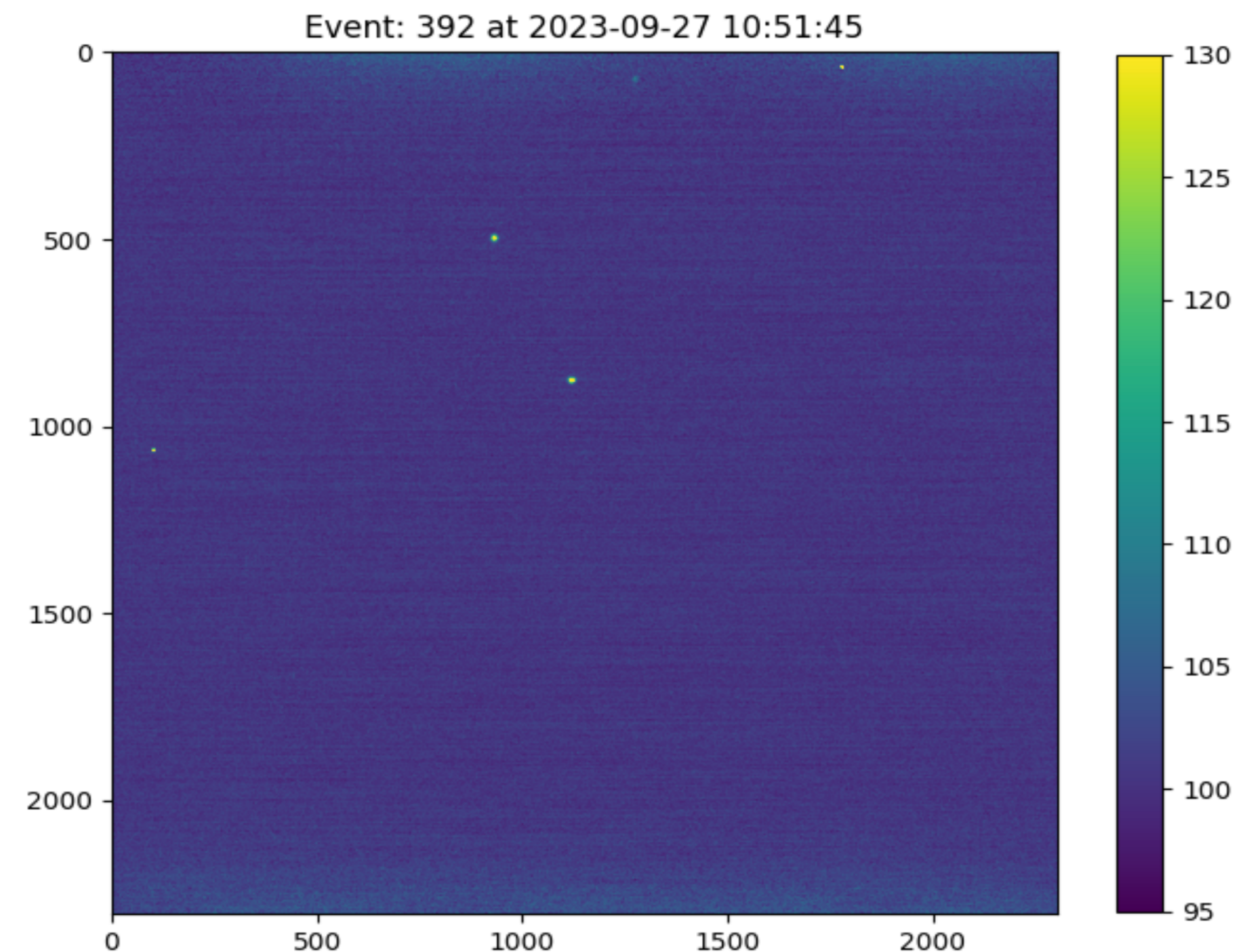
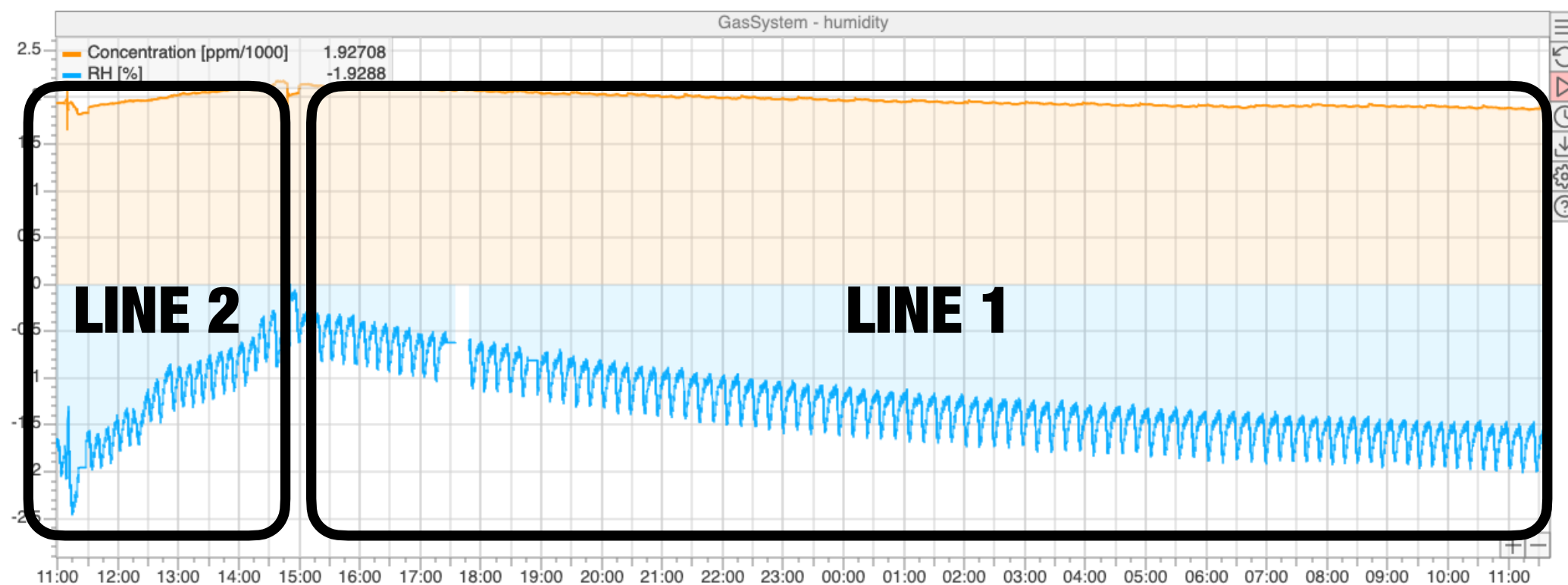


CYGNO status, 27 Sept 2023

# LIME: Run3

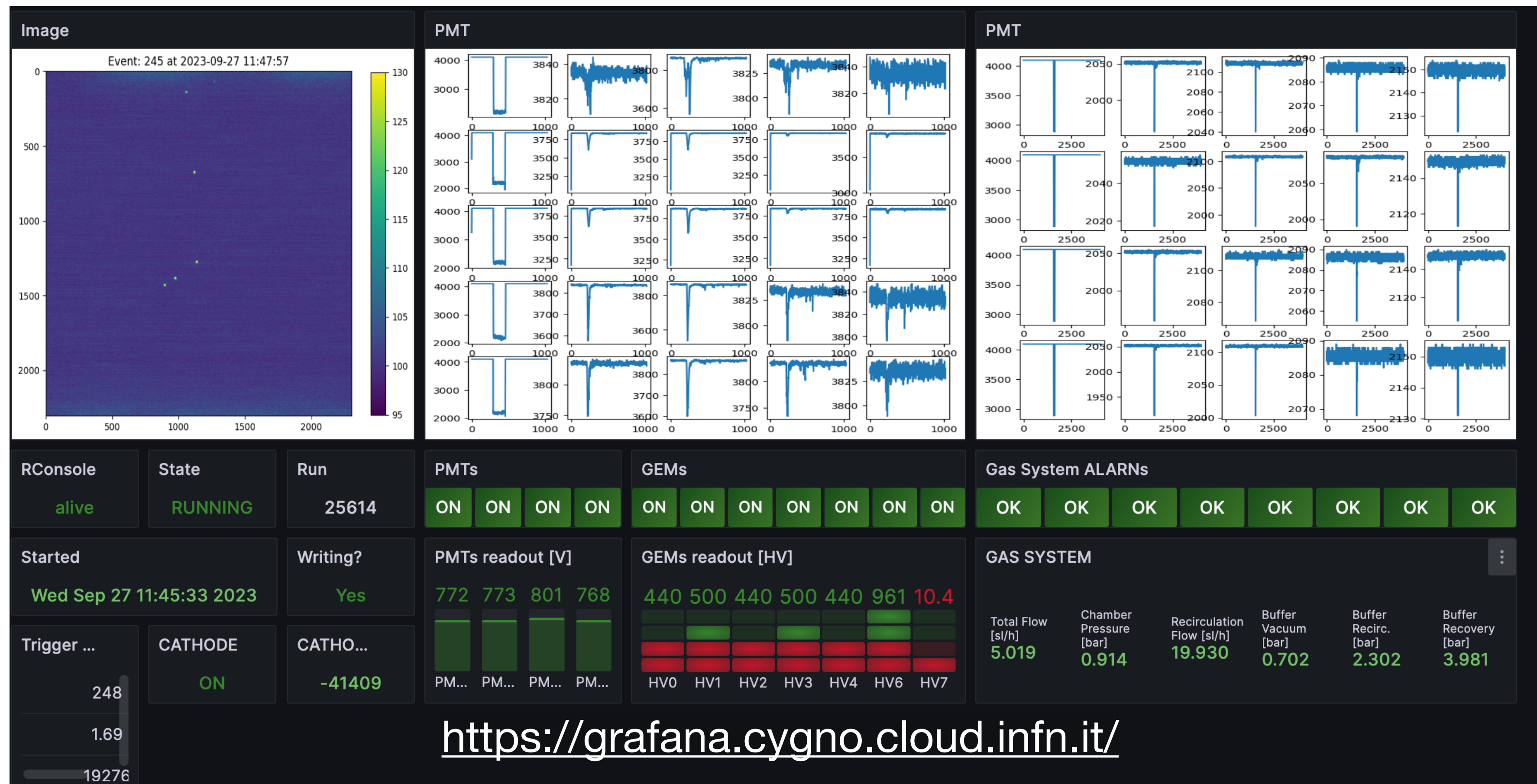
- Last week there a successful intervention on the gas system that is working since a week;
- Yesterday the GEM HV was turned On and we started to take “stability runs” with  $^{55}\text{Fe}$  in position #3
- We tested both the filter lines and line2 seems not able to control humidity, while line1 is working fine.





# LIME: Run3

- Automatic reco and remote console are working fine



# Program for next months

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1. Tuesday, 26th Turn on HV and start stability tests
2. Friday, October 29 start with bkg + daily scan
3. Tuesday, October 10 Ba source
4. Tuesday, October 17 Eu source
5. Tuesday, October 24  $^{55}\text{Fe}$  without collimator
6. October 26 start start with bkg + daily scan
7. November 6 end of Run 3
8. Water shielding installed in November
9. Start of Run4 in December

Points 8 and 9, still to be confirmed

# Test with high energy X rays

<i>Radion.</i>	<i>Code</i>	<i>Present activity (kBq)</i>	<i>Date of production</i>
Eu-152	<b>027</b>	29.19	01/10/1996
Ba-133	<b>063</b>	116.33	01/01/2002
Ba-133	<b>064</b>	94.45	01/06/2002

## Barium

30 keV 95%  
35 keV 22%  
81 keV 33%

## Eu

40 keV 38%  
45 keV 15%  
121 keV 28%

[http://www.Inhb.fr/nuclides/Ba-133\\_tables.pdf](http://www.Inhb.fr/nuclides/Ba-133_tables.pdf)

[http://www.Inhb.fr/nuclides/Eu-152\\_tables.pdf](http://www.Inhb.fr/nuclides/Eu-152_tables.pdf)

# INFN - Referees and Committee

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- Report of INFN referees to the Scientific Committee was quite positive;
- The successful data taking of Run3 and AmBe has been well received;
- They anyway pointed out that there is now a lot of work to do to completely analyse and understand the data and to compare them with the Monte Carlo;
- There were three main requests:
  1. organising a meeting for the next April to show them the final results for Runs 1, 2 and 3 and the preliminary of Run 4;
  2. preparing a Quality plan for Cygno-04, i.e. a document describing the results of the scrutiny of the material and procedures used to assemble CYGNO-04;
  3. updating the Collaboration Letter with foreign institutes to a formal Lol;

# INFN - Referee and Committee

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- On point 1, with the help of Giulia and Emanuele, we are trying to organising and coordinating the analysis and simulation tasks with aim of converging on the needed results;
- On point 2, there was a work started by Anna (LNF student) now on another project. We should re-organise a task force, that selects material, tests them, simulates them and asses the final quality level;
- Point 3 requires a discussion in Steering Committee
- In general, I think that all those points, should be discussed in the SC;