

## XI. 3. ARE YOU SURE YOU KNOW EVERYTHING ABOUT COROT ? A SIMPLE TEST

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### ABSTRACT

Before the launch of COROT, this paper helps you checking your understanding of our favorite mission. For 7 to 77 year old scientists or everyone who is involved in the COROT project. If you are a COROT Co-I, this test is MANDATORY.

Key words: COROT, space mission, asteroseismology, extrasolar planet detection.

Please answer honestly to ALL the 20 questions. Except when **explicitly mentioned**, each answer requires **1 single answer**. Go then to the score table to compute your score and read the associated comments.

### 1. COROT MANAGEMENT

**Question 1 :** Who is the PI of COROT ?

- A : Annie Baglin
- B : Jean Schneider
- C : Fabio Favata
- D : Jerry Lewis
- E : Bjorn Borg
- F : Ramses 2

**Question 2:** Who does NOT belong to the Scientific Committee ? (several possible answers)

- A : Annie Baglin
- B : Michel Auvergne
- C : Jean Schneider
- D : George W. Bush
- E : Zinedine Zidane
- F : Tintin and Milou

**Question 3:** How many COROT week(s) happened ?

- A : 10
- B : Too much
- C : Not enough
- D : An integer between 0 and  $10^{37}$

- E : I don't know, I wasn't born

- F : One in each Co-I's country

**Question 4:** Where does the name COROT come from or what does it mean ?

- A : CONvection, ROTation and Transit
- B : Jean-Baptiste Camille COROT : french painter of the 19th century
- C : Come On and Repair Our Telescope
- D : le CNES Organisme des Réunions Où on Travaille (The CNES organises meetings where we work)
- E : Costly Old Rubbish for Observators and Theoreticians
- F : I don't know

**Question 5:** Who will sign the first papers ?

- A : Me
- B : You
- C : You and me
- D : Jean-Baptiste Camille COROT (the same famous French painter)
- E : Nobody because you are allowed to keep silence and require the help of an advocate
- F : This point will be defined by a clear document approved by the Scientific Committee.

**Question 6:** Where will the first papers be published ?

- A : In "Astronomy and Astrophysics" if papers do not mention any instrumental development
- B : In "Le Canard Enchaîné" (famous satyric French newspaper)
- C : In "The Wall Street Journal"
- D : In an ecologic journal called "Nature"
- E : In "La Voix du Nord" ("The Voice of the North" : famous French local newspaper of the north of France, majored in dogs run over by cars and retired people banquets)
- F : In many astronomical journals

**Question 7:** Who sponsors COROT (several possible answers) ?

- A : CNES

- B : ESA
- C : Ricard SA (famous pastis from Marseilles)
- D : Duluxe Valentine paints (also sponsor of J.B. Corot)
- E : Rhône Poulenc for a cleaner world
- F : The French association of wine producers

## 2. COROT CHARACTERISTICS

**Question 8:** At which altitude should COROT be placed ?

- A : 20000 leagues under the sea
- B : 50 m (just above the trees)
- C : 500 m (that's already high enough)
- D : 897 km
- E : As high as birds can fly
- F : Where any spacecraft ever ventured

**Question 9:** When should COROT be launched ?

- A : As soon as the weather allows it
- B : Tomorrow, that's certain
- C : In the middle of the summer when everybody is on holidays
- D : At the end of next october
- E : We don't know exactly
- F : The 14th of july at 22:30 (French National Day)

**Question 10:** What are the goals of COROT (several possible answers) ?

- A : Asteroseismology
- B : Search for exoplanets
- C : Survey of French suburbs (the COROT satellite will be renamed the "Sarkozy satellite")
- D : Disturb the weather (as nuclear facilities)
- E : Fight against aliens
- F : Spoil the money of citizens

**Question 11:** What is a "lightcurve" ?

- A : A special effect in last Jean-Michel Jarre's show (French musician who made big urban shows with light effects on skyscrapers).
- B : The trace let by Darth Vader's laser sword
- C : The mass deforms the time-space that "curves the light"
- D : The temporal evolution of an object photometry
- E : A new method to loose weight
- F : I don't know, I never saw one

**Question 12:** How many CCDs are inside COROT's camera ?

- A : 0.5 (a broken one)
- B : 1
- C : 4
- D : 2 for the PI, 1 for each Co-I

- E : 12000 (one per target in the exo-channel)
- F : Never mind, they are useless if we cannot work on saturated stars

**Question 13:** Which launcher will be used for COROT ?

- A : Yuriy BILONOG : Olympic champion of shot put in 2004, (IOC 2006)
- B : A huge rubber band
- C : A Soyouz launcher
- D : An Ariane 5 launcher
- E : An athlete doped by steroides and EPO.
- F : The Space Shuttle with an extra kit to launch COROT (ref TBD007 : cost = 2000 Euros Taxes included)

**Question 14:** How many sismo windows are available on the exo CCDs (beware : there is a trap) ?

- A : A few
- B : Many
- C : None
- D : It depends if they belong to the core program or the additional programs
- E : As many as exo windows on the sismo CCD.
- F : Nevermind : ALL the Co-Is will access ALL the data

**Question 15:** Where are Gerard Epstein's glasses ?

- A : On his nose
- B : On the desk in his office
- C : He does not need any glasses
- D : Where they are
- E : In the COROTCASE, ready for launch (with his watch, pens, car keys and vallet...)
- F : That is not the question : the right question is to know wether they will be available for ALL the Co-Is or not.

**Question 16:** What is the prism in the exo channel made for (several possible answers) ?

- A : Getting color instead of black and white photometry
- B : Weighting the instrument
- C : Allowing color information on the target to help discriminating transits candidates
- D : Increasing the risk that something breaks at the launch
- E : Allowing never-ending discussions in the exoplanet group
- F : Nothing and I propose to remove the prism from the camera

### 3. COROT DATA PROCESSING AND OPERATIONS

**Question 17:** How many lines of codes have been written for the WHOLE project, at the 15th of june 2006 (including onboard software, CCC, CMC, CDC, ...) ?

- A : A lot
- B : About  $10 \pm 5$
- C : I made a program to compute it, does the number of lines of it also count ?
- D : None, the data operations are fully analogic
- E : As many as COROT targets
- F : I have no idea

**Question 18:** In the exo channel, what are N2 data (several possible answers)?

- A : Very nice data allowing a lot of very interesting science
- B : N1 data published 6 months later to prevent from an efficient follow-up
- C : I don't care, I will use only N1 data 6 months before
- D : Very "cool" data because they are mixed with liquid nitrogen ( $N_2$ ), so the name
- E : Something unknown between N1 data and N3 data (Yes Annie, there will be N3 data, and N4, N5, N....even if it is not yet implemented)
- F : Nevermind, the right question is to know wether ALL the Co-Is will get rewarded for their contribution to COROT.

**Question 19:** What is "Exo-pipe" (several possible answers)?

- A : The pipeline for the data processing of exoplanet channel data
- B : The abbreviation of "Exotic pipes", the caribbean version of the famous Scotisch pipes
- C : A new way of smoking
- D : Something reprobated by quite all the religions
- E : A pipeline between Toulouse and Marseilles to bring oil during winter and avoid them freezing in the lab
- F : Neverminds, the rights question is to know if we can oversample the pipeline

**Question 20:** What can be done to improve the quality of the pipeline (several possible answers) ?

- A : Work as a team to coordinate the effort on the data
- B : Learn how to use IDL
- C : Drink 2 or 3 more glasses of pastis
- D : Look at the data
- E : Put the data in the trash and simulate new ones that are adapted to the pipeline
- F : Try a brain transplant

### 4. SCORE TABLE AND RESULTS OF THE TEST

For each question, look in the score table at the scores corresponding to your answer(s), and add them. You should get a number between -300 and +300. Then, have a look at the comments corresponding to your score.

Table 1. Score table

Question	A	B	C	D	E	F
1	10	0	0	-5	-5	-10
2	0	0	0	5	5	5
3	10	-5	3	5	-3	3
4	10	5	3	3	-10	-5
5	10	0	5	5	-10	10
6	5	5	0	5	-10	10
7	5	5	0	-5	-10	10
8	-10	-5	0	10	0	5
9	5	0	0	10	10	-5
10	5	5	-5	-5	-5	-5
11	0	5	5	10	-5	0
12	0	0	10	-5	-5	-5
13	-5	-10	10	0	5	0
14	0	5	5	10	-5	-10
15	5	5	5	5	10	-15
16	5	5	10	-10	10	-20
17	10	0	20	-20	5	0
18	10	-20	-10	5	5	-10
19	15	-5	-5	-10	20	-15
20	20	5	-10	5	-20	5

**Your score is negative:** You spent a long time in the project, but at the end, I am not sure you really understood it and how it works. Did you think at a new job ? According to the quality of your answers, you only have the choice between prison keeper, serial killer or bank employee. In any case, do anything but please do not stay like this. If you are a Co-I, of course, you are fired...

**Your score is between 0 and 100:** No doubt, you already heard about COROT. Maybe, you took part to several COROT weeks, but I am not sure you really know what the project is. The solutions you can propose for technical and management problems are rough and look like last century way of managing. Your colleagues should not be proud of you. Be nice for them, give up this job or do something useful (e.g. prepare the coffee, clean up the blackboard...). If you are a Co-I, of course, you are fired...

**Your score is between 100 and 200:** No doubt, you are a COROT fan, but are you more? If you want to be allowed to sign the papers, you should

not be so approximative in your answers. Read twice this book and do the test once again. I am sure you can improve. If you are a Co-I, of course, you are fired...

**Your score is between 200 and 250:** No bad Colleague!. Well, your knowledge of the instrument and all its secrets is not perfect, but as a manager you will be brilliant and it compensates a bit your lack of experimental expertise. I just suggest a training session in Toulouse and you will be ready to be launched... If you are a Co-I, you will soon be fired ...

**Your score is between 250 and 280:** Congratulations! only a few mistakes or missing points but you are quite allright. You have the choice to become data manager, people manager, instrument manager, team manager of anything where you can be a manager. Please send me your name and I will tell a few words to Annie about you. If you are a Co-I, you are lucky, you may keep your job.

**Your score is between 200 and 300:** I should call you Master ! You are able to become PI at the place of the PI. Or maybe, you looked at the score table during the test. In any case, you are fired, because too dangerous for the PI and other Co-Is. Sometimes, it is better to stay humble... If you are a Co-I, of course, you are fired (already said, look at what I wrote).

**You score is higher than 300:** You do not know counting or you did not respect the rules of the game. In any case, you are fired, and nothing can save you... If you are a Co-I, I cannot understand how you managed.

## 5. CONCLUSION

Well, that's all folks. I hope you enjoyed this test. If you are a bit disappointed by the results, no panic ! Read carefully the content of this book, that will remind you most of COROT concepts, then try again until you reach an acceptable score (between 280 and 300).

After 3 negative tries, you can consider yourself as uncorrectable. We strongly suggest you to work on another project. If you are a Co-I.. you know what to do.

## 6. REFERENCES

International Olympic Committee :  
official website : <http://www.olympic.org/>

This book is the "official reference" (and can be considered as "the Holly Bible" for COROT). If you are a Co-I, you MUST read it (and must have written it also...)