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Memorie della

G.V. Schiaparelli and Fr. A. Secchi, S.J.

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Abstract. The source of what I will say in this lecture is the book containing the correspondence of the two astronomers (Schiaparelli & Secchi 1991). It comprises 146 letters which cover a period of about 16 years, from April 30, 1861 — the year in which Schiaparelli discovered the asteroid Esperia, after which he became director of the Brera Observatory — to October 10, 1877, a few months before the death of Fr. Secchi which occurred in February 1878. Of all these letters, 83 were sent by Schiaparelli and 63 by Secchi. These latter ones are kept in the archives of the Brera Observatory while, of the 63 sent by Secchi, 10 are kept at the Rome Observatory and 53 at the Gregorian University.

Key words. Secchi – Schiaparelli – Letters – Meteors

1. Introduction

From one letter of Fr. Secchi we know that the two astronomers met only one time in their lives and this happened in Milan sometime before September 8 of 1870.

This correspondence is very important in so far as it allows us to appreciate some of the great astronomical discoveries of the second half of the 19$^{\text{th}}$ century and also to know how the foundations of the modern astronomy were laid. All of this vividly appears through the exchange of ideas, the collaboration in research and the friendship and reciprocal esteem of these two, who can be considered the greatest Italian astronomers of the second half of that century.

What we notice immediately in this correspondence is, first of all, a clear difference in each one's approach to astronomical research; secondly, there is a very deep friendship and unlimited reciprocal esteem, both on the human and on the scientific plane.

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2. Fields of Research

In brief we can say that while Schiaparelli, at least in the first 20 years of his career, followed the classical stream of precision measurements of the position of the celestial bodies, in order to apply the methods of celestial mechanics to the calculus of the orbits of the planets, comets and meteors, Fr. Secchi, who right from the beginning felt himself to be more a physicist than an astronomer, planned his research chiefly on the physics of the stars, studying in particular the structure and the composition of the Sun, stars and comets.

In the fields of astronomy and meteorology their collaboration started with the measurements of the positions of the asteroid Esperia and with the exchange of meteorological data. Later on their interest passed mainly to the observation of comets and meteors. As for these latter interests, Fr. Secchi, besides publishing in his "Bullettino" the famous five letters of Schiaparelli, was always sending to his colleague of Milan the data that he himself had collected in Rome, including the data that had been collected by his predecessors at the Roman College.

A work that the two began to prepare in collaboration was the measurement of the longitude difference between Milan and Rome, in order to measure the degree of the Central Europe Meridian passing through the respective countries of Lombardo Veneto and the Papal States. However, for various reasons, despite their best intentions, this measurement was never made, even though they had worked a great deal in order to prepare themselves to reduce to a minimum the personal equation, to provide their observatories with a rather costly Hipp chronograph, and to assure the availability of the telegraphic line for the transmissions of the signals.

In preparation for the observation of the solar eclipse of December 1970 in Sicily, Schiaparelli and Secchi, on the advice of Prof. Santini of Padua, prepared the instructions regarding the observations to be done and the chart illustrating the various phases of the phenomenon.

Another field of common research was meteorology and in particular the study of terrestrial magnetism, an especially interesting phenomenon even from an astronomical point of view, given its connection with the solar cycle. In this context every now and then mention is made also of the northern lights and zodiacal light.

As for the researches on the planet Mars, it is well known that Secchi observed it from the beginning of his career and that Schiaparelli dedicated much of his work to it. But in the correspondence there is no word of this because Schiaparelli started his observations just a few months before the death of Fr. Secchi. Yet suffice it to mention that Schiaparelli, the first time he uses the term "canali", adds: "as they are called by Fr. Secchi". Fr. Secchi makes use of the term "canali" in (Secchi 1856) and in (Secchi 1862).

The fact that our two astronomers were dealing with very different fields of research not only did not impede but, precisely because of their reciprocal esteem, it favoured the development of a very close relationship of mutual interest in their respective fields of research to the extent that at times they were able to help one another.

2.1. Reactions of Fr. Secchi to the Letters on the Meteors

I Letter: (14 pages) Starting from the fact of the diurnal motion of the radiant, Schiaparelli argues that the meteors have a cosmic and not an atmospheric origin. Besides he explains why the meteors are more numerous in the early morning hours.

Secchi: *I thank you for the nice letter on the falling stars, and for the honour that you pay me by sending me the beautiful fruits of your rare knowledge.* (N.44, p.84, Aug.1866).

II Letter: (16 pages) The meteors, like the comets, are coming from regions which are very distant from the Sun (N.47, p.105, Sept.1866).

III Letter: (17 pages) The mass of meteors is very small and the original cloud containing them, as it enters the solar system, spreads out on a parabolic or elliptical orbit (N.48, 107 and N.49, p.124, Nov.1866).

IV Letter: (7 pages) Schiaparelli demonstrates that the meteors of August 10 (Perseids) originate from the comet 1862, III, that passed at the perihelion in August 22, 1862. (N.51, p.127, Nov.1866).

Secchi: *The idea that the comets could be connected with the falling stars came also to my mind but I would not have believed such a coincidence in the elements. You have "tossed a strike" as we say!* (N.52, p.33, Nov.1866).

V Letter: (3 pages) The Leonids of November are shown to be related to the Temple comet 1866 I (N.60, p.145 Feb.1867).

Secchi, from Paris: *I congratulate with you for the brilliant success of your theory of the falling stars: here everybody is speaking of it and alluding to the person who tried to usurp your authorship. But that had no other effect than to show even more the merit of your discovery.* (N.62, p.149, May 1867).

Further confirmation of this discovery came when it was proved that the shower of falling stars of December 10 was due to the

Biela Comet and the one of April 20 to the Comet 1861 I.

2.2. Schiaparelli's opinions on the works of Fr. Secchi

Apart from the numerous testimonies of esteem and reciprocal praise that the reader encounters throughout the correspondence, here is what Schiaparelli writes about what was the principal work of Fr. Secchi: *The spectral classification of the fixed stars is a very important undertaking! I see this opening to new horizons which nobody would have ever dreamed of.* (N.48, p.106, Mar.1868). *I do not know where Your Lordship finds the time to do so many things and to develop the incomparable fertility of your ideas. The new application of spectrometry that you have illustrated in your last work in the Comptes Rendus is absolutely amazing.* (N.74, p.169, Mar.1868).

And as for the researches on the Sun: *I have received your very interesting report on the total eclipse of last August. Although I am a pure and simple spectator, I cannot help but follow with admiration the new and considerable progress of solar physics, in which you are participating so gloriously.* (N.84, p.179, Feb.1869). *With immense pleasure I see that finally your observations of the Sun, which, I have always noticed you have been able to see with the telescope better than any other, are beginning to be recognized even by your more relentless adversaries... I congratulate you that you are being rendered justice, even if so late!* (N.128, p.234, Apr.1875).

2.3. Solved and unsolved problems

Fr. Secchi, in addition to studying the Sun with his spectrograph, starts to study the physical structure of the comets with the same instrument. In the correspondence he deals in particular with the Brorsen Comet (N.175, p.171, Apr.1868) and the Coggia comet in which he finds the CO_2 bright bands (N.123, p.227, May 1874) and he asks himself if the comets light may be partly generated by the comet itself.

So two questions remain unanswered: What is the cause of the tail of the comets? Why do the comets have only one tail? At that time the hypothesis was that the comet tail was due to the phenomenon of the tides produced by the attraction of the Sun; but in that case a comet should have two opposite tails. One solution was that the missing tail, that is the one directed towards the Sun, was destroyed by the heat of the Sun (N.49, p.124, Nov.1866).

Another unsolved problem was the origin of the light emitted by the comet nucleus. Apart from the light due to the Sun, Schiaparelli and Secchi, because of some bright lines in the comet spectrum, suspected that, at least some of the light was generated by the comet itself. In fact, as regards the Brorsen comet, Secchi says: *...is it all reflected light?... but the brightness of these lines when the air is clear, and the mass of the comet is small, leads me to believe that this light comes from the comet itself.* (N.75, p.171, Apr.1868).

And, in the same way, Schiaparelli: *...I think it very unlikely that a comet is simply like a meteoric cloud. The jets, the atmospheres, the brightness variations, its own light in part, the repulsive force of the Sun, do not allow me to accept the Tait "sea birds theory".* (N.110, p.211, Jan.1873). And again Secchi: *...We need a beautiful comet in order to know how much comes from its own light and how much comes from absorption.* (N.121, p.224, May 1874). As for a positive contribution: Fr Secchi, in one of his last letters describes an object that he observed many years before, *a black hole, next to a magnificent crown of stars... with a red gem in the centre like a ruby.* Secchi wonders whether, instead of speaking of a "hole" in the Milky Way, it would not be better to speak of a "dark cloud", anticipating in that way the existence of dark nebulae, today admitted by everybody, but confirmed only much later after the discovery of interstellar absorption by Trumpler (N.137, 245, Feb.1877).

At that time astronomical observatories dealt also with meteorology and some meteorological events were often considered to be linked with astronomical causes.

So Schiaparelli, around 1867, was convinced that both the Moon and sunspots had an influence on a supposed periodicity of the rains. But, after many vain attempts to find a law, he asks for Fr. Secchi's opinion and the answer is: *...I believe that the work that you do in meteorology, is just as useless as what I do on sunspots... I say this for our common good so that we do not stray from where we should be directing our attention.* (N.58, p.141, Jan.1867).

Their other common areas of research were the study of the terrestrial magnetism as related to solar activity, northern lights, meteorological phenomena and the earth currents due to meteorological phenomena. For Schiaparelli, *on the basis of 36 years of observations of the magnetic declination* it is clear that the variation of the terrestrial magnetism depends on the eleven-year period of the sunspots (N.110, p.211, Jan.1873), and *it seems that the causes producing the annual period of terrestrial magnetism are altogether independent of the sunspots. Is it possible that this effect may be caused by the terrestrial heat?* (N.112, p.215, Jan.1873).

Fr. Secchi, in answer to Schiaparelli's questions about the action of the storms and thunderbolts on the magnetic needles, gives him a classical lesson in electromagnetism by distinguishing between static and dynamic electricity, and by explaining why the magnetic needles are more sensitive if they have little mass and how the influence of a discharge of a Leyden jar depends on the speed of the discharge. Finally, about Schiaparelli's hypothesis that the annual period of terrestrial magnetism may depend more on terrestrial heat than on the sunspots, Secchi answers: *I prefer to attribute to the Sun the cause of this effect rather than to the heat of the Earth.* (N.113, p.217, Jan.1873).

For his part Secchi is convinced that *...there are some meteorological phenomena which depend upon the Sun and to which meteorologists have paid no attention, but I did so through a series of tedious observations of the solar prominences. It is unfortunate for me that the clouds are always coming in front of the Sun. The frozen cirrus clouds follow the Sun with the precision of the celestial sphere. It makes me despair: but the fact remains that here we have an example of how certain meteorological phenomena occur with an astronomical precision (although at first sight this is not easy to explain). This phenomenon of cirrus clouds has a great influence on magnets as I have demonstrated many times in my long and numerous discussions on this subject. This effect on the earth has a diurnal and an annual periodicity. Add the solar period, which at least indirectly acts on the Earth, and I believe that we have a sufficient (on the whole) explanation.* (N.113, p.218, Jan.1873).

More than once in their correspondence, Schiaparelli and Secchi refer to observations of the zodiacal light and the northern lights: observations which were possible in the centre of a big town only in times gone by! As for the northern lights Schiaparelli noticed how they were influencing the magnetic needles; therefore he deduced the important prophetic conclusion: *So it seems that if the polar aurorae are electric phenomena, they are due to dynamic rather than to static electricity.* (N.112, p.214, Jan.1873).

3. Friendship and esteem for one another

When we speak of their friendship and esteem for one another, and even, in the case of Schiaparelli, of veneration towards Fr. Secchi, it is useful to recall that Schiaparelli was 17 years younger than Secchi and that he started to direct the Brera Observatory in 1862 when Fr. Secchi had already been director of his observatory for 12 years. No wonder, therefore, that Schiaparelli addresses Fr. Secchi with the titles "Pregiatissimo Direttore, Molto Rev., Riveritissimo Sig. Direttore (Most Venerable Director, Most Reverend Lord Director)": titles that Fr. Secchi reciprocated with: "Stimatissimo, Onorandissimo, Veneratissimo... (Most Esteemed, Most Onorable, Most Venerable)". In the same way Schiaparelli closed his letters with: "Suo dev.mo e Obbedientissimo (Your Most Devoted and Obedient)..." and Secchi with: "Suo dev.mo servo... (Your Most Devoted Servant)".

If we now approach the subject matter of the letters, it is evident that the first and the more significant sign of the esteem that Schiaparelli had for Fr. Secchi is evidenced by the fact that, when he decided to publish his discovery on the cosmic and cometary origin of the falling stars, he did it in the form of five letters sent to Fr. Secchi to be published in the Meteorological Bulletin of the Roman College. These famous letters, written in the short period August 1866 – February 1867, are the most important and the longest in all of the correspondence. Schiaparelli could have published his discovery in other Italian scientific and academic magazines of that time. If he preferred the Roman College Bulletin, the reason could not be other than the esteem and friendship that he had for Fr. Secchi and his observatory. In fact, he himself confirms this in a letter to Fr. Secchi in which, referring to the generosity of Prince Boncompagni who was financing the printing of the Bulletin and was sending to him the off-prints of his Letters, he wrote: *In any case this is a very singular sign of kindness that the prince gives to me, and that I will try to reciprocate to the best of my ability. If I manage to establish the true basis of the theory of the falling stars, I will owe it mainly to him and to your most illustrious Lordship* [Fr. Secchi] *who willingly took upon themselves so much trouble for this edition, now so well done and absolutely correct. Because, if I had buried these studies in some academic collection, perhaps by now the world would not yet know nothing anything about it.* (N.58, p.142, Jan.1867).

Schiaparelli, referring to a project of Fr. Denza about some earth physics experiments to be done in the Moncenisio tunnel, writes: *As regards Y.[our] L.[ordship] the respect, the esteem and the very great veneration that I have for your person leads me to advise you to withdraw from this enterprise as soon as possible with some straightforward excuse.* (N.104, p.203, Apr.1872).

Schiaparelli to Secchi: *...I see with regret that your health is no longer as it was. I cannot but wish that your precious life be prolonged for the honour of Italy (which owes to you infinitely more than to so many thousands of chatterboxes and buffoons who are infesting it, always speaking of their fatherland, reciting among themselves the Margutte creed...) as a consolation to your friends and a good example to our scientists.* (N.138, p.246, Feb.1877).

In October 1877 Fr. Secchi, published the book "Le Stelle", with the help of Schiaparelli whom he had asked to intervene with the typographer in Milan. In his letter, after having said that he feels alone, tormented by atrocious stomach-aches and that the doctor forbids him to get up during the night, he adds: *...I have a thought which I wish to share with you in all sincerity. I would like to preface the booklet of Stellar Astronomy, that finally is about to be published, with one line of dedication to your person. But, as I know how much you shun praises, I would like to ask you to permit me to write only these few words: "To the most distinguished Lord G.V. Schiaparelli, Director of the Brera Observatory in Milan. The Author dedicates these pages as a sign of profound esteem and sincere respect." Instead of being handwritten it is a printed dedication and nothing else is written, and you are absolutely not responsible for the nonsense that I might have mentioned. But if this is still too burdensome for you, I will not feel offended and all will be settled by telling the typographer to suppress it. But, hoping for this favour, I am, with the greatest esteem for you...* (N.145, p.251, Oct.1877).

Schiaparelli answers: *...when one has a profound and boundless esteem and veneration for a person, it is quite gratifying to know that one is well thought of by that person... So I agree and I look for the opportunity to show you how much I have been touched by your spontaneous act of generous deference towards one who, for the time being, cannot but see you as his exemplary master.* (N.146, p.252, Oct.1877).

3.1. Humility and awareness of their limits

Schiaparelli writes to Fr. Secchi about the Italian Committee for the measurement of the degree of the European meridian, for which some instruments were necessary, such as precision pendulum clocks, chronographs and telegraphic equipment for transmitting the astronomical data collected from one town to another: *...But as I am quite ignorant in all this new electrical astronomy which, I confess, is a little repugnant to me, so I confide in those persons who have more experience in these matters and, indeed I will often have to indulge Your Lordship who will find in me a more zealous collaborator than an enlightened one.* And, after expressing his opinion on some difficulties with the method for the measurements, he concludes: *Will you be kind enough to enlighten me on this point, while I will also try to study a little.* (N.27, p.36, Apr.1866).

Still Schiaparelli, when preparing the longitude measurements: *I will do my best to complete my preparations so that when you come to Milan... I may take advantage of your experience in these electrical manipulations (that cause me a fever) and correct anything that may be out of order.* (N.79, p.175, Jun.1868).

Fr. Secchi sent a letter to Schiaparelli with reproductions of some stellar spectra and he congratulates him on the medal awarded to him by the Academy of XL. Schiaparelli replies: *I do not understand how Y(our) L(ordship) manages to get so many spectra of the fixed stars... Unfortunately I do not know much physics and I doubt that I will ever be able to apply myself seriously to spectral research: however I beg Y.L. not to put me in the mob of those who curse these studies, and would like that astronomy be limited to pure gravitation for the only reason that it is the only part rigorously subject to the empire of the analysis. Plana, for example, with all his great merits, had this prejudice.* (N.39, 60–61, Aug.1866).

Even Fr. Secchi recognizes his limits when, with respect to the decision to be taken on a possible intermediate telegraphic station between Rome and Milan for the measurements of the meridian, he writes: *...I will not make a choice without your opinion and... I will wait your decision in that matter.* (N.26, p.34, Apr.1866). Later: *I thank you cordially for your affectionate esteem, and for all that I owe you.* (N.64, p.152, Oct.187). And recalling some of his works on terrestrial magnetism: *...perhaps all I did was to show my lack of facility in mathematics.* (N.113, p.219, Jan.1873). Lastly, when Fr. Secchi receives the proofs of the book “Le Stelle” corrected by Schiaparelli, the answer is: *Many thanks, I approve everything.* (N.136, p.243, Jan.1877).

3.2. Reciprocal help

As regards this proof-reading Schiaparelli answers Fr. Secchi: I am very much honoured that you ask me to act *as an obstetrician on this new work and I will try to do it with great diligence.* (N.135, p.242, Jan.1877).

During the final illness of Fr. Secchi, Schiaparelli tries to reassure him: *Do not worry about the two comets now visible on the horizon. I will take care of the position observations, since I have already done many observations for each of them.* (N.146, p.252, Oct.1877).

4. Exchange of opinions on the conditions of astronomical research in Italy

4.1. High-level and Low-level Astronomy

Answering the first letter of Schiaparelli on the Shooting Stars Fr. Secchi writes: *It would be desirable to found a small Italian Astronomical Society to deal with all of the different branches of this science, with each person working according to personal means and interests... Who, better than you, for example, could direct the high-level part! Many others could deal with regions of secondary stars! Comets and the details of physics could be studied by those who cannot do the serious part of this science and so on.* (N.44, p.84, Aug.1866).

Schiaparelli squarely refuses the proposed distinction between low-level and high-level astronomy saying: *You are no doubt joking by choosing me as the director of the “high” part in the Italian astronomical republic. If during my studies I have had a misfortune, certainly that was due to the fact that I was destined to command and direct before learning to obey and work under a chief. Besides, I believe that in astronomy there are no “high and low” parts; and that merit lies in the perseverance and ability with which the work is done and in the scientific progress that they produce in sci-*

ence: therefore it is clear who must be the director: certainly not a disciple like me. And the more "serious" astronomy, according to me, is not the one with longer mathematical formulae or subtleties of analysis: that is certainly the more "comfortable" because it can be done at a desk; and it is an excellent expedient to hide one's laziness. I confess that this part suits me more; but, for goodness sake, do not call it the "high" part! Otherwise we should put in the "low" part men like Tycho, Herschel, Schröter, Carrington, Lassel... But what am I saying? I am convinced that Y.L. is thinking exactly as I have said and that your last words of the letter of August 31, perhaps, were written while you were a bit distracted! (N.45, p.88, Sept.1866).

4.2. Too many observatories in Italy

Schiaparelli: *How much am I to congratulate you, who in spite of the very difficult circumstances, are able to find means to enlarge and furnish your new observatory with new instruments! Here can never get anything, and the cause is due to too many observatories that we have, for which the government spends an important sum, while, for that reason, in none of them (except perhaps for Palermo) it is possible to do any important work of observation. I have been waiting for 7 years for the 8 inch telescope to be installed! But Donati has managed to have the Municipality and the Province of Florence to concur, and has got sixty thousand francs for the construction of a new observatory: but this is not enough, and the government promises and promises, but to no avail.* (N.79, p.175, Jun.1868).

Secchi: *What then is it missing in Italian observatories? Here is it, what is missing is the German spirit of patient observation, and the material repetition of the same thing for millions of times. With the lively spirit that we have, we love variety, novelty, and that's all. I, on the basis of my experience, may say that as soon as my pupils have learned to do the observations well, they have abandoned them saying that they were bored to repeat always the same thing. What to do then with people like that? To dedicate themselves to popular novelties if you want to gain some money, that is all.*

On the other hand, do not believe that I am rolling in money. The repairs and the present expenses are made with the Prize given to me in Paris, and with my earnings at the university. Any director could have a good observatory under these conditions. The government gives me 40 scudos a year, the municipality 12, the house 100: all my fixed revenues are 152 scudos, that is 760 francs. That's all. I dedicate to the observatory not only my energies but also the little money that I have. Luckily I am in such a condition that I do not need more than what I receive from my community and so I'm living as a true philosopher.

Pardon me these chatters, but I believe it necessary to remove the idea that the government is giving me the moon. In confidence I'll tell you that they do not want to leave to the observatory even the prize-winning meteorograph and they are trying to sell it! The things seen from afar look different from what they are when seen closely. (N.80, p.177, Jun.1868).

5. Fr. Secchi's Vents to his friend Schiaparelli

5.1. Uncertainty due to the political situation, financial straits

Secchi: *I cannot risk to dare to go shopping, because at any moment we are expecting the "proficiscere" (depart)... You understand well that when one has the noose at his neck he does not feel like shining his shoes!* (N.49, p.125, Nov.1866).

Schiaparelli answers: *As far as I know, in our region, nobody has a serious desire to provoke conflict and enjoin the "proficiscere" on somebody. In any case the situation in Milan is the same as it was three years ago, and I would be very glad to work under the direction of Boscovich II, in the case that nothing better comes up. But I hope we won't reach such extremes.* (N.51, p.132, Nov.1866).

Secchi: *My return* [from Paris] *has been moved up in order to be present, at my post, the imminent crisis that I saw imminent. I do non know how it will turn out, but whatever it should be my duty is not to be far away. It is possible that this could be my last letter, there-*

fore I cordially thank you for your affectionate esteem and so much that I owe you and, if by chance the circumstances should oblige me to abandon the world of the sciences (as, deprived of the fruit of 40 life years, I could not continue) I beg you to consider me as your sincere friend and admirer... I have your psychrometer... For the time being I have more important things to attend than the psychrometer... (N.64, p.152, Oct.1867).

My position is getting more and more isolated: people from whom I hoped encouragement have given me absolute indifference, not to speak of something worse... I have enough to live but I can't do anything to restore the observatory, nor expenses for further studies. Vixisse sat erit (It is enough to have lived). (N.127, p.232, Apr.1875).

Schiaparelli answers: *The last lines of your letter are not reassuring at all for those who love and esteem Y.L. as I do... On the other hand a person whose name is Secchi has nothing to be afraid of not even in Italy...*

P.S. With infinite pleasure I see that finally! your observations of the Sun... start to be accepted by even the most relentless adversaries. (N.128, p.233, Apr.1875).

5.2. Nemo Propheta in Patria sua

Fr. Secchi has been asked by Schiaparelli to present one of his friends, Prof. Longo, to the fathers of "La Civiltà Cattolica". He will do it but here is his opinion on his brothers at that magazine: *...they judge me as anathema, and my poor booklet on "The Unity of the Physical Forces" was about to be presented as a work not only full of mistakes, but also dangerous to the faith. Luckily a good professor of the Roman College saved me by preventing the publication of an article on this topic in the magazine... Lately some articles that they have published have really disgusted me. What is certain is that their doctrines are not only not in the Jesuit tradition, nor even necessarily catholic, but just the fruit of their own thinking... All of this is confidential because I do not like to deal with such fellows and so I have ceased to give them even the scientific articles as I did in the beginning, and I want to be left in peace.* (N.132, p.238, Nov.1876).

5.3. A particular opponent

A certain astronomer, a relentless opponent of Fr. Secchi's, deceitfully prevents Fr. Secchi from carrying out a program of research in terrestrial physics in the new Moncenisio tunnel. Secchi reassures Schiaparelli: *I almost certainly know the culprit, therefore I have never had any suspicion about you. He is a certain fellow who, for the last one or two years, has been crossing his fingers against me, and in any way he can tries to give me and my initiatives a bad name. He is the spirit of contradiction... It has always been my habit never to fight with the envious or to despise my enemies.* (N.100, p.196, Apr.1872).

After a few days Fr. Secchi continues: *I know how much I have suffered in connection with the geodesic committee, due to the fact that Respighi, resentful of not being the head, was quite impertinent and slandered me to my superiors, trying to give me a bad name. I generously gave in, treated him as my equal, and wanted him to be appointed as committee head, but superiors did not agree. So he apparently calmed down, continued to contradict all of my decisions.* (N.102, p.200, Apr.1872).

6. On the religious ideas of Schiaparelli

After the death of Schiaparelli, his son Attilio sent a letter to Prof Celoria, the new director of Brera Observatory, in which he said that his father believed in a creator God, in the immortality of the human soul, and that he knew very well the history of the different old religions and, in particular, he had a special esteem and consideration for the Christian religion; but he did not practice any religion. He added that he was not present at the moment of death of his father and that if his father, in these last moments, agreed to receive a priest to administer the last Sacraments, it happened only in order to satisfy the pious wish of his sisters and daughters.

Personally, I would like to think that, besides the very noble sentiment which, in those last moments, led Schiaparelli to satisfy the pious wish of his relatives, no less importance should be given to the strong friendship and the immense esteem and veneration of this great astronomer towards his colleague, priest and Jesuit, Fr. Angelo Secchi.

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