Chemical Effects of a Mars-Saturn Conjunction

by NICK KOLLERSTROM and MICHAEL DRUMMOND

Introduction

Simple chemical experiments seem to show that planetary configurations can influence the behaviour of metal ions in solution. Several studies[1 2 3] have described the effect of Mars-Saturn conjunctions on the reaction between ferrous sulphate and silver nitrate in the presence of lead nitrate.

The procedure is very simple. Equal volumes of 1% aqueous solutions of each salt are mixed in a small dish. A cylinder of filter-paper of sufficient size to absorb all the solution within an hour or so is then immediately placed vertically in the solution. As the solution rises up the paper the precipitation of silver begins at discrete nuclei in the paper. Owing to the flow of solution the areas of precipitation are distorted into comet-like patterns called 'forms'. Variations in the reaction rate cause variations in the number and spacing of the forms. By observing the way in which the forms change during the experiment we can, therefore, follow the changes in reaction rate.

The reaction rate is also strongly influenced by other variables such as light intensity, temperature, acidity and the presence of impurities. Hence these variables need to be carefully controlled.

The ferrous sulphate-silver nitrate reaction is particularly suitable for this technique: the precipitated silver is a dense black, and the reaction rate is slow enough to give good forms. Lead nitrate is added to maintain specific planet-metal correspondences which are said to be necessary. In this case the correspondences are Mars-iron and Saturn-lead.

Chemically the role of lead in this reaction is puzzling. When the ferrous sulphate and lead nitrate solutions are mixed together, white insoluble lead sulphate appears in the dish:

$$Pb^{++} + SO_4^{--} \longrightarrow PbSO_4$$

Later on, as the solution rises up the paper the much slower reaction whereby silver nitrate is reduced to colloidal silver by ferrous sulphate takes place:

$$Ag^{+} + Fe^{++} \longrightarrow Ag + Fe^{+++}$$

Thus what is visible on the filter-paper is only precipitated silver, not iron or lead. Nearly all of the lead remains behind in the dish. Why should the small amount of lead remaining in solution affect the precipitation of silver? Somehow it slows down the reaction: with the lead salt present it takes appreciably longer for the precipitation of silver to begin. If only 1% ferrous sulphate and silver nitrate solutions are mixed together, then filter-paper pictures are obtained

which usually differ from the iron-silver-lead pictures in texture, colour and size. The presence of lead normally gives the pictures a much heavier appearance.

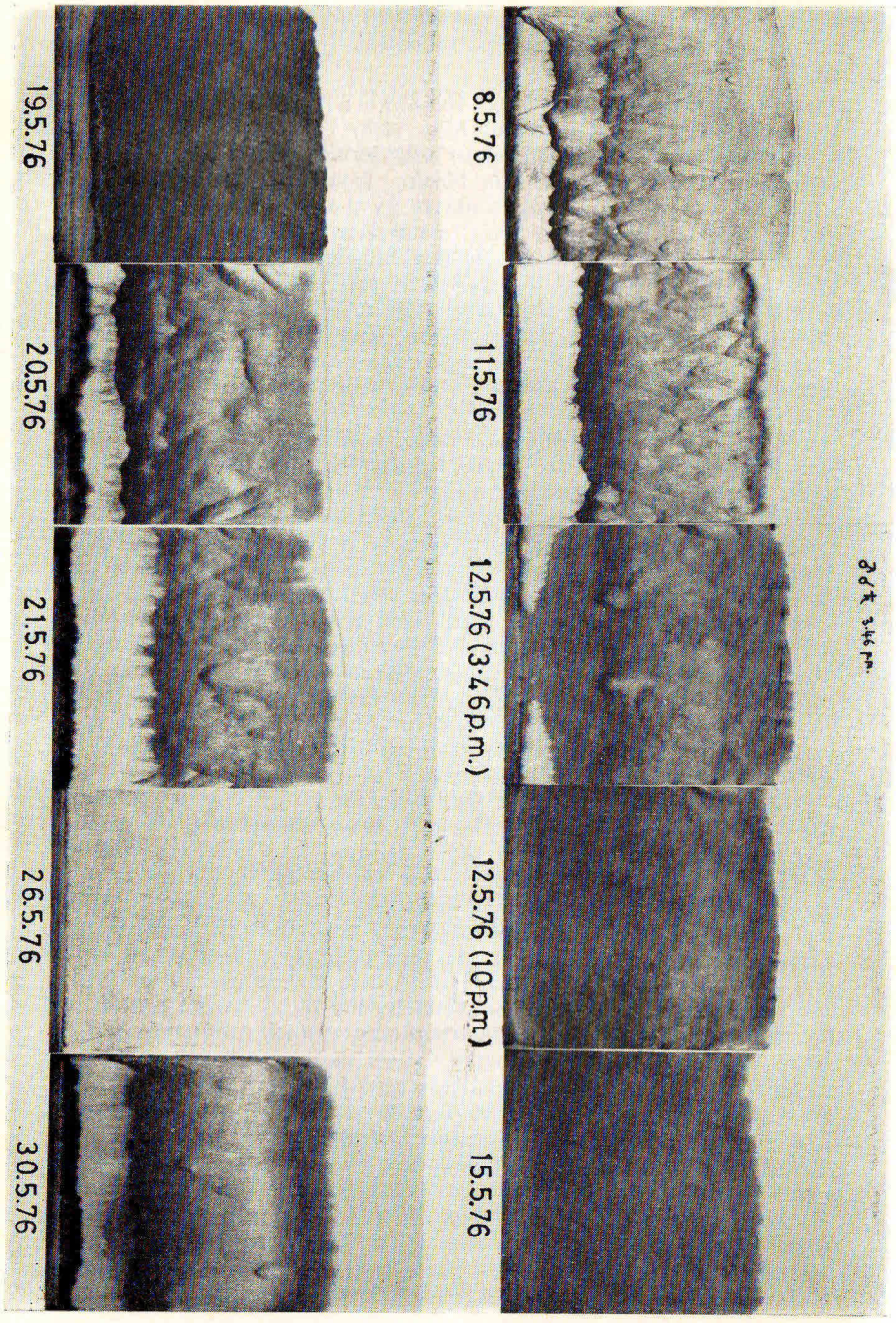
The Experiment

The Mars-Saturn conjunction of May 12th, 1976, was followed by Mr. Drummond, a qualified chemist with several years of laboratory experience, in his 'home lab.' in Henley, from May 6th until June 5th. (This was part of a project started by the Astrological Association in 1975 to investigate these metal-planet phenomena.) Every evening 1.5 c.c. of 1% solutions of lead nitrate, ferrous sulphate and silver nitrate were mixed together in a glass dish and allowed to rise up a cylinder of the filter-paper placed on top. Three such sets were risen each evening. For each one the time taken for the first 'form' to begin growing on the paper was recorded. On some days sets without lead were also risen for comparison, using only iron and silver salts.

The experiment was performed under conditions of dim artificial light, as silver solutions are highly light-sensitive. A room was used whose temperature was fairly constant: it remained between 19°C.—23°C. throughout the month of the experiment. The ferrous sulphate solution used was all freshly prepared at the start of the experiment and then stored frozen in small ampoules. This was necessary as the solution decays upon standing. Each day one ampoule of solution was thawed out and used. This ensured that the ferrous sulphate used each day was similar. The filter-paper cylinders used were made from 15 × 22 cm.^{2} rectangles of Whatman No. 1 filter-paper. The glass dishes used are made especially for these 'filter-paper picture' experiments, imported from Switzerland. When dry it is necessary to store the filter-papers in the presence of a drying agent, otherwise the pictures will decay; silica gel was used here.

During the week before the conjunction the 'forms' appeared on the paper as usual. Two examples of this are shown in the photograph. There was, however, a slight decrease in the area covered by forms for two days before the event. On the day of the conjunction two sets were risen, one at the time of the conjunction, 3.40 p.m., and the other in the evening. One filter-paper from each of these is shown. At the time of the conjunction a uniform charcoal grey area started to blot out the forms, and by the evening of the 12th the process was almost complete. By the 14th all form had disappeared from the pictures. This 'darkness without form' remained on all the papers without changing for six successive days, and then disappeared on May 20th as suddenly as it had come. During these six days many extra papers were risen to see whether some mistake had been made, but all papers came out the same.

This period of maximum influence of the conjunction, indicated by the complete disappearance of form, corresponds to an orb of nearly 4° between Mars and Saturn. However, the total period over which the rate of the precipitation reaction was disturbed was between May 10th and May 25th (Fig. 1). This corresponds to an orb of about 6°, 1° before the event and 5° after the event.



A control series was performed starting on May 9th of filter-papers using only 1% solutions of ferrous sulphate and silver nitrate. These showed very little change over the time of the conjunction: the forms remained. Their reaction times as shown in Fig. 1 remain remarkably constant, and in fact they were discontinued after May 19th because they did not seem to be changing at all.

The conjunction took place with the Moon very nearly in square to the two planets. Two weeks later when it was again in square we were surprised to see another effect quite opposite in nature appearing on the papers. After the pictures seemed to have returned to normal and recovered from the effect of the conjunction they began to fade out once again. This time, however, the fading out was not into a charcoal grey, but into a very pale white or pale yellow colour. This effect lasted for several days, from May 25th–28th (Fig. 1). One such picture is shown in the photograph. This Moon-square effect was not as strong as that of the conjunction: only one or two out of each batch of three papers appeared then without form.

Analysis of Results

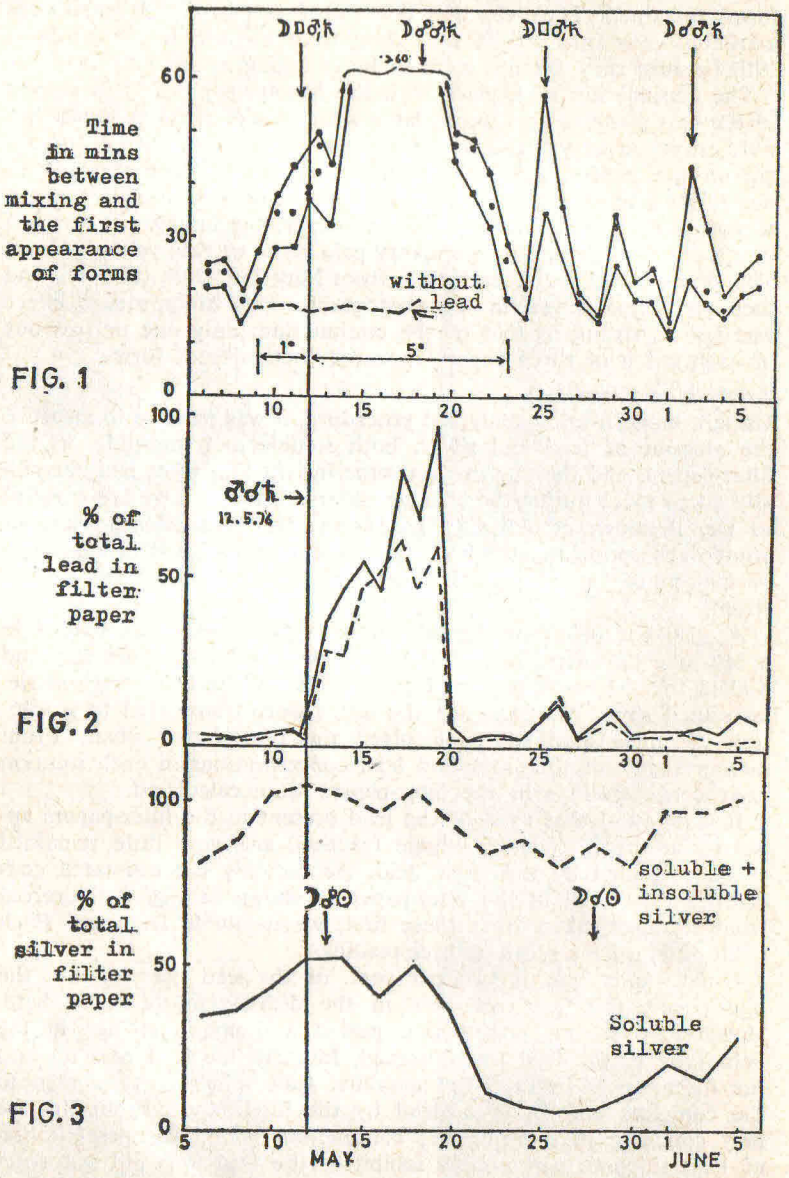
Using a modern microanalytical procedure, it was possible to measure the amount of lead and silver, both soluble and insoluble, in the filter-papers, and thereby to gain some insight into what had chemically taken place during the changes observed. For this we are grateful to Dr. Benbow, of the City University, for permission to use an atomic absorption spectrophotometer and also for his kind assistance on matters of procedure. The analysis was carried out by Mr. Kollerstrom.

A strip cut off from the side of each filter-paper was soaked in a test-tube of water. Every filter-paper was treated in this way and soaked for the same length of time. This dissolved out the soluble, unreacted silver nitrate. Then the strips were transferred to a solution of nitric acid which dissolved the precipitated silver. From measurements of the silver and lead concentrations in each solution their concentrations in the filter-papers were calculated.

It was found that most of the lead present in the filter-papers appeared in the first, water-soluble fraction, and very little remained to be extracted by the nitric acid. Accordingly the estimated concentration of lead in the filter-paper as shown in Fig. 2 is derived from readings taken from these first, water-soluble fractions. Each point on Fig. 2 is a mean of three readings.

Usually only one or two per cent. of the lead rises up into the filter-paper, the rest remaining in the dish as insoluble sulphate. However, over this conjunction period a dramatic change in the behaviour of the lead was observed. Most of the lead rose up into the filter-paper. In fact, the maximal lead values corresponded to the complete absorption of lead by the filter-paper. From this we may conclude that during the conjunction period the precipitation of lead sulphate was greatly inhibited: the lead ions did not react as usual during the event.

To see how accurate these lead readings were, another strip was cut from each filter-paper and after a similar procedure the lead



concentrations were calculated as before. The results are shown in Figure 2 (dotted line). There was one difference in procedure: the bottom centimetre was cut from each strip to remove any possible contamination of the papers with lead which had been precipitated in the dish, making the lead levels lower than before. The graphs indicate that the event took several days to build up to its maximum effect, at which time the precipitation of lead was more or less completely suspended. They also suggest a slight after-effect at the time of the next Moon-square, on May 25th.

The concentrations of silver in the filter-paper, both as soluble silver nitrate and as insoluble metal, are shown in Figure 3. As before, each point is a mean of three readings. The lead graph seemed to show very clearly the main conjunction effect, but the silver graph tells us neither the time nor the duration of the conjunction. The lead graph has a fixed base line, which agrees with the value calculated from the solubility of lead sulphate, 0.042 g/l. On the other hand, the silver graph has no such predictable level—like 'the inconstant Moon', it waxes and wanes, with a maximum and a minimum at the two squares between the Moon and the Mars-Saturn conjunction. Alternatively it may be that the silver graph is showing a Moon phase effect (Fig. 3). The graph suggests merely a Moon process, even though the images formed in the filter-papers mirrored very plainly the course of the conjunction.

Discussion

From these results we see how observations of the change in lead concentration may be used to indicate the time span of the conjunction, while the variation in silver content suggests a more gradual Moon-process. When control experiments were performed without the presence of lead, little perturbation was observed in the forms on the filter-paper. This may be evidence for planetary influences operating according to specific correspondences.

The occurrence of a Mars-Saturn conjunction has here been followed in three ways—as a perturbation in the forms on a filter-paper, as a variation in the rate of a reaction, and as a change in chemical composition. The result is comparable with previous accounts. Dr. Hauschka's experiment over the 1949 Mars-Saturn conjunction used the same procedure as described above and recorded an inhibition of form and darkening of image for about six days following the event. Dr. Karl Voss's experiment over the 1964 Mars-Saturn conjunction also showed a darkening of the image and a disappearance of form at the time of the event. Further work on other Mars-Saturn aspects is now in progress and it is hoped that this will be reported in due course.

References:

1. Kolisko, L., 'Saturn und Blei', 1952.
2. Dr. Voss, 'Neue Aspekte', 1964.
3. Dr. Hauschka's experiment is described in 'The Secrets of Metals', by W. Pellikan, 1973.
   See also Dr. G. Dean's forthcoming book, 'Recent Advances in Natal Astrology' for an up-to-date review of this field.