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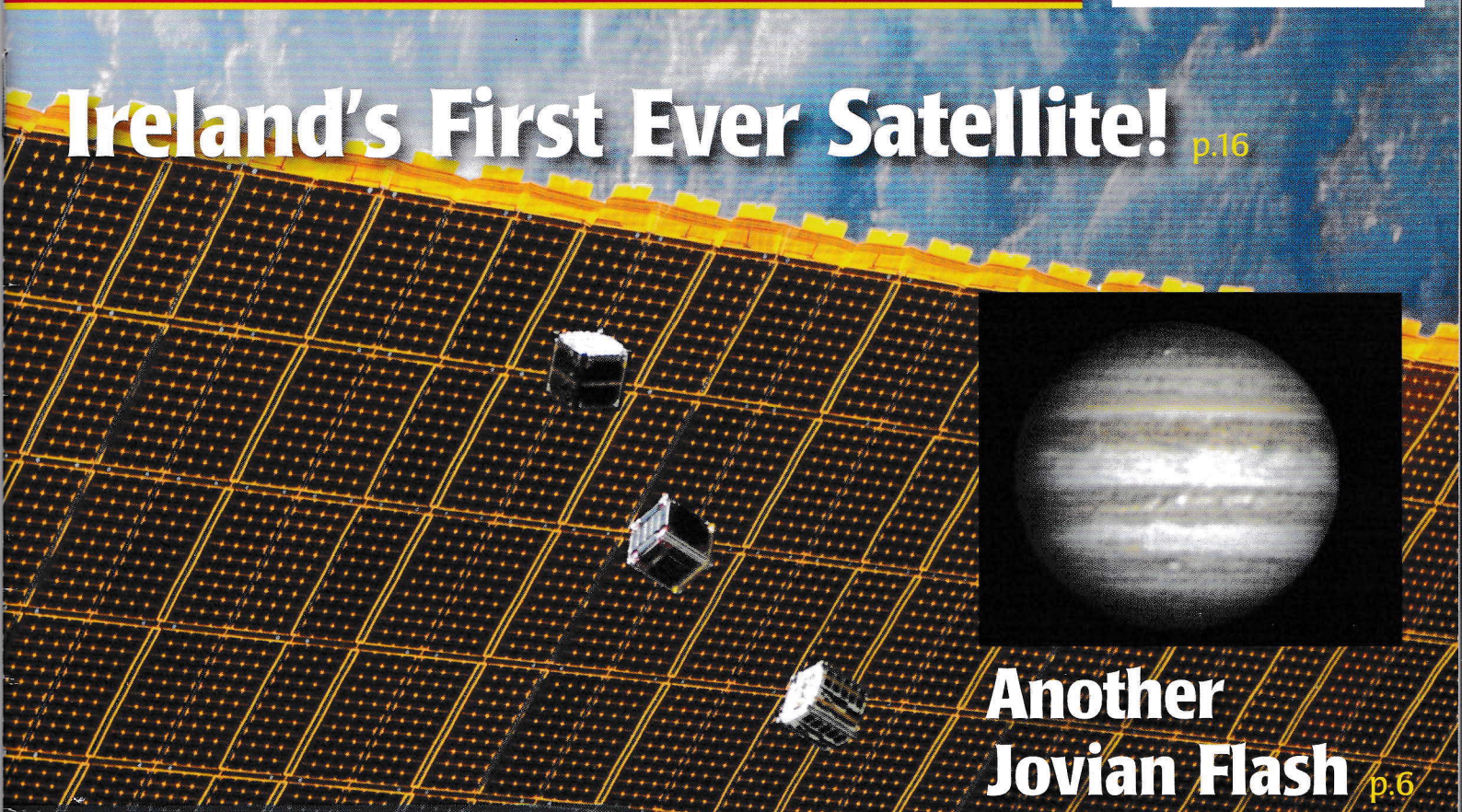

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Another Jovian Flash

by Ann Dunne

There was another impact on Jupiter on May 26th. It was first spotted by Sauveur Pedranghelu in Corsica. Amateurs are very aware of what such impact observations look like and Sauveur suspected that he had observed a new impact.

He reacted adequately by rapidly contacting Marc Delcroix to get a confirmation from him. Marc issued an alert to the worldwide planets observers community. This allowed two German amateurs, Thomas Riessler from Dettenhausen and Andre Fleckstein from Halle to recover the impact on their Jupiter videos that night.

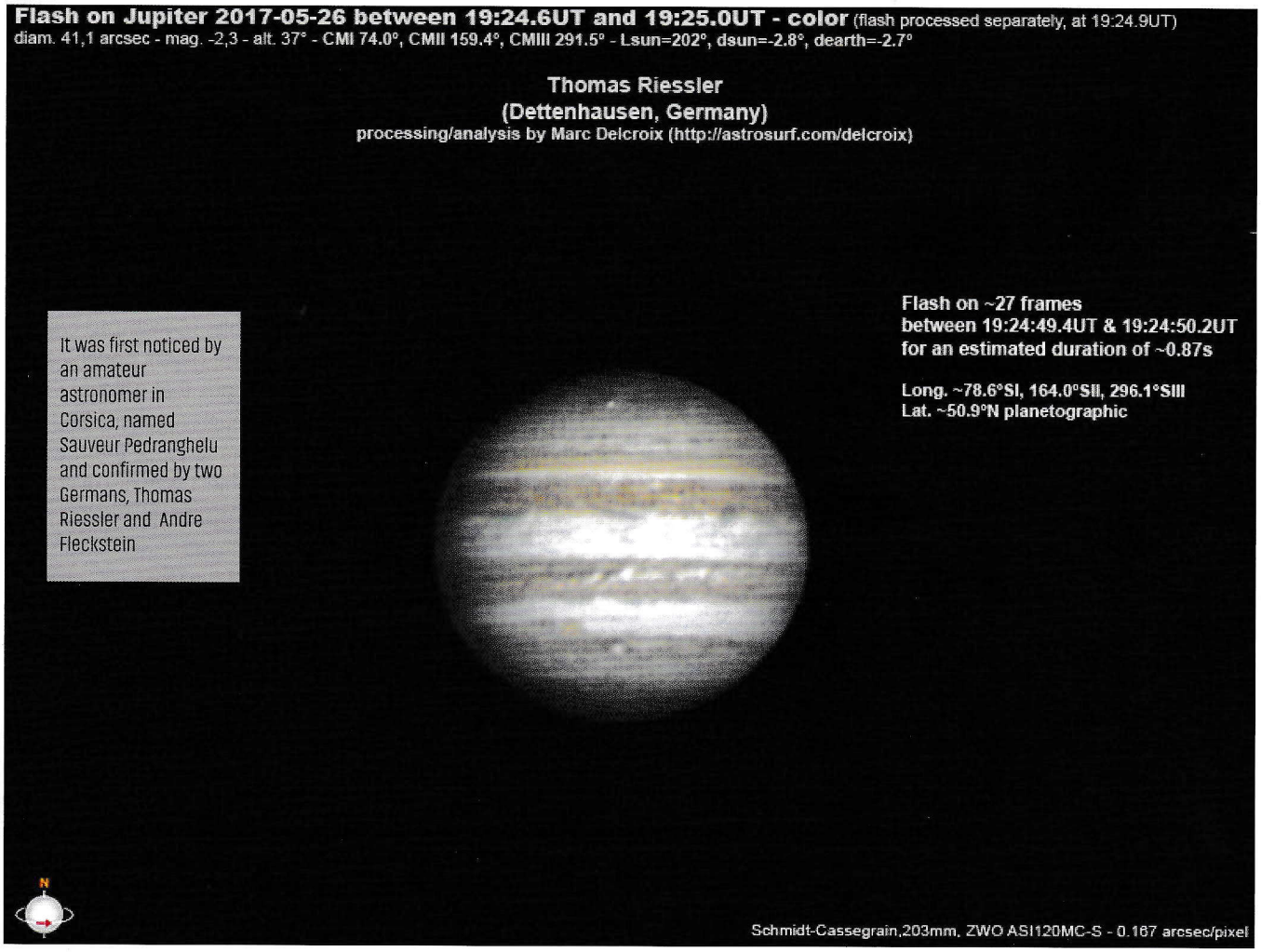
Readers will remember a similar impact on St. Patrick's Day last year, taken by an Irishman, John McKeon which was also confirmed by a German, Gerrit Kernbauer and processed by Marc Delcroix and Sebastian Voltmer.

Hence, this is the second impact observation from Europe, after two from Asia and one from North America.

As in 2016, the impact was caused by an object too small to leave any signature in Jupiter's atmosphere. At that time, Jupiter expert, Professor Ricardo Hueso told Astronomy Ireland: "If Jupiter were hit by a much larger object (50m or more) the impact would produce a cloud of dark material observable with large telescopes such as Hubble or some ground-based telescopes. If the object impacting the planet were large enough (200m or more) the dark debris field would also be observable for a few days by amateur astronomers. This happened in July 2009 when Jupiter was impacted by an object of about 500m producing a dark scar in the planet, discovered by Anthony Wesley, an amateur astronomer from Australia."

Astronomy Ireland got in touch with Professor Ricardo Hueso, in Spain, for his views on the recent impact:

"We had a busy time analyzing the first data from the impact! Marc Delcroix and I are working together on the analysis of these impacts and on other projects to find more of these impacts. Marc is the person who has done most of the analysis of the current



May 2016 cover showing John McKeon's Jupiter impact image

event and he deserves more credit than me." said Professor Hueso.

"In any case we have a full dossier of this event and we hope to be able to "measure" the size of the impacting object from the combined analysis of the three videos. Our best guess for the moment is that the impact was caused by a small size object of 10-20 m but probably smaller than some previous impact flashes. This is the fifth of this kind of events but only three of them have been analyzed carefully."

We asked Professor Hueso if the latest object had any relation to the previous ones in 2010, 2012 and 2016?

"The question about the relation between different impacts is the most interesting, but unfortunately it's also a very tough question. The latest impact shares its size range with the previous impacts in 2010 (2 impacts: one in June and the other in August), 2012 and 2016. Besides that we don't have enough information to know if they have a possible common origin in a particular family of Solar System objects. Now that we have 5 impacts of the same category we could start to analyze that question by examining the position of Jupiter in the solar system at the dates of different impacts compared with known distributions and orbits of small objects that could be candidates as possible sources of impactors on Jupiter."

"Earth receives small impacts from different families of objects. The most numerous are the impacts with leftovers of comets when the Earth traverses the extended tail of comets producing shooting stars. If impacts on Jupiter are mainly caused by a particular family of objects (a given comet or a family of asteroids) we can try to solve that question but it will imply a difficult analysis. With only 5 small impacts we cannot solve that question yet and more detections would be needed." he concluded.

Special thanks to Marc Delcroix, Professor Ricardo Hueso for their help with this piece and to Sauveur Pedranghelu, Thomas Riessler and Andre Fleckstein for their images.