

Why is the Identification of the Pulsar so Important?

Being only the third radio pulsar for which the optical image has been found, PSR 0540-693 now belongs to a most selected and interesting group of objects. It is now possible to concentrate future observations to the corresponding optical object and to better exclude the disturbing background light from the surrounding nebula. There is no doubt that it will be very thoroughly studied by large optical telescopes during the coming years and the groups have already

applied for additional observing time at ESO as well as with the Hubble Space Telescope.

When the direction to the pulsar is known with the highest achievable precision, it is possible to take correctly into account all the various effects introduced by the Earth's uneven motion and thereby to combine observations of individual pulses accurately over long periods. This will allow to properly measure the progressive lengthening of the pulsar period, the exact value of which is of key importance for understanding the pulsar mechanism. Of the

550 pulsars presently known, this measurement has only been made for the two youngest ones, the pulsar in the Crab Nebula and PSR 1509-58. The age of PSR 0540-693, as deduced from the lengthening of its rotation period, is not yet well determined, but it is likely to be the third youngest known.

In this connection, note also the recent identification by the Italian group of the nearby, but radio-quiet pulsar, Geminga, see *The Messenger* No. 70, p. 30.

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“El Cóndor Loco” Tests the La Silla Winds!

After many long and exciting nights at La Silla during my time as “French cooperant” in 1992–93, I enjoyed a few times the thrill of testing in a very special way the wind patterns around that mountain.

Everybody knows of course how important it is to study the local atmospheric conditions around observatories in connection with the seeing investigations, etc. Astronomers all around the world are doing so, and when you can combine the “useful” with the pleasant, why not? True, I must admit that I could not avoid a certain feeling that this particular method of aerodynamic investigation may not have been entirely permitted at La Silla, but if you have ever tried to imitate the peaceful and majestic condors of the Andes, then it is very difficult not to attempt it.

This picture was taken by Marc Moniez and is for me an unforgettable souvenir of this good old time. Hovering around the mountain, I experienced the beautiful site of the ESO observatory as no astronomer has ever before (and probably also after) me.

Beware! I absolutely do not recom-



mend other potential astronomical paraglider pilots to follow me unless they have a very thorough experience indeed. The airflow conditions around La

Silla, as it turns out, are not ideal for such flying; this is also common knowledge among the poor photographers who, hanging dangerously in open doors of one-engine planes, have obtained photos of the observatory in impossible angles. I did come back from Chile with some (fortunately minor) holes in my gossamer wings, punctuated by a stray cactus at the time of a rough landing.

If they follow my advice, they should rather go to “Cerro Grande” above the La Serena bay where they will encounter good conditions for dynamic flight in non-turbulent conditions ensured by the wind from the sea. Or for long summer flights, go to “Batuco”, some 20 kilometres north of Santiago. You can also easily fly at the various ski resorts above Santiago, and the very best is the “Cerro Providencia” flight, 2,500 metres above the Chilean capital – an experience, I promise, that you will never forget!

A todos los que se acuerdan todavía del “cóndor loco”.

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TRIFFID Imaging of 47 Tuc on the NTT

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The four images shown here illustrate the observational possibilities with TRIFFID, the TRansputer Instrument For Fast Image Deconvolution which was used to identify the optical image of the

pulsar PSR 0540-693 in the LMC, cf. page 27 in this *Messenger* issue.

The processing of these frames is still quite preliminary – various techniques are proving promising and are being in-

corporated into a single flexible process. The amount of processing is quite horrendous. Image files contain pixel addresses and times for every single photon – a maximally uncompressed