

adopt the conversion from  $L_{FIR}$  to the SN rate given in Mattila & Meikle (2001), i.e.  $SNr \approx 2.7 \times 10^{-12} (LFIR/L_{\odot}) yr^{-1}$ , we find that our survey has missed about 80% of the expected SNe. This can be explained if most of the SNe are so embedded in dust that they are significantly obscured even in the near-IR or, alternatively, obscured AGNs may contribute substantially ( $\sim 80\%$ ) to the far-IR luminosity of these galaxies. Finally, there is growing evidence that most of the starburst activity is located in the nuclear region (Soifer et al. 2001). If most SNe occur in the nucleus (i.e. within the central  $2''$ ), then our

limited angular resolution would have prevented us to disentangle them from the peaked nuclear surface brightness of the host galaxies.

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## A Deep Look at an Active Galaxy

The image below shows the peculiar edge-on spiral galaxy NGC 3628. It is situated in the constellation Leo

and forms a famous triplet of galaxies together with M65 and M66, also known as the Leo Triplet. Its dis-

tance is 35 million light-years/11 Mpc. NGC 3628 is interesting in several respects: although classified as a spiral



galaxy of type Sbc (like our own Milky Way galaxy) its massive dust shows disturbances, possibly as a consequence of the fairly close proximity of the two other members of the Triplet. Furthermore, there seems to be a lot of star formation going on, as one can see in the upper right corner of the image, where numerous star-forming regions with young massive blue stars are visible. The box-like bulge of this galaxy (visible at the top of the image) is also remarkable and could indicate the presence of a central bar. A number of globular clusters can be seen as fuzzy reddish spots in the halo of the galaxy.

The field around NGC 3628 is rich in very faint galaxies, many of which can be seen in this image as slightly diffuse objects. Only a few foreground stars belonging to our own Milky Way are visible, sharp and point-like. However,

the conspicuously blue star-like object just SSW of the diffuse patch that extends more or less along the minor axis of the main galaxy, is not a star but an X-ray emitting quasar at a redshift  $z = 0.995$ .

Of special interest in this picture is an elongated low-surface-brightness feature that seems to emerge along the minor axis of the large active galaxy. It appears to be part of a chain of objects that coincides very exactly with an X-ray filament associated with ejection of X-ray material from the centre of the galaxy, as shown by observations with the ROSAT and, very recently, the Chandra satellites.

The high image quality of FORS2 on VLT/Kueyen enables resolution of the various objects along this optical feature. A spectroscopic investigation is currently under way in order to study their possible physical relationship to

events in this conspicuously disturbed, nearby galaxy.

Technical information: The colour image was composed from five individual exposures through Bessel B, V, R and I broadband filters. Exposure times were 120 + 600 sec in B, 300 sec in V, 600 sec in R and 600 sec in I. They were taken with FORS2 during the commissioning period in February 2000 and retrieved from the ESO Science Archive. The seeing on the different frames was between 0.64 and 0.8 arc-sec. The size of the field is  $6.8 \times 6.8$  arcmin; north is up, east to the left. Pre-processing was done with the FORS pipeline in Garching. Observations were carried out by G. Rupprecht, data reduction by F. Patat (both ESO/Garching), image composition by R. Hook and R. Fosbury (both ST-ECF), astronomical background provided by H. Arp (MPA). *G. RUPPRECHT*

## Coming Home at Paranal

### Unique “Residencia” Opens at the VLT Observatory

*(Taken from the ESO Press Release of 7 February 2002)*

#### Summary

The Paranal Residencia at the ESO VLT Observatory is now ready and the staff and visitors have moved into their new home.

This major architectural project has the form of a unique subterranean construction with a facade opening towards the Pacific Ocean, far below at a distance of about 12 km. Natural daylight is brought into the building through a 35-m wide glass-covered dome, a rectangular courtyard roof and various skylight hatches.

Located in the middle of the Atacama Desert, the Residencia incorporates a small garden and a swimming pool, allowing the inhabitants to retreat from time to time from the harsh outside environment.

Returning from long shifts at the VLT and other installations on the mountain, here they can breathe moist air and receive invigorating sensory impressions. With great originality of the design, it has been possible to create an interior with a feeling of open space – this is a true “home in the desert”.

Moreover, with strict ecological pow-

er, air and water management, the Paranal Residencia has already become a symbol of innovative architecture in its own right. Constructed with robust, but inexpensive materials, it is an impressively elegant and utilitarian counterpart to the VLT high-tech facilities poised some two hundred metres above, on the top of the mountain.

Ever since the construction of the ESO VLT at Paranal began in 1991, staff and visitors have resided in cramped containers in the “Base Camp”. This is one of the driest and most inhospitable areas in the Chilean



*This photo shows the Residencia, looking towards west. The linear construction used to fill the natural depression of the ground in this area is evident. The 35-m central dome protrudes from the “filled-in” valley. Photo: Massimo Tarenghi.*