Historical Archive at the European Southern Observatory

Leslie Kiefer

Library, Documentation, and Information Services (LDIS) department
European Southern Observatory (ESO)

ESO (European Southern Observatory)

- pre-eminent intergovernmental science and technology organization in astronomy.
- design, construct and operate powerful ground-based observing facilities
- enable important scientific discoveries
  - **ESO Headquarters: Garching, near Munich, Germany**
  - **ESO offices in Chile: Vitacura Santiago, Chile**

Image composition showing all the ESO observatories and the Headquarters.
Credit:ESO/M. Kornmesser

ESO Sites

La Silla

La Silla Observatory is located on the outskirts of the Chilean Atacama Desert, 600 km north of Santiago de Chile and at an altitude of 2400 meters.

In 1969, ESO found its first observing site.

Credit: Gerhard Hüdepohl/ESO

Paranal

At 2635 meters above sea level in the Atacama Desert of Chile, ESO's Paranal Observatory founded in 1996, is one of the very best astronomical observing sites in the world.

It hosts several world-class telescopes; among them are the Very Large Telescope and the Visible and Infrared Survey Telescope for Astronomy.

Credit: G.Hüdepohl (atacamaphoto.com)/ESO

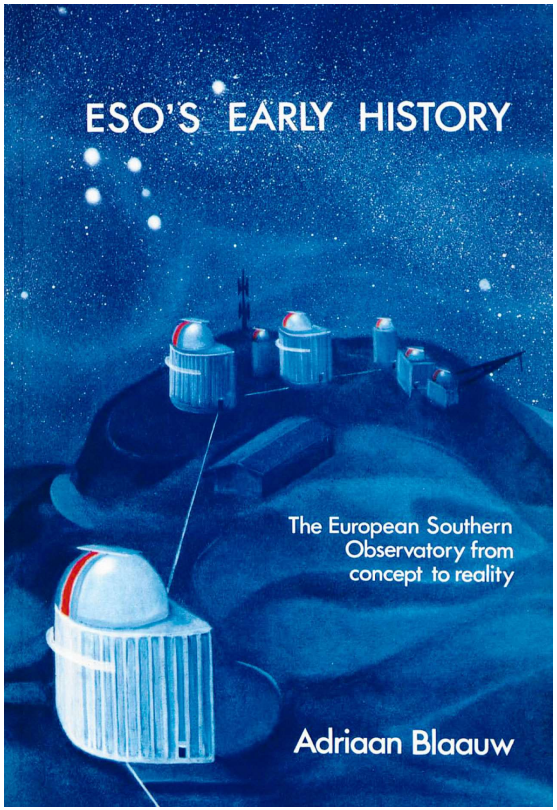
The Library, Documentation, and Information Services (LDIS) department

Historical Archive Project

The history of astronomy in documents

190 items identified in our Library Catalog.

- Documents added as a result of correspondence carried out in the course of writing the book **"ESO's Early History".**
- A collection from **Jan Oort** (Initiator of ESO in the year 1953, was Chairman of the ESO Committee in 1957-1963, and first President of the Council, during the years 1964 and 1965)
- Archives of **Adriaan Blaauw** (was involved in the creation of ESO as Secretary of the ESO Committee, as Scientific Director in 1968-1969, and as Director General during 1970-1974.)
- Archives of **Harry van der Laan** (Director General of ESO during the years 1988 – 1992)



Credit: ESO

The history of astronomy in documents

What can we find here?

- **Internal documents**
  - Correspondence
  - Meetings reports
- **Documents about the construction of the sites, why Chile?**
- **Finance reports**
- **Agreements with other institutions**
- **Pictures**

Frei Inaugurará Nuevo Observatorio "La Silla"

LA SERENA.— El Presidente de la República, Eduardo Frei Montalva, inaugurará oficialmente el Observatorio Astronómico "La Silla" durante una ceremonia que se efectuará a dos mil quinientos metros de altura en la zona de la Cuesta de Pajonales, a ciento veinte kilómetros al noreste de La Serena.

Para concurrir a este acto, el Presidente viajará a esta ciudad el martes 25, en avión Avro, hasta el aeródromo de La Florida. Desde este lugar será transportado en helicóptero hasta "La Silla". Terminada la ceremonia, el Presidente volverá hasta el aeródromo La Florida para tomar nuevamente el avión y regresar a la capital.

EL OBSERVATORIO "LA SILLA"

Este es el segundo observatorio que inaugura el Presidente de la República en la provincia de Coquimbo. El primero fue el de "El Tololo", ubicado al sureste de La Serena, en la zona del Valle de Elqui. "El Tololo" está en plenas funciones y su aporte a las investigaciones a través del mundo entero es muy apreciado, pues se han logrado en el hemisferio sur importantes informaciones que antes no se obtuvieron ni en los más grandes y modernos observatorios de Estados Unidos y Europa.

"La Silla" no será un complemento a la acción investigadora, sino que mediante equipos capaces de lograr nuevos triunfos en esta tarea en la que participan numerosos hombres de ciencia.

Los equipos que trabajan en "La Silla" están formados por los siguientes instrumentos:

a) Un astrógrafo a prisma, con una abertura de 40 cms. y una distancia focal de 4 mts., que sirve para determinar las velocidades radiales de estrellas fijas;

b) Un telescopio Cassegrain, con una abertura de 50 cms. y una distancia focal de 7,50 mts.;

c) Un telescopio Cassegrain, con una abertura de 60 cms. y una distancia focal de 9 mts.;

d) Un telescopio Cassegrain, con una abertura de 100 cms. y una distancia focal de 15 metros.

Los instrumentos signados con las letras b, c y d, sirven, en primer lugar, para la medición fotoeléctrica de la luminosidad estelar.

Todos los equipos serán usados principalmente en la investigación del cielo austral, a las que no se había prestado antes mayor atención, tal como ha sucedido en el hemisferio septentrional.

Las regiones centrales de nuestra vía láctea, que se encuentran escondidas detrás de una gran nube de gas y polvo cósmico, encierra secretos cuyo conocimiento requiere de complicados métodos de la fotometría infrarroja.

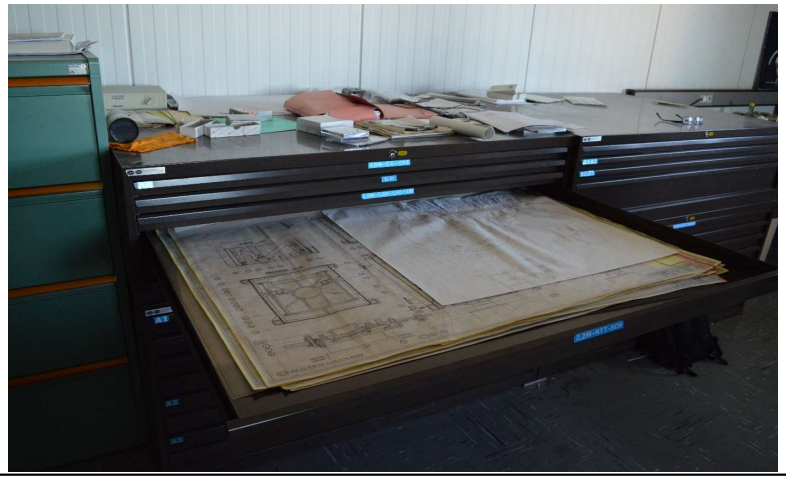
Con el acto inaugural del día 25 de este mes, se da el primer paso para establecer un verdadero complejo científico astronómico en la provincia de Coquimbo, ya que posteriormente será inaugurado un nuevo observatorio en el Cerro Las Campanas, el que estará a cargo de la Organización norteamericana "Carso", la que ha proyectado la instalación de potentes telescopios, uno de ellos será igual al del Monte Palomar, que tiene una abertura de 200 centímetros.

Este nuevo observatorio estará ubicado al noreste de La Serena y en el límite con la provincia de Atacama.

What about the materials that are not so obviously historical?

Motivations

- *It has come to the Library's attention that there is a great amount of La Silla documentation that may be of historical interest for ESO or the astronomy field generally, but which has not been digitized or even deliberately preserved at all. (Gomez, M., 2017)*



- Documents we can find:
  - Binders with typed or handwritten notes; manuals (either ESO- or manufacturer-produced)
  - Memoranda; logs; purchase orders and observing proposal forms.
  - Technical drawings (loose, or stored in a cabinet, flat or hanging) or binders.

What we have so far

Inventory made by former colleagues Maria Eugenia Gomez and Dominic Bordelon.

- 2017 trip to La Silla and Paranal
  - *"At La Silla, we visited **several telescopes** (Schmidt, 3.6m, ESO 1.5m, 1m), the **Astro Workshop**, and the **former Maintenance and Construction** office. At Paranal, we visited the **Documentation Room** located at the base camp, where several cabinets of La Silla technical drawings have been stored recently."*

Sheets by telescope and format

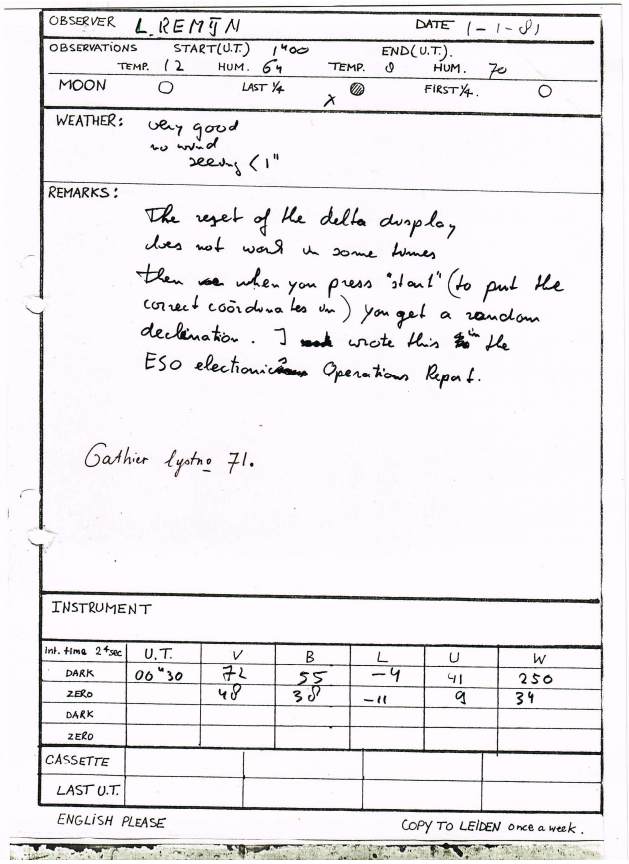
Row Labels	Sum of # sheets
1m	24
3.6m	879
Danish 1.5m	202
MPG 2.2m	46
NTT	1094
Schmidt	878
VLT	454
(blank)	4210
Grand Total	7787

La Silla digitization project

Scan of telescope operations reports from “golden years” of La Silla 70s, 80s & 90s, by Harri Lindgren.

At this moment all telescopes there were in operation.

Around 2500 pages scanned so far.



OBSERVER L. REMIJN DATE 1-1-81

OBSERVATIONS START(U.T.) 1400 END(U.T.).
TEMP. 12 HUM. 64 TEMP. 0 HUM. 70

MOON ○ LAST ¼ ◍ FIRST ¼. ○

WEATHER: very good
no wind
seeing < 1"

REMARKS:
The reset of the delta display does not work in some times then when you press "start" (to put the correct coordinates in) you get a random declination. I wrote this to the ESO electronics Operations Report.

Gathier Lystrup 71.

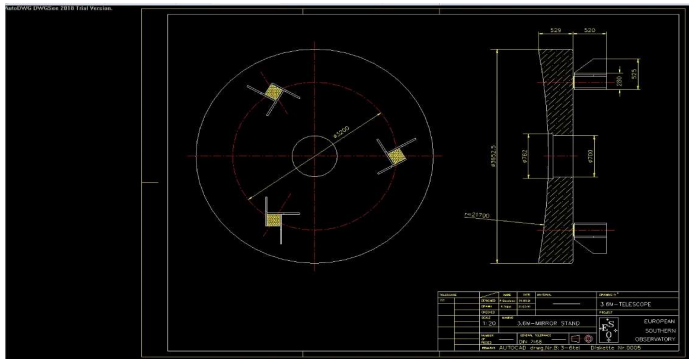
INSTRUMENT

int. time 2 sec	U.T.	V	B	L	U	W
DARK	00"30	72	55	−4	41	250
ZERO		48	38	−11	9	34
DARK						
ZERO						
CASSETTE						
LAST U.T.						

ENGLISH PLEASE COPY TO LEIDEN once a week.

What kind of problems do we face

- What materials are we going to select
- Not a priority for the institution for current operations
- Limited staff and time
- Duplicates and old formats
- Main materials in the observation sites, difficult access and not ideal storage conditions
- Not all rooms with important documentation have been identified



Conclusions

- Large amount of material; which ones to choose for digitization project?
- Categorization: by Telescope? Instrument? Building? Something else?
- It’s a long term project
- Help with the technical data for more detailed cataloguing
- Decide technical details, e.g., tools, file format, storage options (Phase 2)

Thank you!

Leslie Kiefer
leslie.kiefer@eso.org

@ESOAstronomy
@esoastronomy
@ESO
european-southern-observatory
@ESOobservatory